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Leadership, Innovation, Media and Communication



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"Hayat daha kolay"

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9TH INTERNATIONAL CONFERENCE ON LEADESHIP, TECHNOLOGY, INNOVATION AND BUSINESS MANAGEMENT

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PREFACE

Dear Guests, Honorable Colleagues, Valued Researchers, Ladies and Gentlemen,

*Welcome to "**The 9th International Conference on Leadership, Technology, Innovation and Business Management**", which has been organized jointly by Yıldız Technical University, Beykent University, Gebze Technical University, Istanbul Technical University, International Strategic Management and Managers Association, Turkey, and CEDIMES, a worldwide network of Francophone academicians. I hope this conference, which is being held in Istanbul, Turkey, will be fruitful for all the participants. I am so happy today. You are all welcome again. You're beautiful scientists. I offer you all my deepest love and respect.*

Let me give you some information about our conference More than 70 valuable papers are received for our conferences from the wider regions of the world. Through the detailed work of the Conference Advisory Board, Scientific and Organizing Committee and Peer Review Committee, 46 papers are selected to be published in the conference proceedings.

The number of represented countries is fifteen including, Turkey, Algeria, South Africa, Italy, Ireland, Greece, Nigeria, United States of America, Germany, Latvia, Brazil, Albania, Switzerland, Bulgaria and Mexico.

Proceedings of The 9th International Conference on Leadership, Technology, Innovation and Business Management will be published together on-line by Future Academy, in their on-line publication "European Proceedings of Social and Behavioral Sciences", and they will also be submitted for consideration to be included in Clarivate Analytics' Conference Proceedings Citation Index. This year, some of the papers from proceedings of The 9th International Conference on Leadership, Technology, Innovation and Business Management will be selected and published online in the Journal of Global Strategic Management, Journal of Research in Business and Social Science (IJRBS) , Eurasian Academy of Sciences Social Sciences Journal, International Journal of Organizational Leadership , International Journal of Innovation and Technology Management, Journal of Management, Marketing and Logistics, Research Journal of Business and Management, Journal of Business, Economics and Finance, and Journal of Research in Business and Social Science (IJRBS) .

*This years conferance theme, "**Leadership, Innovation, Media and Communication**" is part of the conference's standing agenda of forging workable solutions from the vonvening of scientific study and practical experience. Leadership is no longer related to use of power, it about influence. World Economic Forum examined business world of future in the context of fourth industrial revolution in 2016. Reserach results showed that changes in working World will bring changes in workplace competencies for 2020.In the future, the most important competency is the solving new and mostly unstructured problems in a complex environment. This is followed by critical thinking, creativity, emotional intelligence, coordination with others, service orientation, negotiation and cognitive flexibility skills.*

*Management is not an individual activity. It relies on designing organizations and working with people around them in order to have a big impact. Without "**being**", you can not have self awareness, you connot inspire people around you and you can not think about organizational responsibilities. So, being is a way of creating professional identity and responsibility.Today, Communication plays a crucial role between leadership and innovation and business management. The most important value added of the MBA programs should be transfering management and leadership skills to the students in the context of knowing-doing and being trilogy.*

In today's rapidly changing business environment, innovation has become an essential requirement for staying competitive. Innovation promotes the need for constant change and renewal. It has a huge effect on all the areas of a business. And an innovation framework is the key component of continuous effective change which increases the capability of business to generate customer value. Today, innovation is not a fantasy; it is a must; because innovation means problem recognition, problem solving through invention, and solution exploitation.

We have to develop a new insight into the concept of innovation. We should bring imagination and concept into reality by re-aligning creativity processes with value creation processes. In order to accomplish this; choosing, building and preparing the right organization and the right people for executing and scaling the innovation are critical factors. Innovation doesn't include only inventions. It includes introducing and using previously known ideas and solutions in a new context. For this reason, innovation management is quickly becoming a critical

requirement for enabling a sustainable business. It describes the activities and decisions that make an idea realized for the purpose of generating business value.We need to sustain and grow our business or our company; and for sustaining and growing our business or our company, we have to manage the investment in creating new opportunities for generating customer value.

During this conference which will last two days, we will have the opportunity to work with different colleagues, different experts, different researchers. In other words, this conference will bring together leading researchers, economists, businesspeople, managers, engineers and academicians in this field of study from around the world.

Our distinguished participants will have the opportunity to present their valuable scientific contributions and to establish an international network among those who volunteer to communicate and study together in the fields of Leadership, Technology, Innovation and Business Management.

I would like to sum up my speech so that participants will have more time for their valuable presentations and that the subsequent discussions will be encouraged. I strongly believe that both the presentations and the following discussions will pave the way for broader horizons in the related fields.

Before finalizing my speech, I would like to commemorate our Founding Chairman Professor Erol Eren and our Founding Co-Chairman Professor Asım Şen. They were both my dear professors who contributed a lot to my academic career and were an inspiration to us all, as well. Our deceased Professor Eren and Professor Şen will always live in our memory, and we will do our best to continue their inspired work. May their soul rest in peace.

First I would like to thank the honorary presidents of our conference: Prof. Dr. Murat Ferman, the Rector of Beykent University and also Prof.Dr.Bahri Şahin the Rector of Yıldız Technicial University.Second, I would like to give my special thanks to our keynote speakers: The conference will be addressed by two distinguished keynote speakers: Professor Erik Knudsen of the University of Central Lancashire, the UK, and Dr. Jeroen Kraiijenbrink of the University of Amsterdam, the Netherlands. It will be an honour for us to be able to hear your ideas.And also,dear Prof.Dr.Halit Keskin and Associate Prof.Dr.Murat Yalçıntaş, many thanks for contributions to leadership, innovation, media and communication session.

Thirdly, I would like to thanks ANKA Consultancy and Güneş Sigorta for the sponsors of our congress. And now, last but not least I would like to thank all the members of the Conference Advisory Board, Scientific Organizing Committee and Peer Review Committee.Fourthly, I would also like to express my special thanks to the management of all of the organizing institutions, namely, Chair of the International Strategic Management and Managers Association and Conference Co-Chair Professor Oya Erdil of Gebze Technical University, and Conference Co-Chair Professor Lütfihak Alpkan of Istanbul Technical University, Co-Chair Prof. Dr. Oğuz Makal, Dean of the School of Communication of Beykent University, Co-Chair Associate Prof.Dr.Yasemin Tanses Gülsoy from Beykent University CEDIMES President Professor Claude Albagli, and CEDIMES Co-President Professor Maria Negreponti-Delivanis.Lastly I would also like to express my special thanks to Dr. Asuman Kutlu for her precious contribution; and Prof.Dr.Selim Aren ,Dr. Mehtap Özşahin, Dr.Meral Elçi ,Dr. Esra Erzengin, and also research assistants ; Tuğba Karaboğa, Deniz Benzer, Hande Aral, Cahide Karav, İlker Çetin , Sedat Erol, Emine Sırmalı, Ezgi Çakır, Ömer Lütfi Günay, Mahmut Köle, and Dilek Karaca for their meritorious help.

With that, I would like to welcome once more all of you, on behalf of the orginizing committee, to this exciting venue. And I hope that you will find the upcoming sessions and discussions full of eye opening moments with invaluable insights over the next couple of days.

It's a great pleasure for us to see so many of you here.

Prepare yourself to be scientifically challenged, excited and inspired!!!

Thank you again for your cooperation. Sincerely yours,

Prof. Dr. Cemal Zehir

Chairman of the Conference

FOREWORD

Dear Colleagues and Guests,

On behalf of Beykent University, I would like to welcome all of you to the 9th International Conference on Leadership, Technology, Innovation and Business Management (ICLTIBM 2019). The conference aims to bring together researchers, managers, engineers and practitioners from around the world to exchange ideas in the fields of leadership, technology, innovation, and business management. This year the conference broadens its scope to bring in a fresh perspective on the issues surrounding leadership, technology and innovation management: that of media and communication.

Beykent University is proud to be the host and one of the organizers of this international event. Established in 1997, Beykent University is one of the leading foundation universities in Turkey. We provide education to more than 30,000 students on four campuses in Istanbul, at undergraduate and graduate levels. We have nine faculties (medicine, dentistry, law, engineering and architecture, communication, economics and administrative sciences, arts and sciences, sports sciences, and fine arts), a graduate-level institute, one two-year vocational school, and three four-year schools (foreign languages, applied sciences, and health sciences). At the undergraduate level we have 61 four-year programs and 75 two-year programs. We also have 10 research centers.

With an ever-expanding network of academic exchange programs and collaborations, Beykent University reinforces its rigorous academic standards and continues to grow its teaching and research capabilities. To that end, we sponsor publications and partner with national and international academic institutions to bring forth distinguished conferences such as this one. In this case Beykent University has partnered with Istanbul Technical University and Yıldız Technical University of Istanbul, Turkey, Gebze Technical University of Kocaeli, Turkey, the international network of French-speaking academics CEDIMES, and a local association of management scholars - International Strategic Management and Managers Association. I would like to congratulate all of the organizations who have contributed to the 9th International Conference on Leadership, Technology, Innovation and Business Management. Of course, I would like to address a special word of thanks to Beykent University's Faculty of Communication led by Dean Professor Oğuz Makal for their contributions to the realization of such a laborious endeavor.

To the participants of the conference I extend my ardent wishes for a successful conference.

Prof. Dr. A. Murat FERMAN

Rector of Beykent University

PREFACE

Dear Colleagues and Guests,

I would like to welcome you all to the 9th International Conference on Leadership, Technology, Innovation and Business Management, focusing this year on the theme of "Leadership, Innovation, Media and Communication," as suggested by the School of Communication of Beykent University.

We are very pleased to host such a reputable international conference. In addition to over 40 well-qualified researchers from different countries, we are today together with two distinguished keynote speakers. Now I would like to introduce them. Let me start with Professor Erik Knudsen, professor of media practice at the University of Central Lancashire. He has also his own film production company. He has directed six feature films and written several books and book chapters and articles.

Our second keynote is Dr. Jeroen Kraaijenbrink, adjunct associate professor of strategy at the University of Amsterdam. He is a strategy scholar and trainer and also the author of The Strategy Handbook: A Practical and Refreshing Guide for Making Strategy Work.

On behalf of the Faculty of Communication and Beykent University, I welcome you to Istanbul and wish you a successful conference.

I would like to continue by thanking some of the individuals who have brought this conference about:

The Honorary Chairperson of the Conference, Prof. Dr. Ali Murat Ferman, the Rector of Beykent University,

Chairperson of the Conference, Prof. Dr. Cemal Zehir, Professor at Yıldız Technical University and also Editor-in-Chief of the Journal of Global Strategic Management,

Co-Chairs of the Conference:

Prof. Dr. Lütfihak Alpkan, Vice-Rector at Istanbul Technical University and Member of the Social Policies Council of The Presidency of The Republic of Turkey,

Prof. Dr. Oya Erdil, Gebze Technical University,

and Associate Professor Dr. Tanses Gülsoy of Beykent University.

Of course, I would like to thank Dr. Asuman Kutlu and all of the academicians and research assistants at Beykent University who have taken part in this organization.

We live in an age of rapid technological change. The pace of change is so fast that businesses cannot respond the way they have in the past. One thing is clear: It is no more possible to live in the way we have been living so far. Industry 4.0 is changing not only our lives but also our dreams. Life will have to be redesigned. When Alvin Toffler, the American futurist, said: "The next major explosion is going to be when genetics and computers come together. I'm talking about an organic computer," he was referring to these days.

People adopt any innovation with great enthusiasm especially in the field of communication and informatics. Information is not as important as it used to be in the past. Now the significant thing is how you present information and make it valuable. Artificially intelligent robot "Sophia" takes questions from journalists and seems almost human... Any development related to Tesla electric cars sets the global agenda. For instance, one of the most creative leaders of our time, Elon Musk, took to Twitter to announce that future Tesla cars would be able to stream YouTube and Netflix. His launching a car into space with "Starman" - the mannequin dressed in a spacesuit - occupying the driver's seat became one of the top trending topics in social media.

All of this points to the importance of innovation, leadership, business management, and the criticality of strategic communication at their interface. Let us also not overlook the significance of reverse innovation. Remember the One Laptop Per Child initiative in 2006, aimed at making it possible for schoolchildren in poor countries to obtain a laptop at a low cost. Later a Taiwan-based company Asus designed its own laptop computers for developing countries and marketed it at attractive prices.

Portable ultrasound devices developed and manufactured in China have been successfully marketed in Western countries. General Electric is one of the best examples of reverse innovation. The company has adapted electrocardiography and ultrasound devices manufactured in developing countries and marketed them in

developing countries, then transported the innovation to the United States. Another example is the US-originating Wal-Mart markets. When Wal-Mart entered Mexico, Brazil, and Argentina, it opened up stores similar to the small retailers common in those countries. Later the company carried the "small Wal-Mart" concept to the United States, opening up a niche for itself, and became even more successful.

A lot is happening also in Turkey. Turkey's first Turkish coffeemaker "Telve," developed by Arçelik, received the iF Design Award and has achieved great success as it offers ease of use and novelty in the market. Another innovative enterprise "yemeksepeti dot com" was acquired by the world's biggest on-line food ordering company in 2015.

Another example from Turkey is Simit Sarayı. Turkey's most popular and widespread simit chain ("simit" is a type of bagel covered in sesame seeds) turned this local food into a brand across the country and opened to the world with franchises. The company, which already has 22 stores in London, is opening new stores in the best locations of the world.

All these examples show the importance of innovation, leadership, business management along with strategic communication. I think we all know the definition of innovation. The term both refers to novelty and community. Are we expecting a richer, easier, and a more comfortable life? Innovation refers to anything which contributes to our expectations from technology to education. Findings from studies on DNA and genetic structures, and inventions in the areas of biotechnology and molecular biology have expanded food and agricultural production. In the post-Fordist approach, we have switched to a flexible manufacturing and consumption system, enabling small-scale robotic production rather than production in large plants, in many areas with fewer people.

Innovation continues on many different fronts and is not within the reach of only the likes of Google, Apple, and Hewlett-Packard. The Japanese company Toyota captures the idea of quality earlier than others, Swedish Spotify creates a revolution in music downloading. Netflix is changing the way we watch movies. Just ten years ago if we were told that people would earn millions from the Internet, we would have dismissed the idea. Today there are innumerable Internet millionaires. Yuri Arcurs is a man who supplies stock photography. People make money by sending tweets or posting blogs. As my Mother used to say: "The world is changing, my Son."

This conference is going to draw up a road map. The map shows the road to leadership, innovation, media, and communication. The discussions at the conference will expand the map, we will find our way through our ideas. Also, I have to point out, that more than us, it is our children who need direction in that new world.

I hope the conference will be rewarding for all.

Prof. Dr. Oğuz Makal

Dean, School of Communication of Beykent University

Conference Co-Chair

PREFACE

Dear Colleagues and Guests,

The 9th International Conference on Leadership, Technology, Innovation and Business Management has now earned itself an important place in management scholarship. This year's conference is hosted by Beykent University and organized through the collaboration of Beykent University, Gebze Technical University, Istanbul Technical University, the International Strategic Management and Managers Association, and CEDIMES.

This year the conference focuses on the theme of "Leadership, Innovation, Media, and Communication." Leadership and innovation issues and their inter-relationships with media and communication are among the areas this year's conference will explore. This represents an attempt by the conference to open up its horizons to related disciplines.

As a co-chair of the conference and a faculty member of Beykent University, I deem it a great pleasure to extend my deep appreciation to the President of the Board of Trustees of Beykent University, Mr. Adem Çelik, the Rector of Beykent University, Prof. Dr. A. Murat Ferman, and the management of all of the organizing institutions, namely, Prof. Dr. Oğuz Makal, Dean of the School of Communication of Beykent University and Conference Co-Chair, the Chairperson of the Conference Prof. Dr. Cemal Zehir of Yıldız Technical University, Chair of the International Strategic Management and Managers Association and Conference Co-Chair Professor Oya Erdil of Gebze Technical University, and Conference Co-Chair Professor Lütfihak Alpkan of Istanbul Technical University, CEDIMES President Professor Claude Albagli, and CEDIMES Co-President Professor Maria Negreponti-Delivanis.

An international conference of this scope takes a lot of work and is the fruit of the efforts of many people. From the formation of the scientific committee and peer review committee to the construction of the Web site, the tasks entailed in the preparation of an international conference are innumerable, and every one of which has critical importance. At last count, my list of jobs to be accomplished as part of this conference numbered 70. We have benefited from the valuable assistance of many individuals in carrying out those tasks.

I would like to take this opportunity to thank the scientific committee, the peer review committee, and the organizing committee. I owe special thanks to organizing committee member Dr. Asuman Kutlu of Beykent University and the conference secretariat on the Beykent University side, composed of the eight research assistants of the School of Communication of Beykent University. The ten of us worked seamlessly as a team. Last but not least, I would like to thank all of the managers and members of the public relations directorate of Beykent University for their assistance.

Our participants this year represent a considerable geographic extent. We hope our international participants also take the time to enjoy the historic and cultural treasures of Istanbul, and we wish all of our participants a productive conference.

Associate Professor Dr. Tanses Yasemin GÜLSOY

Co-Chair of the Conference

INNOVATION POLICY: GOVERNMENT AND CORPORATE PERSPECTIVES

THE END OF WESTERN CIVILIZATION WITH THE INVASION OF THE EAST

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Abstract

Numerous indicators point to the end of Western civilization. Global governance, along with liberalism, had been taken over by the US after World War II, with the addition of globalization during the last 50 years. Despite being America's choice, globalization, has largely favored China in achieving rapid growth rates, and in less than 40 years threatening the US supremacy. In many crucial sectors America is no longer the "first". The greatest risk to the US, however, lies in China's concerted efforts, with the help of Russia and other economies, to replace the dollar as a global savings currency. China, besides being surrounded by numerous economies in Asia, Africa and Europe, is launching a new globalization, reviving the old silk road and providing its products to the world, while at the same time contributing to the development of the less advanced economies. Predictably, in a few short years from now China will have taken over the position of the US, as world ruler. The big question is whether the US will accept this change in leadership or whether, on the contrary, the Thucydides trap which caused the Peloponesian War shall be verified.

Keywords: Dedollarization, end of western civilization, new economic order, new Silk Road, Thucydides trap

1. Introduction

There are numerous indications, not to say evidence, pointing to the conclusion that the global economy is at a crossroad towards catalytic changes. Changes that occur approximately every 200 years, in the form of radical upheavals. "The old world is dying, the new one is slow to emerge and the monsters are invading this twilight" (Gramsci). The global economy paints a picture of chaos, in which nothing works in the way we knew. All those marvelous promises that imposed and welcomed globalization, from one end of the globe to the other, are miserably failing. Ultimately, globalization was not the system that would ensure prosperity for all the inhabitants of the earth, but the system that recorded few winners and countless losers. Globalization is probably the last stage of "Western capitalism", but also the system that accelerated its end.

The West especially, during the last five or so decades, has been increasingly entering largely uncharted waters. All that is well-known, safe and traditional recedes at a dizzying speed and is being replaced by the unknown, subversive and threatening. Western civilization seems to have exhausted the time historically available for the life of each civilization, and is now called upon to surrender its sovereignty to its successor. In particular, the West seems to have entered the unprecedented and inevitable stage of capitalism that we are currently witnessing and is threatening advanced economies with permanent stagnation and the end of growth (Hansen, Summers). The main feature of perpetual stagnation in modern advanced economies is the long-term inability to balance savings and investment, in the form of surplus savings, which cannot be equated to permanent under-investment. The advanced centers of "western culture" are already presenting a clear picture of the general decline prevailing in all facets of social, economic, and cultural life. According to all indications, this is the herald of the end for the Western civilization, as for all those which preceded it and followed the same prescribed path. Civilizations emerge, prevail and die.

However, the end of each era is accompanied by the rise of another, through which a new culture emerges replacing the one whose end has come. In the past, Western civilization was born through the ashes of the ancient Greek culture, with the successive emergence, from 1860 onwards, of the dominant economic centers of Australia, Great Britain, and the United States. At this stage of capitalist development, our civilization, the Western one, which has been co-existing with democracy, capitalism, liberalism and during the last 50 years with globalization, is being marginalized. One cannot doubt the fact that, in recent decades Western culture is gradually losing its glamor, no longer attracting but on the contrary being abandoned by its proponents.

But how does one ascertain the decline of civilizations? Obviously, over time, fatigue saturates the individual elements constituting a civilization, highlighting the difficulty of maintaining their cohesion, reinforcing their

progressive inability of successfully responding to internal and external stimuli, stressing the adverse effects of cumulative trends towards the adoption of unsuccessful economic policy measures, and revealing the gradual loss of temperance in the decisions and actions of officials and citizens.

In Part 1 of my article I will highlight the invasion of China which, according to all indications, will be sitting on top of the world in about ten years from now, thus displacing the US and bringing on a new international economic order, while in Part 2 I will turn to the implications which the latter is expected to have on the various aspects of life on our planet.

2. Good Night West-Good Morning East

Since the end of World War II, and until recently, Western domination, capped by the US, was unquestionable, with the prevailing belief that there would never be a rival in all eternity (Fukuyama 1989). This certainty however, was ruthlessly crushed, forcing Francis Fukuyama to make the following statement: "China is the biggest challenge in telling the “end of history”, as it has been modernized financially while remaining a dictatorship (...). If in the years to come, its growth continues and if it maintains its position as the largest economic power in the world, I will admit that my view was definitely wrong”(Fukuyama, 2018).

Indeed, all developments, analyses and statistics indicate that the West will soon be forced to hand over the keys of its long-standing reign to China, the new, and rapidly rising superpower. This new dominant power of the world is expected to gradually gain the support of other emerging economies in Asia, Africa, Latin America and Europe, and the Balkans in particular. China's huge undertaking, known as the New Silk Road, is attracting an ever-growing number of mostly emerging economies around it, as a metropolis, with the latest acquisition of El Salvador, a fact which is enraging the US, being in their neighborhood (Londono).

Although globalization was America's choice, it was ultimately China that benefited from it. America, for a long time, did not realize that the great danger for it was well hidden under the poor and marginalized giant of China at the time.

2.1. China's leaps gradually marginalize the West

I will now present certain key facts about how fast the Chinese economy is moving and how seemingly painlessly it will surpass the US in the role of world sovereign, and much faster than originally anticipated:

Table 01. GDP growth of the two major economies, America and China, from 2016 and forecasted to 2040 (assuming that America will achieve an annual growth rate of 2.0% while China, respectively, of 6.5%)

GDP	2016	2018	2025	2028	2033	2040
America	$18.6T	$19.4T	$22.3T	$23.6T	$26.1T	$30.0T
China	$11.2T	$12.7T	$19.8T	$23.9T	$32.8T	$50.0T

Source: Malcolm Scott and Cedric Sam (2017) "Here’s How Fast China’s Economy Is Catching Up to the U.S." (Smith)
Published: May 12, 2016 Updated: November 06, 2017

However, the calculations in Table 1 do not accurately reflect the size of GDP and its differences between the two superpowers because they do not take into account their significant purchasing power differences. E.g. a burger costs 1.8 times more in the US than in China. Adjusting the GDP figures for these two economies, on the basis of this difference shows that, as of 2016, China's GDP exceeds that of the US, as follows: China $ 21T and US $ 18.5T.

The data in Table 02, below, complement the US and China’s economic profile as projected for 2025.

Table 02. Basic data for the two superpowers as projected for the year 2025

	USA	**CHINA**
Population	320 million	1,385 million
FDI $*	287,16 billion	347,85 billion
Internet	836 million	189 million
Annual growth rate	2.4%	7.4%
Exports	2.34T	2.34T
Imports	2.85T	1.96T
Public Revenue	2.7T	2.11T
GDP per capita $	54,629.5	7,593.9
Tourism		
Number of international visitors	69,768 million	55,686 million
Average wage		
2013	44,888$	14,600$

*Foreign Direct Investment

Source: Ruchir Sharma (2017) "Slow growth can only help China", *International New York Times*, 26/10

China is running very fast and alone accounts for 39% of world GDP growth in 2016. However, as Table 02 shows, even with PPP per capita income estimates of the two economies (1), China's is still only 1/3 of its US counterpart.

The US economy continues to represent the largest part of the world economy in 2016: 24.7% versus 14.9% for China. However, this percentage for America is steadily declining, as it represented around 50% at the end of World War II, and only 15.1% today, while it is projected to decline further to 13.7% by 2023, respectively.

On the other hand, China is on its part steadily forging ahead and we should already note that America is no longer "First" in several crucial fields. In fact, this explains the persistent and cumulative accusations of the West (mainly the US) against China. China has been accused of a series of "misconducts" such as sponsoring its public companies, being undemocratic, stealing technologies from its competitors, artificially keeping the external value of the yuan low to encourage exports, not respecting intellectual property laws, using the Chinese diaspora (most recently in Australia) as spies, etc.

But even greater than the threat to the US, fueled by China's economic and technological developments, is the one that endangers the monopoly of the dollar as a global reserve currency (Engdahl). Indeed, China is stepping up its program, aiming at de-dollarization, with the support of other allies / emerging countries. Russia's presence is particularly important to that end (Durden), as it is the world's largest oil producer and already the main source of oil for China. In order to reduce risks in their trading and to boost trade between them, these two strong emerging economies established a PVP for the yuan and the ruble in October 2017. Next, they are planning to extend this payment system to other countries participating in the "Silk Road". It is the first time that the PVP system has been launched, for transactions in yuan and foreign currencies, and it is obviously aimed at limiting risks as it allows for the simultaneous settlement of transactions in two different currencies. This new, alternative international monetary system is already partially operational with the introduction on the international market of crude oil long-term futures contracts priced in gold convertible yuan. The plan envisages that China, the world's largest oil importer, will cease paying for it in dollars in the near future, but will acquire it in yuan. As the Chinese currency, in this case, is expected to be convertible to gold, there will in principle be no reason for the oil-producing countries to refuse acceptance. Then, once China proves beyond doubt its economic euphoria and hegemony in the world, the conversion of the yuan to gold will become superfluous. It is obvious that these initiatives threaten the international dominance of the US currency and are intended to force the West, rather soon apparently, to hand over the keys to its long-standing global monetary dominance to China. To China, who does not stand alone on the international stage, but is strongly supported by Russia, and flanked by the BRICS countries (2). Let me add that, China and its allies in the "new silk road" are considering the possibility of creating a common currency, possibly based on the experience of the euro (Negreponti-Delivanis 2018, Part II, E).

When this new giant system of economic and monetary power is dynamically launched, it will be very difficult for the US and all the advanced western economies not to be definitely marginalized. Needless to say, this new system is directly linked to the financing needs of the "new silk road".

2.2. What is the treatment of the superpower expected to be?

America's only response, for the moment, is simply reverting to the past, once more with the adoption of protectionism, although with unclear and ever-changing rules. Donald Trump seems to believe that the measures he occasionally proclaims, aimed primarily at slowing growth and in particular China's new technologies, will be enough to realize the vision he likes to put forward with every opportunity, that is, "America First", which indirectly includes "China Second". However, although international developments are difficult to predict accurately, there are many reasons why the success of this objective seems extremely unlikely, if not impossible. First, because the size of China's economy already exceeds that of the US, in many respects, and nothing seems capable of stalling the completion of its supremacy on all key levels of comparison with the superpower that preceded it. Second, China's special form of globalization will be totally different from the western one that is bidding us goodbye. This globalization bearing the colors of China, threatens to sweep everything in its path. Thirdly moreover, China is unlikely to be substantially affected by Donald Trump's decisions against it, having already entered the stage of boosting domestic consumption accompanied by an unavoidable reduction of its dependency on exports, as well as feverishly pursuing its grand scheme of the new "Silk Road". After all, the multifaceted war between America and China, officially recognized as commercial, is essentially a high-tech war. In particular, America has realized, albeit with great delay, China's superiority, not only in robotics, but also in the many hubs of 5G technology.

On the other hand, China lists its goals for the future, based on a serious, well-thought out plan, and has recently stated (Cohen) that in 2035 she "will be the world’s No1 in new technologies", and in 2050 "the No1 power ensuring prosperity for all" (3).

Obviously, the thorny question from the answer to which depends our survival on our planet is precisely how America will react to the growing threat of losing its global primacy.

The first, albeit unlikely possibility is America's haughty optimism that there is no serious threat of its being marginalized by China, that various solutions such as protectionist measures on imports, non-signing or withdrawal from international trade agreements and trying to reduce the pace of Chinese growth will eliminate the risk. They will not however, because China's prevalence in almost all modern and crucial economic sectors is either already a fact or the necessary foundations have been led for the near future.

The second and more scary possibility refers to the US decision not to accept its global crowding out from China, and therefore to use every possible means to prevent it. In the face of such a devastating prospect for the West, there is obviously always an outlet for the intentions of the superpower, which is simply recourse to war. While China clearly does not want to embark on such an adventure that will delay and perhaps frustrate its detailed plans for the future, such a tragic global development cannot unfortunately be ruled out.

The risk of conflict arises following China’s Communist Congress and Xi Jinping's entry into his second term. China highlights its intention, as well as its potential to become the world's first economy, by relegating the US to second place. This is precisely when it becomes clear that America is not prepared to give China the throne which it has been steadily holding onto for decades and officially recognizes China as its economic enemy (Swanson). Relations between the two superpowers, currently swirling in the midst of an escalating trade war, seem increasingly difficult to avoid the well-known Thucydides' dilemma (or trap), which explains the causes of the Peloponnesian War. The thoughts triggered even today by this "dilemma" are considered more timely than ever, since they are projected two and a half thousand years forward in the US-China relations. It is well known that the Peloponnesian War in ancient Greece was caused by Athens' refusal to cede part of its power to the emerging Sparta, for fear of losing its privileges. Thucydides 'dilemma' is seriously troubling Donald Trump's staff. Graham Allison, in particular, a professor of international politics at Harvard, recently spoke at the White House's National Security Council about how a war between the two superpowers could be avoided, based on his own article which is in turn based on concerns about the Peloponnesian War (Allison).

How probable is a conflict between the US and China? For the time being, according to all indications, a military conflict between the US and China seems to be avoided because neither of the two superpowers wants it. The same however does not apply as far as the eruption of a trade war is concerned, which is increasingly

intensifying and putting globalization in the past. The reluctance of the two superpowers, the US and China, to enter a war between them at this stage, disputes Graham Allison's certainty that there is, in all cases, a "Thucydides trap".

What is by no means certain however is how this rivalry between the two superpowers will evolve over a longer period, and unfortunately the threat of a global conflict with the use of nuclear weapons is heightened, following the US President's recent statement that he will withdraw from the Medium Range Nuclear weapons Treaty signed with Russia, in 1987, for their elimination. Donald Trump justifies his decision on the basis of "Russia breaching the terms of the Treaty". The real reason underlying this decision however, lies in the following additional cause which is frightening in itself. Donald Trump stressed "the need for the US to deploy its military equipment" (Pentapostagma). On its part, China is not lagging behind, but has also started to modernize its military machine (Lind). A particular although justified concern for the West was China's stance, on the occasion of the grand military parade in Beijing for the commemoration of the 70th anniversary of its communist system. This is because there is a lot of evidence in favor of China potentially reverting to the "threat theory" (Wong).

America's greatest concern, which is understandable, is first and foremost in the field of new technologies, where according to numerous indications, China is ahead. Based on a 2017 report by a special congressional committee on inter-state relations (4), it appears that Chinese investments in the US were strategically focused on information and communication technologies, agriculture, and biotechnology. The US administration is now directly accusing the Chinese of stealing its technology and exploiting the hitherto freedoms of investing in America, while imposing numerous restrictions on their own territory as to the acceptance of US investments. According to research findings, this intellectual theft of China has cost the US $ 1 trillion. America's goal is to block Chinese high-tech investment and force China to change its policy, in particular not to "steal" American technology. Specifically, Donald Trump's intention appears to be to isolate China and now openly pursuing a series of measures that are overtly directed against her. These include, among others, America reverting to preferring bilateral trade agreements with its traditional partners, including banning further agreements with China, like the recent US-Canada-Mexico (Rappeport) agreement. Talks are also planned seemingly directed at tightening America's relations with the EU, Japan, Britain, the Philippines, Vietnam, etc., with the aim of keeping China apart and on the grounds that it does not comply with the terms of free trade. However, these measures against China, in addition to being too late, are extremely unlikely to lead to the results expected by America. They are measures of despair that fail to stall the Chinese torrent. That is why nothing in the long run precludes a war conflict between the two superpowers.

3. The New World

One of the major problems that the West should already be concerned with is whether China will be content with conquering world economic sovereignty, or if it will instead seek to impose its own cultural values on the globe, which are quite different from their respective western counterparts. Indeed, China, with Xi Jinping in his second term as its leader, is currently abandoning its earlier approach to the West, which included respect and perhaps even a dose of admiration, and is becoming overtly arrogant. China is already behaving as a rising power against the receding West and it does not hesitate to defend its own ideological bases, downplaying those of the West. The Chinese CC has openly denounced the western liberal regime, which it describes as dangerous and ineffective, citing the effectiveness of its own model, namely the country's one-party rule, arguing that it should be promoted to the rest of the world. At the party's 19th congress, Xi Jinping proposed "a new option for other countries" involving "Chinese wisdom and the Chinese approach to solving the problems of the human race" (The Economist). The democratic regime of the West with its freedom is also at the center of discussions and concerns in China, and is generally rejected because it is considered the cause for the weakness and decline of the Western world. These contradictions are also likely to be heightened by the fact that Xi Jinping, China's CC Secretary General has changed his country's constitution so that he can remain in power for as long as he wants.

How different will the world be, with the new international economic order being ruled by China and the US no longer? How will globalization, capitalism, Western values and liberal democracy evolve? The new world will, of course, be different from that prevailing in the West after the end of World War II and up to the present day. Not, however, as different as it may seem at first glance. This is because, the West has also witnessed significant changes, which are usually not taken seriously enough in comparisons. Let's try to list some:

3.1. Globalization

Let me begin with globalization under Western standards, which is already significantly shrinking under the combined burden of rising nationalism, the return to protectionism, the threat of migration, and the revived respect for national borders. There are three forms of globalization currently prevailing and operating in the world: the traditional western one, the Chinese one with the "new silk road", and the digital one, which has been growing rapidly in recent years.

As far as one can foresee in a constantly changing world, these three globalizations will continue to coexist for some time, and when China fully dominates the globe, its own form of globalization will wipe out the western one. Digital globalization will naturally continue to grow rapidly, coexisting and complementing the Chinese one.

It can be argued that Chinese globalization does not involve a clear choice of open borders, but of adequately managed open borders. China's interest, seemingly at least, is not primarily to compete with the US or the EU, but to build its own empire, in which the economies of the partner countries are linked and in some way dependent on it and not in competition with it. China wants to regulate the terms of trade and maintain a harmonious hierarchy in its relations with other countries. China's intention is to restructure Asia on the basis of a system of political and economic cooperation based on local development and implemented with the help of Chinese investment. With the introduction of this new system of cooperation, China differentiates itself from the American system of competitive cooperation, which it considers illegal (Mottet and Lassere). China's opening up to free trade goes hand in hand with strong protection for its industries (Mottet and Lassere). There is obviously no question as to whether China applies the free competition regime. On the contrary, it is rather obvious that China is following F. List's urges on the need to protect its infant industries from free competition, and is seeking all sorts of combinations between different and often conflicting systems.

It is only natural that the West is seriously worried with China's intentions concerning its foreign trade and relations with other countries, as these are not clear, especially since Xi Jinping has triumphantly been named China's lifelong president by 3000 representatives of the people. The West fears the impact that China's envisaged massive investment may have, mainly in the Balkans, as well as its ambitious goals, with its "Made in China 2025" program to promote Chinese products and new technologies. These fears are justified, at least in part, by the fact that Chinese companies receive high state subsidies, wherever and whenever necessary, thereby securing special privileges over Western businesses and products.

3.2. Capitalism

China has expertly combined communism and capitalism. Its persistence in maintaining communism, in spite of its very significant openings to capitalism, can be explained less as an adherence to ideologies and much more as continuing to maintain the cohesion of this vast country. Confucianism which guarantees respect for social hierarchy and imperial rules, and operates independently of political parties, has been combined with or even partially replaced communism. Chinese leader Xi Jinping, like Mao, also attributes a great importance to combining religion and the communist regime because it is a powerful uniting factor of the people (Buruma). What began and is still continuing in China is "the introduction of capitalism only so far as it guarantees democratic reforms ensuring bureaucratic accountability, encouraging competition and limiting the power of leaders" (Ang).

Thus, modern China has not only been persuaded to accept private companies and entrepreneurs within its realm, but has also taken steps to effectively support them. The private sector is privileged in China, provided it remains under the control of the government. These companies are generously supported by the Government with legitimate methods but also, in many cases, by means that are in opposition to healthy competition, and which anger the US. In addition, the size and power of these Chinese companies are constantly monitored so that their operation does not go unchecked and surpasses the capabilities and power of entire countries, as in the case of many multinational Western companies.

The Chinese private sector contributes by 2/3 to the growth of the economy and by 9/10 to the creation of new jobs (All-China). However, in spite of the success of the private sector, ideological voices have been raised, accusing the leaders of its failure to adhere to the principles of communism and calling for its abolition, arguing that it has accomplished its goal which was its contribution to the development of China, especially now that China's growth has somewhat slowed down (Yuan).

It should be noted that Communist China also tolerates 647 billionaires on its territory which exceeds the 631 present in America.

It goes without saying that the successful combination between market and government prevailing in modern China reserves a special place for private ownership. Indeed, in the case of China, it is well understood that the smooth functioning of the economy requires the coexistence, complementarity and close cooperation between the private and public sectors. And according to all evidence in this area, China has achieved this cooperation, which due to its monolithic past should have been particularly difficult. In the West, by contrast, the utter dominance of the extreme neoliberal view after the 1970s often perceives the public sector almost as a flaw and an anomaly of the system.

3.3. Liberal democracy

The most important accusation of the West against China is the lack of democracy. China's response to this accusation is that: "Everyone wants to enjoy the benefits of democracy, but political analysts would make a deadly mistake in thinking that they can only be achieved by the complete transplant of the American political system" (Ang).

It is naturally a fact that the West strongly believes in its own democracy as the only system that ensures the well-being of its citizens, and furthermore, that its own democratic system is automatically imposed on economies that go beyond a critical threshold of growth, communication and information. The West, therefore, seemed certain that China would adopt this regime as soon as it met the necessary conditions for it. However, although China has exceeded the "intermediate income" threshold, and although communications technology has spread rapidly, with 600 million Chinese holding smart phones and 750 million Chinese Internet users, and in spite of the evolution of the system to a more authoritarian one, western forecasts as to the change of regime have been refuted. Moreover we must eventually accept that authoritarian systems can be just as, or even more effective, than Western democracy. Furthermore, the degree of democracy actually practiced in the West does not differ as often as one believes from the non-liberal system imposed by populism in general (Friedman). Finally, there is democracy outside the West, with completely different standards and conditions, but with the same goal, that of the well-being of citizens. Its achievements, and not only, allow the view that the advantages of democracy are not a monopoly of the West, that they can also be achieved by recipes different from the Western ones and that this also paves the way for the dominance of “populist parties all over the world". These newly established political parties or even governments, have adopted many elements of unfree democracy, which is being implemented in China, and not only.

4. Conclusion

Hopefully, in the end, the Third World War will be avoided, and the transfer of world domination from the West to the East will be as smooth and as peaceful as possible. Certainly, developments in this sensitive area will depend on the rise of nationalism prevailing in China, as well as in Trump's America. An interesting question is whether this rise of nationalism enhances or reduces the tension between China and the US. Does it increase or decrease the chances of war? I would argue that both cases are equally likely.

The radical changes, as far as they can be sketched so far in advance, are summarized as follows: Globalization, as we have known it, will continue to decline. Let me mention that the growth rate of world trade has decreased from 5.5% in 2017 to 2.1%, and foreign investment was reduced by 1/5 compared to the previous year (The Economist). The establishment of Chinese globalization also foresees the simultaneous development of many countries and regions of the world that were in poverty until now. Capitalism, on the other hand, will continue, but in a different form and probably, as state capitalism. Democracy will continue to exist, but more and more as a non-liberal rather than liberal democracy. On the other hand, whether the people will be more or less happy and satisfied with their lives than in the past will largely depend on the form of income distribution. If the new world regime succeeds in reducing the enormous inequalities, and providing everyone with an income that covers both basic and non-basic needs (5), the world will surely be better.

For a more in-depth analysis of this broader topic see: the author's latest essay entitled "The End of the Economic Dominance of the West and the Invasion of the East", Delivani Foundation and Ianos, 2018.

Endnotes

- Taking into account purchasing power differences in the two economies.
- Except for Russia and Brazil, India, South Africa, as well as their partner countries of the Shanghai Cooperation Organization (SCO) which include Kazakhstan, Kyrgyzstan, Tajikistan, Uzbekistan, and more recently Pakistan.
- Statement by Xi Jinping at the 19th Chinese Communist Congress.
- From the US China Economic and Security Review Commission.
- Bearing in mind that what is meant by basic needs is evolving and that the enjoyment of life requires satisfaction, in addition to basic and certain non-basic needs.

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PROPOSAL OF A REFERENCE MODEL FOR CORPORATE GOVERNANCE PRACTICES OF THE CYCLICAL CONSUMPTION SECTOR IN BRAZIL

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Abstract

This research aims to propose a reference model for the improvement of Corporate Governance practices through a comparative study between the state of art and the state of practice of the Cyclical Consumption Sector in Brazil. In order to do that, we elaborated a theoretical research aiming to collect information about the main practices of corporate governance. After that we surveyed the practices implemented by 44 Brazilian enterprises listed as B3 on the Cyclical Consumption sector. The data was collected through annual reports published by the enterprises mentioned above in 2017, and also in websites of relationship with investor of these companies. The next step was the refinement of data using filters to eliminate redundancies of practices, which were grouped, in a first stage, according to what is recommended by the manual of corporate governance practices; in a second moment, the grouping occurred with the help of the R tool, used for data analysis, in the form of clusters. Finally, we applied a questionnaire of scalar type to verify the degree of correlation among the Corporate Governance practices. The results were satisfactory, validating the model proposed and making evident that the state of practice is substantially more advanced than the state of art. Although the Corporate Governance practices are efficient tools to restrict frauds and corruption, many are the challenges to be faced about this topic. Therefore, the management policy for business incubators in this category should be anchored by efficient planning.

Keywords: Proposal of a reference model; Corporate Governance Practices; Cyclical Consumption Sector in Brazil

1. Introduction

The concept of Corporate Governance is traditionally very important for business. It refers to the rules, procedures and management of contracts of the corporations with their creditors, employees, providers, clients and governments, among others (LAKSHAN AND WIJEKOON, 2012). Despite the fact of the term Corporate Governance (CG) is not recent, it is something modern which gained emphasis after the North American accounting scandals. The fundamental basic principles of a "good" Corporate Governance are: disclosure, fairness, accountability and governance responsibility. We can see that all of them are very connected to the ethical codes, having as its main goal the business integrity of a certain enterprise, offering disclosure, trustworthiness and reliability to the users of their social, economic and financial information. It is certain that there are many kinds of enterprises exploring economic, financial and human resources, which are also contributing to the development of the society (DE BENEDICTO, 2002). According to the IBGC (2018), "Corporate Governance is the system through which societies are directed and monitored, involving the relationships between Share/Quota holders, Administrative Council, Board of Directors, Independent Audit and Supervisory Body". It also states that "the good corporate governance practices have the goal of increasing the value of the partnership, facilitate access to its capital and contribute to its perpetuity" (IBGC, 2018). For Andrade and Rosetti (2004, p. 20), the topic Corporate Governance aims to answer to a market demand and will grow a lot due its capacity of influencing a variety of information users, allowing them a solid basis, which is reliable to their decision making processes; and through the diverse relationships that occur in the institution in different corporate levels. Thus, it is necessary a methodological structure which ensures the efficiency and effectiveness of this purpose that allows reduction of errors, fails and frauds which lead to losses, damages and even the extinction of the organization.

There are many possibilities of failure due to lack of effective monitoring of actions/initiatives/practices realized by institutions promoting relevant distortions about these actions. This can be minimized with a good system of Corporate Governance, namely, efficient and effective. It presupposes the prioritization of those Corporate Governance practices that are really facilitators and elementary so that institutions may achieve higher performance on their results. In this sense, this study aims to present a proposal of a reference model for the

improvement of Corporate Governance practices through a comparative between the state of art and the state of practice of the Cyclical Consumption sector in Brazil. By observing the world and specially the national scene, we see a lot of financial and economic scandals related to errors or frauds involving big corporations, and Brazil is also involved in this web of irregularities caused by a minority but which cause huge losses to the great part of the population, especially those who use this kind of information for their financial and economic decisions. Some of the literature used to this study is already about the Brazilian experience, like Leal and Camuri (2008), Scherer (2003), Rangel and Andrade (2005), Barros (2015), Lorenzi, Procopiuck and Quandt (2009). However, any of these studies propose a reference model for Corporate Governance. So, this study starts from a literature gap about this research object. We expect that this research might contribute in a plausible and feasible way for progresses on the state of art and state of practice. We also hope it enlighten new paradigms for modeling structures for the Corporate Governance Practices, translating more complex and reliable information to the investors or information users who are mostly composed by minority shareholders at the margin of the company's decision making processes. This article is structured as it follows: the state of art; methodology; proposal of a reference model; results and underlying analysis, and, finally, conclusions and recommendations. These procedures are described hereafter.

2. Understanding Corporate Governance

We believe that the starting point of the subject corporate governance might have been given by Berle and Means, around 1930. In their study, Berle and Means (1832) analyzed the shareholding of big enterprises in the United States and then discussed the conflicts of interest raised on properties whose structure was pulverized. They were also the precursors on discussing the costs and benefits of the separation between property and control of enterprises. According to Dias (2010, p. 38(, "Corporate Governance is a set of practices which aim to optimize the performance of a company by protecting all interested parts, which means, investors, employees and creditors". The author also mentions as the main goal of corporate governance "[...] to provide more disclosure, fairness on the treatment of shareholders and accountability". Although there are various models of corporate governance around the world, basically the key mechanisms of the management process by world governance are guided by a defined system of principles which involve: Disclosure; Accountability; Fairness and Corporate Responsibility respecting the rights and the fulfillment of standardization aligned to the country legal regulation system, as well as to the company internal regiments, as social statute and internal policies (ANDRADE AND ROSETTI, 2004).

Corporate Governance in Brazil is still in its evolutionary process, gaining strength and credibility, because it is marked by a historic context which starts at a privately held market – characterized by family and state control, during the 20th century – passing through a process of tax breaks for encouraging the development of the shareholding market in the 1970s, increase of company listed and the economic instability of the country in the 1980s, privatization of state enterprises and inflation control in the 1990s, until the 2000s, when there was the wave of initial public offerings (IPO). A great change on Brazilian governance was the foundation of IBCA (Brazilian Institute of Administrative Counselors), in 1995, which later, in 1999, became IBGC (Brazilian Institute of Corporate Governance), publishing the first Code for Best Corporate Governance Practices. According to IBGC, the basic principles of governance in Brazil are: disclosure, fairness, accountability and corporate responsibility. The New Market and the Differentiated Governance Corporate Levels (Level 1 and 2) were created in 2000 by Bovespa (currently B3) and is defined by Gonzalez (2012) as "a listing segment destined to negotiating shares emitted by enterprises which commit themselves, voluntarily, to the adoption of corporate practices and additional disclosures in relation to what is demanded by law". It is the highest degree of corporate governance practices, which involves all the indispensable demands. The enterprises that participate of this segment obtain advantages when pricing their shares and offer advantages to their investors, because they present a greater degree of disclosure. Their main difference is that investors have the right to vote, once the enterprises which adhere to the New Market are forced to provide ordinary shares (PEIXE, 2003).

The corporate governance practices gained force in the United States at the 1980s, when investors became more active in the companies where they had shares at, leaving behind a defensive behavior and started being more active, especially in big pension funds, as the Texaco-Bass Brothers and CalPERS cases. The topic gained more power after the scandals of accounting frauds in the early 2000s, as the Enron, Xerox, Tyco and WorldCom cases. In Brazil, the main guide for CG practices is the Code for Best Corporate Governance Practices by IBGC, which divides the mechanisms in five groups: Partner, Administrative Council, Board of Directors, Supervisory

Bodies and Conflicts of Interest. The practices of each group are suggestions and proposes based on principles and conducts so the enterprises which adopt them get a better management performance. To Valentim and Souza (2018), practices may be understood as innovative initiatives which derive from changes in previous practices, different and better ways to perform an action, process or project, aiming efficiency and effectiveness and, consequently, management excellence. Thus, we understand that corporate governance is a set of pratcies used for managing na entity aiming to improve the relationship among shareholders and to determine and control the strategic direction and the performance of organizations (HITT; HOSKISSON; IRELAND; 2014).

3.Methodology

In a first moment, we research the specialized literature, which allowed us to identify the Corporate Governance practices. After that we identified the enterprises listed on B3 which belong to the sector of research. Finally, we surveyed the Corporate Governance practices in these enterprises (Cyclical Consumption sector). From the perspective of our theoretical framework, we consulted books and scientific articles published in national and international journals in the basis Capes, Scielo, Google Academy among others. Then, we defined the Corporate Governance levels and the sectors to be analyzed through the B3 website: New Market (142 enterprises), Level 2 (22 enterprises), Level 1 (27 enterprises), Bovespa Mais (60 enterprises) and Traditional (191 enterprises). Of this total, 84 belong to the Cyclical Consumption sector. Right after the division of the CG levels, we chose the enterprises according to the level with highest CG demand, the New Market level. We chose the Cyclical Consumption Sector, composed by various segments, and, from these enterprises, we randomly picked 44 up. For collecting data we defined which tools of every enterprise should be submitted to analysis, allowing the beginning of the documental study, in which we analyzed the company annual reports, considering 2017 as the reference year regarding Corporate Governance, and the company websites for Investors Relationship. The collection of data happened through query to the B3 website and the company websites as well, where we could obtain downloadable material.

The study referred to the reports relative to 2017. Then, the results should not be generalized to the other years, once the practices observed in the year researched might be different from the ones adopted in the past. So, the results are presented and analyzed in parallel; and individually, by phase/stage. With the intent to reduce subjectivity, we used the R Software to elaborate the clusters of Corporate Governance practices, as well as the proposal of reference model. Finally, aiming to verify the correlation among the Corporate Governance practices we applied a questionnaire of scalar type (Survey) addressed to specialists with knowledge and experience about the research object (Corporate Governance Practices), such as Annalists, Directors, Financial Managers and others. We applied three pre-tests before the definitive test. The questionnaire was applied via email and also via Google Forms. We sent 35 questionnaires, of which 24 were answered. Right after that, we applied the Spearman statistical technique, which proves to be appropriate to this case. In the next section we present the "propose of a reference model for improving Corporate Governance practices to the light of the Brazilian Cyclical Consumption Sector."

4. The Proposal: Reference Model for Improving Corporate Governance Practices

This section presents the proposal of reference model for improving the corporate governance practices in the Brazilian cyclical consumption sector. The model is structured according to the following phases:

- Phase 1: Identification of Corporate Governance Practices Based on the Theoretical Framework of the Brazilian Cyclical Consumption Sector;
- Phase 2: Clustering/Organization of Corporate Governance Practices;
- Phase 3: Proposal of Improvement for the State of Art from the State of Practice – Cyclical Consumption Sector;
- Phase 4: Analysis of the Correlation among the Corporate Governance Practices/Initiatives/Actions using Spearman.

We describe these phases as it follows:

- **Phase 1: Identification of Corporate Governance Practices based on the Theoretical Framework**

Stage 1 – Corporate Governance Practices – IBGC

The Best Corporate Governance Practices of 2017 were taken from the Code of Best Practices, which are recommended and separated according to the chapters: Shareholders, Administrative Council, Board of Directors, Supervisory and Control Bodies, and Conduct and Conflict of Interests.

Stage 2 – Corporate Governance Practices – New Market

The New Market is a segment of the B3 listing which destined to the negotiation of shares issued by enterprises that voluntarily compromise to the adoption of additional corporate governance practices in relation to what is demanded by the law.

Stage 3 – Corporate Governance Practices – State of Practice

Once identified the Corporate Governance practices of the 44 enterprises researched (from the cyclical consumption sector), according to the annual reports and the relationship with investors, the next step was to organize them. The Corporate Governance practices of these companies (Practices Behavior), presented according to the chapters used by IBGC – Shareholders, Administrative Council, Board of Directors, Supervisory and Control Bodies, and Conduct and Conflict of Interests, in a total of 98 practices, are:

- ***Corporate Governance Practice of the enterprises researched – Shareholder:*** Are 22 practices found on the enterprises disclosure. It was possible to verify that some practices are more frequently adopted than others, like: all companies presented one action/one vote, statute/social contract, mediation and arbitration, general assembly/shareholders meeting, dividends policy and share dispersion. These are practices recommended by the IBGC and demanded on the New Market. We emphasize that it is fundamental to guarantee fair treatment to all partners in companies where the shareholders evaluate to be convenient to adopt structures in which there are no symmetry between political and economic rights, which means: proportional to their participation on the social capital, in relation to the economic rights and in any relevant events, as would be the case of transference of control or corporate reorganization. Then, it is essential that all companies include this practice on their statue/social contract, or in a compromise to be signed by the parties. The Privacy Policy, although is not demanded and/or recommended, achieved a percentage of 55%. Around 46% of the companies adopted the practice of liquidity of titles during the research period. The other practices reached a percentage rate under 50%. However, the number of approaches does not represent the quality of Corporate Governance codes, but the diversified way these companies address the topic.
- ***Corporate Governance Practices in the companies researched – Board of Directors:*** When it comes to the Board of Directors, as shown on Figure 1b, the disclosure, the relationship between the interested parts and the remuneration are practices adopted by most companies. The reputation has economic value and might attribute competitive advantages. Thus, the board of directors must guarantee that, besides the mandatory information by law or regulation, other information is provided to the interested parts, of all kinds that might interested this public – financial or non-financial ones, positive or negative, as soon as they are available in a clear and concise way, so that the content prevails over the way of divulgation. The information must also be made public immediate and simultaneously to all interested parts, regardless the geographic localization. It is still possible to say that the role of the Board of Directors is still low on the enterprises Conduct Codes, while in 13,36% of them the risks and the control environment are periodically reported, as well as files and necessary information.
- ***Corporate Governance Practices in the companies researched – Administrative Council:*** the administrative council is the collegiate body in the company whose members are elected by the partners to exercise the position of counselors to preserve the enterprise principles, values, social object and governance system. Thus, when it comes to the administrative councils, only the recommended practices of Number of Members, Counselors Independence and Term of Office achieved 100%. The others do not follow the same path, as Implementation of Administrative Council (54,55%), Segregation of Presidential Functions (22,73%), Relationship with the Administrative Council (15,91%), Counselors Remuneration (31,92%), Confidentiality (22,73%) and the other ones, which were under 20%). Through the enterprise reports we could observe that the planning of succession and evaluation of the council and counselors are rare practices, although they are very valuable because they

contribute to an effective council, making part of the accountability of the organization and allowing improvement of its governance.

- ***Corporate Governance Practices in the companies researched – Auditory and Control:*** This figure presents the practices directed to the enterprises auditory and control. As we can verify, 62% of the companies do not have auditory committees which, according to the Code for Best Practices by IBGC, is a relevant body which assists the administrative council, paying attention to the risk control processes, processes and controls relative to the production and disclosure of the enterprise reports and information for investors, on the evaluation of efficiency of internal control and on fraud prevention, aiming to ensure that the information published by the enterprise are reliable and just. A relevant aspect is that 50% of the enterprises presented concern with actions that ensure that the organization is acting according to its principles and values, reflected in policies, procedures and internal standards, as well as to the laws and regulation devices to which it is submitted to (Compliance).
- ***Corporate Governance in the companies researched – Conduct and Conflicts of Interests:*** This figure illustrates 18 practices addressed to the conduct and conflict of interests and, as we can see, all the enterprises researched adopt the practice called Conduct Code, whose main goal, according to the Code for Best Corporate Governance Practices is to "promote ethical principles and reflect the organizational identity and culture, based on responsibility, respect, ethics and considerations of environmental and social order" which, on its turn, is advantageous, once the practice increases the level of internal and external reliability of the organization, which results on values of image and reputation. Another practice that is adopted by most organizations (in a percentage of 75%) is the Information Disclosure Policy. This practice guarantees that the partners and investors are treated equally, having simultaneous access to information. After that are the Conflict of Interest practices, with 66%, Reporting Channel and Stock Negotiation Policy, both with a percentage of 64%. Finally, the practices under 41% are Conduct Committee (41%), Donation and Contribution Policy (36%), Transaction among Interested Parts (30%), Policy for prevention and detection of illicit actions (25%), Financial and risks committee (25%), Council Reelection (25%), Policy for relationship with suppliers (23%), Policy for relationship with contributors (20%), Policy of relationship with clients (18%) and Vote Register (11%).
- **Phase 2: Clustering/Organization of Corporate Governance Practices in the Cyclical Consumption Sector**

Right after the identification of the practices disclosed by the researched enterprises, the next step was the application of tests for recognizing the best quantity of clusters. To do so, we applied grouping tests using R Software, considering 6 to 14 groups. To contribute on the definition of the amount of clusters we used a dendogram, which illustrates the grouping in a hierarchical way, as well as the cutting point for the creation of groups as it is used in Ferreira's (2018) work. Based on this dendogram and analyzing the representativeness of each grouping formed in the quantities of 3 to 14, we defined ten groups of practices. Based on this separation, 98 practices were distributed, as we can see on Table 2:

Table 2 – Quantity of corporate governance practices by cluster

Cluster 1	Cluster 2	Cluster 3	Cluster 4	Cluster 5	Cluster 6	Cluster 7	Cluster 8	Cluster 9	Cluster 10
4	25	19	6	17	8	4	6	4	5

This way, aiming to highlight/emphasize the strongest terms in each cluster we generated the term cloud, presented on Figure 1.



Figure 1 – Word cloud with most evident terms in the clusters

Based on the description of practices in the groups and with the help of the term cloud the groupings were characterized. Hereafter we present the groups and their denominations:

- **Group 1**– of the four (4) practiced grouped here we identified the strongest terms as: code, role, conduct. After contextualizing, this group was named "Conduct Practices";
- **Group 2** – this is the largest group, containing 25 practices. The most frequent terms were: counselor, board of directors, arbitration. Here we observed that the practices related here pointed to the management in different organization levels, then, this group was named as "Counselors Practices".
- **Group 3** – With 19 governance practices, the most frequent word is "committee". By observing the associated practices, this group was named as "Committee Practice".
- **Group 4** – This group counted with six (6) practices. The most frequent word was "Parts". By observing the practices associated to it, we verify they are about the related parts. Then, the group was named "Relationship Practice".
- **Group 5** – With 17 governance practices this group has the word "Policy" as the most frequent one. We observed that the practices pointed to governance which somehow involved the various policies adopted by the enterprises. Thus, the group was named as "Policy Practice".
- **Group 6 –** This group presented eight governance practices and the most frequent words were "Council" and "Administrative". After observing the associated practices we could see many of them (term of office, availability, remuneration, selection) which related to people management. Then, this group was named "Council and Administrative Practice".
- **Group 7** – With four governance practices, the word "Control" was the most prominent. The practices of this group are referent to the adoption of control criteria, ways of risks management, conformity action plans and others. Thus, the group was named "Control Practice".
- **Group 8** – This group presented six governance practices. The spotted term was "Governance". By observing the group it was possible to see practices that pointed out to the search for governance practices. The group was then named "Management Practice".
- **Group 9** – with four governance practices, the most frequented term was "Partner". The practices in this group were about deal management, information and access available. It was then named "Partners Practice".

- **Group 10** – containing five governance practices, the most frequent term was "Shares". In this sense it was possible to observe that the practices in this group were related to the shareholders, since the perception of their needs to action tracking, the incentive to purchasing plan and distribution of dividends. The group was then named "Share Planning Practice".

- **Phase 3: Proposal of Improvement of the State of Art from the State of Practice – Cyclical Consumption Sector**

In this phase we present a proposal of reference model integrated between the state of art and the state of practice referent to the corporate governance practices. This procedure is developed through a comparative study between the state of art and the state of practice. Then, Figure 2 presents the structure of the proposal for improvement of corporate governance practices to the light of the Cyclical Consumption Sector.

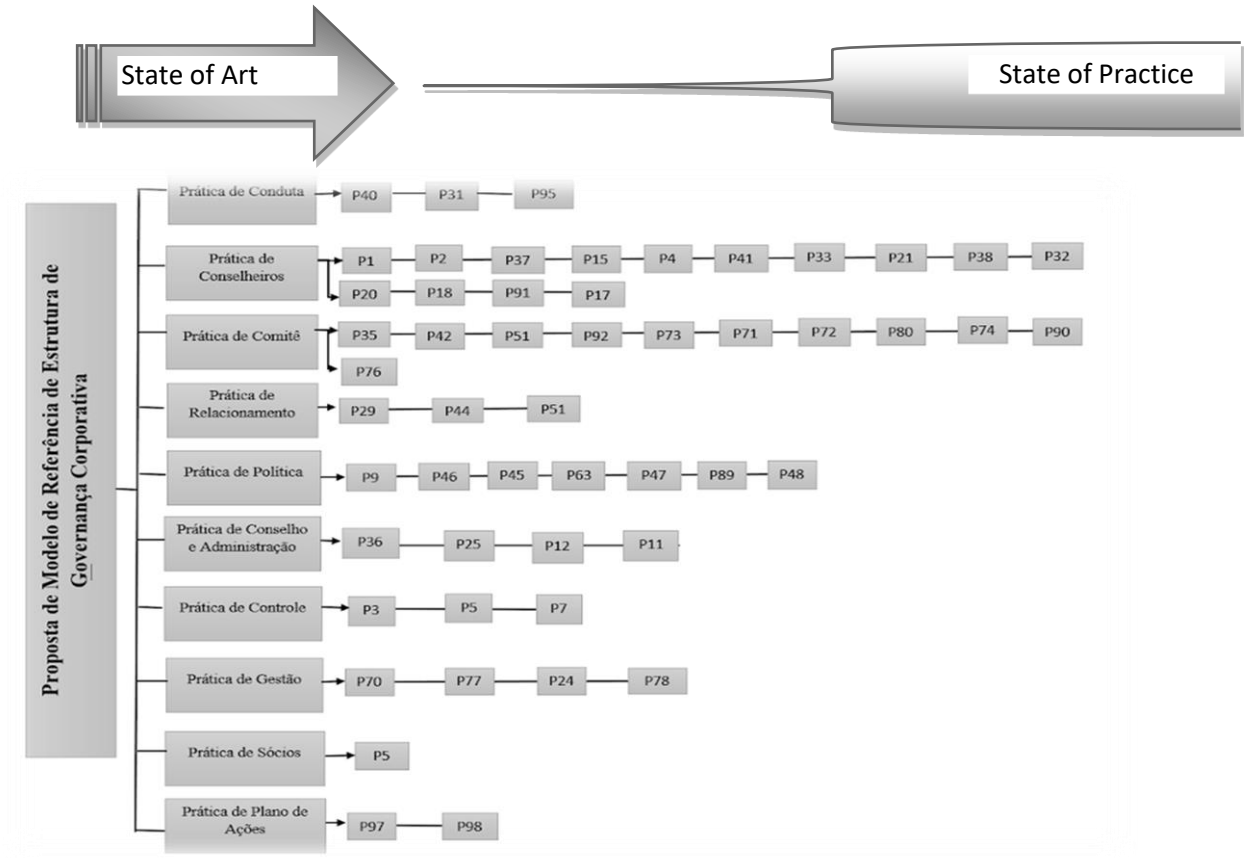


Figure 2: Reference model for improving corporate governance practices – cyclical consumption sector

As we can verify, the state of art is incomplete in comparison to the state of practice, once it does not specify the main initiatives taken to guarantee that the managers who implement the Corporate Governance practice will fulfill their goals on decision making, conflict of interest and information asymmetry. We identified 98 practices of 44 enterprises in this sector. This model presupposes the consideration of CG mentioned in the theoretical framework but also the consideration of advances on the technical/practical potentialities implemented by the enterprises, as the case in question. It means that the state of practice contemplates a substantial advance in relation to the state of art, once there are practices that are already implemented, but not yet mentioned on the theoretical framework.

- **Phase 4: Correlation Analysis among Corporate Governance Practices/Initiatives/Actions using Spearman**

Right after identifying the corporate governance practices/initiatives/actions we applied the statistical method correlated analysis of practices aiming to verify the correlation among the practices mentioned considering that, in order to consider a practice as well succeeded, the implementation of another practice is required. It allows the managers to better orient organizational resources and avoids compromising the business results. Figure 3

illustrates the correlation among the practices/initiatives/actions in the cyclical consumption sector, using the Spearman statistical technique.

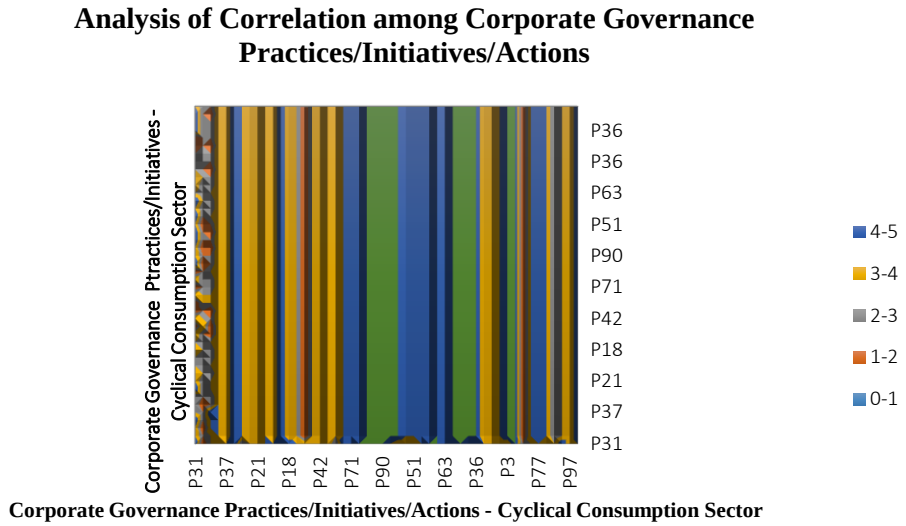


Figure 3: Correlation analysis among corporate governance practices/initiative/actions

Gathering the results presented on Figure 8 it is possible to state that the practices P24, P44, P72 and P41 are strongly related to tall corporate governance practices in the cyclical consumption sector. It means to say that the practices mentioned must not be individually implemented, disregarding other practices. It is evident that, if implemented without considering their correlations, the results might be compromised as, for example, the generation of incomplete and inconsistent information which consequently leads to inappropriate decisions.

3.4 General Discussion of the Proposal of Reference Model and Implications to the Management Practice

The Reference Model which constitutes the object of this research is a proposal which aims to contribute to the improvement of a method which already exists (state of art), based on the data and results found. Besides, it tries to increment the inconsistencies and deficiencies of the enterprises in relation to the Corporate Governance practices, as well as enable the smartest decision, once the model allows managers to implement practices that really increment value to the business, besides optimizing resources, as they center their efforts on practices that are really relevant to the company. It is plausible and feasible to evidence that efficiency and effectiveness of its applicability might depend on other variables. Because of that, the model presented here is, above all things, flexible. According to Vernadat (1996) apud Goulart (2000), reference models must contain a certain degree of generality and be customizable. It is up to each manager to evaluate, consider and implement the model according to the specificities of the enterprise. It is right to say that this model was developed through a study between the state of art and the state of practice. It is evident that some questions are still opened, once this model must be submitted to other validations, besides the ones elaborated by specialists (external validation). Either way, we believe that the model proposed here does not intend to be complete, but to express a substantial contribution to a more robust propose for a knowledge area so relevant, as it is the Corporate Governance.

5. Final Words: Lessons Learned

This research aimed to present a proposal of a reference model of a corporate governance structure for enterprises of the Brazilian cyclical consumption sector. Then, the goal was achieved and the research problem was solved. To do so, we made a wide bibliographical review and a documental research which subsidized the identification of Corporate Governance practices. The data collected showed that the state of practice is much more advanced than the state of art and that some enterprises stand out on the implementation of practices which are recommended by the IBGC and demanded on the New Market and on the implementation of practices created by the organizations themselves. Thereby, the research presented, through its results and the proposal, information which contribute to the improvement of knowledge about governance structures and their deficiencies or shortages in big national enterprises of the cyclical consumption sector, allowing the reduction of information asymmetry and the possibilities of errors or frauds. Howsoever, although Corporate Governance

practices are efficient tools for restricting frauds and corruption, many are the challenges to be face about this topic Kusumanightias; Ludigdo, Irianto, and Mulawarman, 2016).

Then, it is plausible and feasible to say that this is an extra tool to help the managers on their decision making processes. This research may also become the decision spectrum smarter, once this model allows managers to implement the practices which might really increment business value, besides optimizing resources, once their efforts are centered on practices that are more relevant to the company. On the other hand, by presenting a correlation study, this model gains emphasis, once the implementation of a practice is totally dependent of the parallel implementation of another practice. We highlight that one of the greatest difficulties was the analysis of annual reports and the websites directed to the relationship with investors, because many of them needed more precise and relevant information about the practices adopted, aiming the importance of Corporate Governance, without clarifying about the practices adopted. It is also important to say that this research was applied in an only sector, which may represent a limitation factor. We recommend that future studies are dedicated to analyze enterprises from other sectors or comparative studies sector by sector. Besides, as a next step, we recommend the internal and external validation of this model by specialists with technical and scientific knowledge about this object of investigation.

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CAN TECHNOLOGY SUBSTITUTE ITS CREATOR? IMPACT OF INDUSTRY 4.0 ON ENGINEERING WORK1

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Abstract

In the era of digital transformation, the concept of Industry 4.0 brings tools, methods and technologies such as big data, autonomous robots, sensors and actuators, simulation, AR/VR, additive manufacturing, cloud computing, artificial intelligence, horizontal and vertical integration, internet of things, cyber security together for higher levels of effectiveness and creates high expectations both in organizations and individuals. Exploring the advantages of Industry 4.0 has been one of the hottest research topics in recent years; however, its implications on production relations and welfare are rarely discussed. In its highest level of adoption, Industry 4.0 promises lights-out manufacturing or dark factories where the intelligent hardware and equipment replace labour force and brings the discussions on the increasing unemployment and decreasing value of existing human skills and experience. In the relevant literature, there exist many academic studies regarding the effect of Industry 4.0 on work, jobs, and employment, but these studies focus mainly on blue-collar workers. In this context, the current paper aims to examine how engineers who have made a significant contribution to the emergence, diffusion, and development of new technologies will be affected by Industry 4.0. By using qualitative data collection and case study methods, the impact of digital transformation in manufacturing on engineering work and jobs are explored. Structured interviews were conducted with the managers, who are also engineers, in two manufacturing companies that operate in the different tiers of the value chain in the white goods industry, which is one of the sectors with the highest level of digital maturity and high value-added in Turkey.

Keywords: Digital transformation, engineering work, fourth industrial revolution, industry 4.0, technology, white goods industry

1.Introduction

It is imperative to follow the advancements in manufacturing technologies in order to adapt quickly to the ever-changing market demands, to make high quality, low-cost, and efficient production, and to keep up with the global competition (Rojko, 2017). The new reality of production and economy is the concept of Industry 4.0, which has been a trend in recent years (Ślusarczyk, 2018). The concept of Industry 4.0, which is used synonymously with the Fourth Industrial Revolution, was first introduced at the Hannover Fair in 2011 and announced in 2013 as a strategic initiative of Germany (Xu, Xu, & Li, 2018). Industry 4.0 refers to making devices smarter by aligning traditional production systems with Internet technologies (Lackey, 2014). More specifically, Industry 4.0 is the digital transformation of the entire value chain based on cyber-physical production systems, which are the innovations in digital technology such as the internet of things (IoT), data analytics, robotics, cloud computing, and artificial intelligence (Kowang et al., 2019; Ng, 2020). The definitions mentioned above bring to mind the third industrial revolution. However, the fact that digital technologies used since the third industrial revolution have become more advanced and integrated systems that can transform the global economy and society has given birth to Industry 4.0 and made it different from the third industrial revolution (Schwab, 2016). Brynjolfsson and McAfee (2014) argue that the factors that led to the emergence of Industry 4.0 and differentiated it from other industrial revolutions are innovation based on the recombination of existing parts, exponential developments, and digitalisation.

Obviously, this transformation in the industry will lead to significant transformations in work life, as well. Technologies that contribute to cyber-physical production systems have already begun to change the work practices of scientific management principles that consider people as a part of the business process (de Kok, 2016). The work that means "*the performance of some act or skill in return for an economic reward, or in the ultimate hope of receiving some such reward*" (Danaher, 2017) is now more cognitively sophisticated, team-oriented, time-pressured, mobile, and also requires new skills (Lee, 2016). Furthermore, how technological

[1] This paper is based on the Ph.D. dissertation of Kübra Şimşek Demirbağ.

developments will affect employment is another object of interest. Artificial intelligence (AI) can now drive cars, serve in restaurants, and defeat human champions in games and contests (Bostrom, 2014; DeCanio, 2016), in other words, AI has the potential to surpass the human ability. However, there are many different arguments in the literature regarding the future of work and employment. On the one hand, it is claimed that human labour will not lose its importance in the coming years, and technological advances will lead to an increase in employment (Spath et al., 2013; Rüßmann et al., 2015); on the other hand, it is estimated that some jobs will be lost due to digitalisation (Bowles, 2014).

Demirbağ and Yıldırım (2018) categorized academic publications on Industry 4.0 according to their themes and revealed that Industry 4.0 publications were grouped under five different themes: (1) status quo, trends, challenges and opportunities, and future directions, (2) business models/transformation, system integration, strategic management, process and/or production engineering, (3) education, (4) tools and technologies, and (5) organizational life. The publications, which were gathered under the theme of organizational life, have centred on issues such as human-centred design, hybrid organizations, human-robot interaction, and the future of the work (Demirbağ & Yıldırım, 2018). Mostly, blue-collars are taken into consideration in academic publications on the future of work (Haeffner & Panuwatwanich, 2017; Ras, Wild, Stahl, & Baudet, 2017), and this is quite reasonable since robotics and automation will first be substituted with routine and manual tasks that require low skills (Autor, Levy, & Murnane, 2003). Nevertheless, robots will perform non-standardized and cognitive tasks in a very costly way (Decker, Fischer, & Ott, 2017), and substitutability cannot be limited to routine and manual tasks alone. From this point of view, the impact of Industry 4.0 on white-collars should also be examined, and appropriate policies should be developed in areas such as education, labour, and employment security. This paper examines how engineers, who have an essential role in the emergence of the fourth industrial revolution, will be affected by Industry 4.0 by the case analysis method. In detail, the paper focuses on the impacts of Industry 4.0 on engineering work and investigates what education and training requirements and new skills and competencies are for engineers, whether digital transformation will change the job & task descriptions, the number & variety of tasks, the depth & breadth of technical knowledge, and whether the engineering work will lose its value and dignity as a result of these changes.

2. Literature Review and Theoretical Framework

There has been some concern in the literature that automation and digitalisation, accelerated by Industry 4.0 wave, will increase unemployment (Arntz, Gregory, & Zierahn, 2016). On the other hand, it is argued that advances in technology create new jobs while making some jobs obsolete (Mashelkar, 2018).

Frey and Osborne (2017) examined the susceptibility of 702 occupations to computerisation to classify them as high-, medium-, and low-risk occupations and to investigate the expected effects of computerisation on the labour market. Their research shows that approximately 47% of the occupations in the USA are in the high-risk group, while the susceptibility of engineering and science occupations to computerisation is low since they require a high degree of creative intelligence. Presently, computerisation is not a substitute for creative science and engineering professions but will be complementary in the long run. Another noteworthy finding of the research is that education and wages show a negative relationship with the probability of computerisation (Frey & Osborne, 2017). Even though occupations that require low skills and low levels of education are in the high-risk group, professions that require high skills and creativity, such as engineering, are ultimately in danger of succumbing to computerisation.

While engineering is defined as designing objects, processes, and systems systematically and iteratively to meet the needs and desires of humanity, technology is a modified form of the natural and designed world to meet human needs and desires, in other words, technology is a product or process that arise from the application of engineering design processes (Quellmalz, 2014). In that case, will the technologies created by engineers, who are the key actors in advancing technology, ultimately take away their jobs? While technology is still complementary to engineering, developing appropriate plans and policies with a proactive approach is critical.

In the literature regarding Industry 4.0 and engineering, there is a limited number of academic publications that focus on the training and educating engineers for Industry 4.0 (Chen & Zhang, 2015; Richert et al., 2016; Golob & Bratina, 2018) and the new skills and competencies needed for Industry 4.0 (Motyl, Baronio, Uberti, Speranza, & Filippi, 2017) although more attention needs to be paid to these issues.

3. Research Method

In this paper, case study method that refers to "an empirical inquiry that investigates a contemporary phenomenon in depth and within its real-life context, especially when the boundaries between phenomenon and context are not clearly evident" (Yin, 2009) is used since case studies are usable when focusing on contemporary events, control of behavioural events is not required, and the form of research questions is "how" and "why" (Yin, 2009). The research steps are presented in Figure 1.

Since the white goods sector is one of the three sectors with the highest level of digital maturity (TUBITAK, 2017), it has been selected for research. In this regard, the interviews were conducted with the managers of two white goods companies, one of which is the supplier of the other.

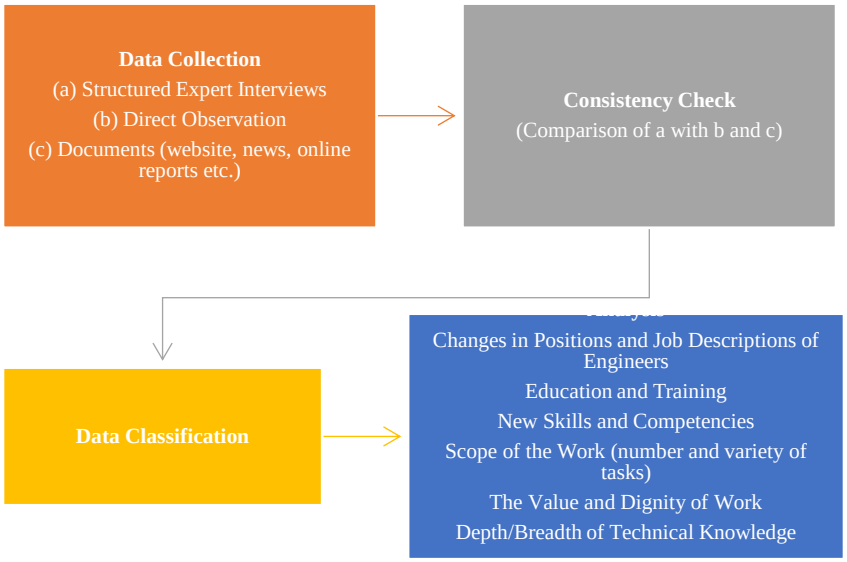


Figure 01. The research steps

Firstly, the company managers were asked interview questions about the engineering work, and their answers were compared with the data obtained from direct observations and documents, such as the website of the company or related online news/reports, to check the consistency. Table 1 shows the interview questions. The collected data were classified and analyzed considering the discussions in the literature.

Table 01. Interview Questions

Research Issue	Interview Questions
Changes in Positions and Job Descriptions of Engineers	Are there any changes in positions and job descriptions of your engineers due to the transition to Industry 4.0? Do you think Industry 4.0 will affect your engineers negatively? Will the number of engineers decrease because of Industry 4.0? Which engineering positions may disappear? Why?
Education and Training	Should Industry 4.0 training be given to engineers? If engineers were trained in your company, what was the scope of the training? Will the level of engineering education increase? Why?
New Skills and Competencies	What are the new skills and competencies for engineers? Why?
The Scope of the Work	How has Industry 4.0 changed the number and variety of tasks of engineers?
The Value and Dignity of the Work	Will Industry 4.0 reduce the value and dignity of the engineering work? Why?
Depth/Breadth of Technical Knowledge	How will digital transformation affect the depth/breadth of technical knowledge of engineers? Why?

4. Findings

Information about the interview participants and the company is presented in Table 2.

Table 02. Participants and Companies

Company	Participant	Company Information
A	Founder & Managing Director	A well-known supplier company that produces parts of furnaces and ovens for the main industry with 160 employees
B	Production Technologies & Industry 4.0 Manager	One of Turkey's leading white good companies that offer products and services to more than 130 countries with 30,000 employees

The answers given by the firms to the interview questions are summarized and presented below.

4.1. Changes in positions and job descriptions of engineers

Company A – There have been some changes in the scope of the work of engineers working in the product-process development department. Two engineers working in this department started to work more interactively. The engineers in the R&D department were solely responsible for product design; now, they design processes as well as products.

Digital transformation will not negatively affect the engineering work; engineers are the luckiest ones if they are aware of digital transformation and Industry 4.0 and can keep up with technology.

The number of engineers will not decrease in the medium term, but some departments and positions will not be needed in the long run, such as production, quality, and production planning. On the other hand, R&D employees will not lose their jobs.

Company B – Engineers will not suffer from digital transformation, and the number of engineers will increase since the systems will be more complicated.

The production planning department will disappear because there is no need to plan when everything is visible. Quality engineers will also disappear. Production engineers will not disappear in the medium term but may disappear in the long term. Additionally, the number of maintenance engineers will be reduced, but the number of R&D engineers will surely increase.

4.2.Education and training

Company A – The expected level of education for engineering positions will increase. They should study for a master's and doctorate. Industry 4.0 should be given as a lecture at universities, and engineering students should have in-depth knowledge of some of the Industry 4.0 components.

The company's engineers join events and workshops regarding Industry 4.0 and received simulation training. As the company aims to increase robot investments, they provide engineers with simulation and offline robot programming training.

Company B – Technical Academy and TechPro Academy are training programs of the company. TechPro Academy includes modular programs, internal and external training programs, and specialized training programs prepared in cooperation with a university. For two years, 400 white-collars have been trained through this program, which includes courses such as supply chain, project management, and strategic planning. The technical academy is designed to enable technicians to adapt to new technologies. Besides, some training programs are provided in the company's laboratory, as well.

4.3. New skills and competencies

Company A – Engineers should be versatile and well-read people who can see the big picture. Also, having in-depth knowledge of a technical subject like robot programming is critical. Expecting creativity and problem-solving skills from an engineer is like expecting honesty from a person. An engineer has to be creative and problem solver. These are not expectations but necessities.

Company B – Nowadays, everything is fast but accessible. Only desire, effort, and enthusiasm are needed. Anyone with these features can learn everything from search engines, platforms like Youtube or MOOCs like Udemy, Coursera, and edX.

4.4. The scope of the work

Company A – Just as there are differences between the past and present, today and tomorrow will be different from each other. Of course, there may be changes in the scope of the work.

Company B – The biggest problem of the new generation is the uncertainties in the process, but the digitalisation of the processes will make prioritisation and identification of job roles and tasks possible.

4.5. The value and dignity of the work

Company A – Competent engineers will take the job of engineers who do not develop themselves. Some positions may disappear, but the value of the remaining engineering works will increase.

Company B – It will definitely increase.

4.6. Depth/breadth of technical knowledge

Company A – The depth/breadth of technical knowledge will increase. In addition, the meaning of the concept of "technical" may change.

Company B – Yes, it will increase, but technical knowledge will be more accessible.

5. Conclusion and Discussions

In this study, by the aim of collecting information about the implications of Industry 4.0 application on engineering jobs in manufacturing, face-to-face interviews were conducted with the managers of two white goods companies, and the effects of the fourth industrial revolution on the engineering work and the recent changes in the work of engineers of the companies were explored. All the questions addressed to the company managers were grouped under six topics: (1) changes in positions and job descriptions of engineers, (2) education and training, (3) new skills and competencies, (4) the scope of the work, (5) the value and dignity of the work, and (6) depth/breadth of technical knowledge. When companies were asked whether there were any changes in job descriptions and positions of engineers due to digital transformation, Company A stated that engineers started to work more interactively. On the other hand, the title of the manager in company B is the "production technologies and Industry 4.0 manager", and the fact that the department of production technologies and Industry 4.0 has been established in the company can be considered a striking change. Both companies believe that digital transformation will not reduce the number of engineers, and even complexity may increase the number of engineers needed. Nevertheless, those who cannot keep up with the technology, whether they are engineers or not, can lose their jobs. Both of the managers gave the same answers to the question about which engineering positions would eventually disappear. Production, quality, and production planning departments may disappear over time, but there is nothing to worry about R&D engineers. Company A believes that the level of education expected from engineers will increase and that Industry 4.0 should be given as a course at universities. Both companies have been training engineers or, at least, encouraging them to receive training for a while. Company B has established very systematic training programs for both white- and blue-collars as a large corporation, but Company A encourages its employees to participate in workshops and similar events. When asked what new competencies and skills expected from engineers, Company A stated that engineers should be versatile specialists, while company B thinks that only desire, effort, and enthusiasm are needed. Both companies expect changes in the scope of the work, i.e., the number and variety of tasks. Besides, Company B considers that the digitalisation of processes will make the boundaries of tasks and job descriptions more clear and role conflicts can be eliminated. According to responses from the companies, the value and dignity of the engineering work will increase since Industry 4.0 will cause engineers who do not improve themselves to lose their jobs, and only the successful engineers will take centre stage. Lastly, companies agree that the depth and breadth of technical knowledge expected from engineers will increase.

The findings of the case study are parallel with the arguments and findings in the literature. As Frey and Osborne (2017) point out, it is unlikely that engineering work will be fully computerized in the short- or medium-term, because the engineering profession requires creative knowledge. Nevertheless, engineers who are insufficient in terms of creative and technical knowledge should not expect an optimistic scenario. Moreover, engineering

positions in production, production planning, and quality departments may disappear over time, as they require routine work with less creativity, as stated in the paper of Autor et al. (2003). To lose their jobs in the short- or medium-term does not seem possible for engineers working in R&D positions, which require higher skills and creativity. With the elimination of routine tasks, changes in the job/task descriptions and scope of the work, and an increase in the depth and breadth of technical knowledge are expected. Henceforward, since engineering positions will be available only for well-educated and competent engineers; the value and dignity of the engineering profession will increase.

This paper focuses only on the white goods sector as it is one of the three sectors with the highest level of digital maturity in Turkey. Further research is needed in the automotive, computer, electronics and optical products, and materials (rubber and plastic) sectors with the highest digital maturity (TUBITAK, 2017). Besides, structured interviews were conducted with the managers of two white goods companies in this study. In the following study, it is planned to increase the number of interviews and to include both managers and expert engineers in the research. Finally, this research assumes that the companies interviewed have a high level of Industry 4.0 maturity due to the fact that they operate in the white goods sector. Expanding the scope of the next research is planned to measure Industry 4.0 maturity levels and present current Industry 4.0 applications of the companies.

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COLLECTIVE LEADERSHIP AND INNOVATIVE VALUE CREATION RELATIONSHIP UNDER THE INFLUENCE OF TECHNOLOGICAL TURBULENCE

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Abstract

In recent years, technological changes and new paradigms, emerging countries such as Turkey, where micro and small scale organizations dominated is also crucial. If so, organizations must be ready for both opportunities and threats in the face of these developments. The study focused on the questions that "What will the impact of collective leadership on the organization's innovative value creation" and "how do technological turbulence affect this relationship?". Data from 372 questionnaire forms collected from the Turkish organizations received an incentive through TUBITAK and KOSGEB. The data and models analyzed using AMOS and SPSS. According to this study, the positive relationship between collective leadership and innovative value creation about the internal dynamics of the organization examined. Furthermore, the positive effect of technology turbulence also examined innovative value creation. It also examined the negative moderation effect of technology turbulence between collective leadership and innovative value creation. We think that these findings contribute to literature that examines the relationship between collective leadership, technology turbulence and innovative value creation.

Keywords: Collective leadership, technology turbulence, value creation

1.Introduction

Destructive technologies (information and communication technologies, artificial intelligence, energy, and genetics) have emerged in recent years. Radical innovations that these technologies have affected human behavior, market structures, and the culture of organizations (Geels, 2002). Organizations such as Amazon, Skype, and Uber, as a result of the development of information and communication technologies and the Internet, will be able to revolutionize existing industries by providing revolutionary innovations and offering business models (Gassmann, Frankenberger, & Sauer, 2016). Amazon is the largest bookseller in the world without having any store. Uber has become the world's largest taxi transportation company without having its car and taxi driver (Gassman et al., 2016). Skype is also the world's largest telecom operator in the world without having any telecom operator infrastructure.

Radical innovations are also profoundly changing the meaning of the traditional concept of competition (Casadesus-Masanell & Ricart, 2010). These innovations are transforming sectors into competitive situations of organizations and are becoming to affect their sustainability (Ocasio, 1997; Wirtz , Schilke, & Ullrich, 2010; Lee, Shin, Hong, & Kim, 2011). In this case, the traditionally existing sectors change, and the lives of the organizations involved in these sectors endangered. The chances of survival of organizations that do not react to the threats and opportunities brought by the changes in the sociotechnical environment and cannot produce appropriate strategies for adapting to these changes (Heracleous & Werres, 2016). It does not exist today successful and global organizations such as Nortel (1895 — 2013) and Worldcom (1983 - 2006) because of the wrong strategy timely (Heracleous & Werres, 2016). Technological advances such as the increasing globalization of the business environment (Lee et al., 2011) or Web 2.0 (Wirtz et al., 2010) drive organizations to renew and transform the established value logic. In today's world, where the open environment becomes even more transparent, organizations can update the value logic to adapt to environmental changes. They can survive and need to create innovative value. Organizations that cannot keep up with change will have no chance to live, but organizations that react towards change will continue their lives.

Developing countries have lower technology industries than in developed countries (Zawislak, Zen, Fracasso, & Reichert, 2013). Environmental turbulence brings by a short product life cycle, a dynamic market structure with rapid inputs and outputs, rapid know-how loss, and rapid change in customer expectations. These changes can be

opportunities for organizations or threats. In particular, organizations with high structural inertia cause risk their lives by being helpless in the face of technological developments.

Organizations in developing countries (transition economies) have close ties with organizations in developed countries. Especially communication channels in the world evolved, accelerated, and facilitated. These kinds of developments also affect organizations in developing countries more. Especially in recent years, technological changes and new paradigms, emerging countries such as Turkey, where micro and small scale organizations dominated is also crucial. If so, organizations must be ready for both opportunities and threats in the face of these developments. The impact of this situation is increasing, especially in the business lines of evolving technologies. In the world conditions where competition is increasing, and profitability is reducing. Furthermore, technological innovation paradigms that bring industry transformations, how organizations in developing countries can change this is becoming a matter of importance that will keep up. In this context, "What will the impact of collective leadership on the organization's innovative value creation" and "how do technological turbulence affect this relationship?" uncertainties are gaining importance in terms of management.

In the academic literature, such studies conducted in Brazil and China, but these countries are only in the developing class. Our country is the bridge that connects western and eastern civilization. Therefore, it associates with both the West and the East for centuries. Its institutional environment influenced by relations with both cultures. Similarly, our organizations also affected by this situation. Since it is a developing country with the intersection of different geographies and cultures, carrying out this work in organizations in our country will make serious contributions to the academic literature.

2. Literature Review and Theoretical Framework

2.1. Literature Review

The open and robust dialogue environment explains collective leadership within the organization, and the organization has a homogeneous perspective (Dos & Kosonen, 2010; Lewis, Andriopoulos, & Smith, 2014). In complex and dynamic environments where change is high, uncertainties and risks are also very significant. As business model innovations affect the value structure of the organization, the decisions taken within the scope of these innovations can be complicated and risky decisions for employees in the organization. For the decisions taken by senior management to be successful, it is important to be owned by the whole organization and to produce arguments that will support these decisions. Organization employees as a whole produce arguments that will support the decision-making process of top management entails collective commitment in the organization. Collective leadership is one of the keys to the operation of carrying out changes. The most crucial factor in accelerating innovative value creation is the provision of collective leadership in organizations that want to react quickly to changes in the external environment. Collective leadership is mostly the ability of the top management team to integrate with the organization and understand each other and trust each other. In cases where trust, empathy, and dialogue increased between managers and individuals in the organization, personal agendas eliminated and received in terms of adaptation to dynamic changes from the external environment. Strategic decisions taken by the whole organization as a single whole (Dose & Kosonen, 2010).

Conceptually technological turbulence is defined as irregular and unpredictable rapid technical fluctuations in the environment where organizations operate (Didonet, Simmons, Díaz-Villavicencio, & Palmer, 2012). Emerging markets are the target market for the implementation of radical innovations and disruptive technologies (Stuart & Cristensen, 2002). While strong technological turbulence promotes product innovation in developed countries (Dosi, Grazzi, & Moschella, 2015), emerging markets become a natural customer of disruptive technologies (Vezzoli, Ceschin, Carel, Dieh, & Kohtala, 2015). These technologies play a crucial role in creating service-based value in developing countries (Reynoso, Kandampully, Fan, & Paulose, 2015).

2.2. Theoretical Framework

In this study, the theory of dynamic capabilities explains our basic questions and is the basis for the hypotheses created. The theory of dynamic abilities emphasizes that organizations need to respond dynamically to competitive environments with intrinsic capabilities such as collective leadership (Teece & Pisano, 1994). The theory of dynamic capabilities is interested not only in the selection of resources and the preservation of a competitive advantage but also in the collection, development, and renewal of resources. According to this theory, these capabilities must be identified, used, and renewed by the organization. Teece, Pisano, and Shuen (1997, p. 516) describe dynamic capabilities as "the ability to integrate, build, and reconfigure internal and

external competencies to address rapidly changing environments." In parallel with other scholars in the field, Eisenhardt and Martin (2000, p. 1105) identified dynamic capabilities in a range of specific and definitive process sequences such as product development, strategic decision-making, and alliance.

Dynamic capabilities are the concepts of innovative value creation, business models and strategy, and related to each other. The strength of the dynamic capabilities of the organization is essential in shaping business model design and thus creating value for the organization (Teece, 2018). Accordingly, the organization needs to develop capabilities and structures such as decentralized decision structure, creative organizational culture to facilitate innovative value creation (Bock, Opsahl, George, & Gann, 2012). Accordingly, collective leadership as dynamic capabilities depends on the organizational structure of an organization.

2.3. Hypothesis Development

Organizations create innovative value; in other words, updating value logic, human, physical, and capital resources to serve new value creation purposes (Zott & Amit, 2010). Innovative value creation in organizations initiates through new technologies, process innovation, and product innovation (Chesbrough, 2010). Organizations with high perception are in a better position to initiate the innovative value creation process (McCann, Selsky, & Lee, 2009). Organizations not only need to obtain information from the external environment but also include the ability to identify opportunities by acquiring new knowledge and develop an action plan for opportunities (Teece, 2007). External sources, such as changes in consumer demand, competition, and market information, including general economic market data, are inspired by innovative value creation. (Doz & Kosonen, 2008). Organizations' ability to perceive changes in the external environment is essential for creating innovative value, especially in fast-changing situations (Teece, 2010). Therefore, to successfully launch these changes and encourage innovative value creation, management must create collective wisdom and synergy among all employees (Doz & Kosonen, 2010). Achtenhagen, Melin, and Nald (2013) connects the success of innovative value creation to collective leadership mainly along with guidance and a sense of mutual commitment among employees. To demonstrate and explain these relationships, two primary hypotheses determined in this study.

Hypothesis 1: Collective leadership positively affects the organization's innovative value creation.

Technological turbulences bring irregular and unpredictable rapid changes in the environment where organizations operate, accompanied by rapid changes in customer expectations, bring and shorten the product life cycle. Specifically, it requires investment to create innovative value related to products or services. In a state of intense technological turbulence, this issue presents opportunities and poses a threat to organizations. Organizations are more likely to create innovative value in the face of threats than opportunities from the environment (Saebi, Lien, & Foss, 2017). In this case, technology turbulence is an opportunity for organizations that have not yet taken action or a threat to organizations that have just made their investments. Technological turbulence has a moderating effect on the relationship between collective leadership and innovative value creation in terms of technological fluctuation brings threats and opportunities from the environment.

Hypothesis 2: Technology turbulence has a moderating effect on the relationship between collective leadership and the organization's innovative value creation.

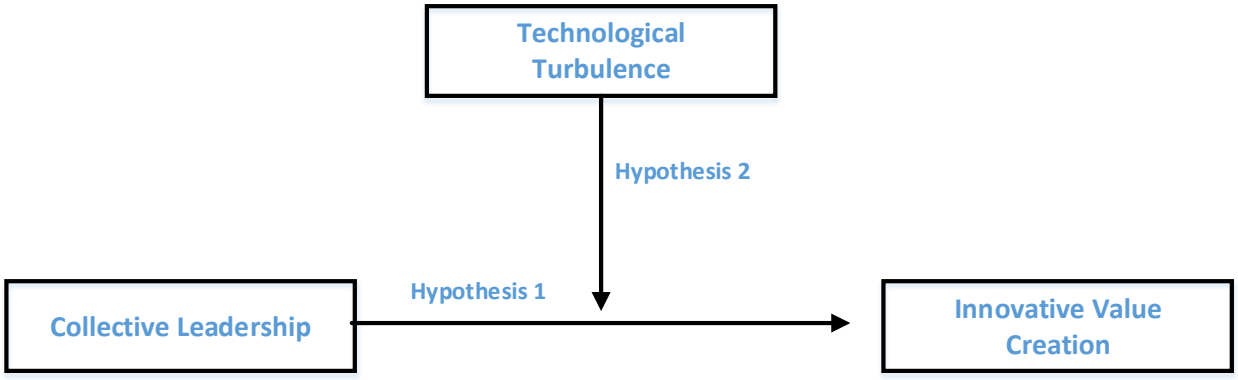


Figure 1. Model for collective leadership and innovative value creation

3. Research Method

3.1. Sampling and Data Collection

Scientific and Technological Research Council of Turkey (TUBITAK) and the Presidency of Small and Medium Enterprises Development and Support Administration (KOSGEB) give to the private sector in Turkey R&D innovation coordinates their incentives. In this context, any organization must fill out a detailed project proposal form to benefit from incentives. The project proposal form includes not only data on technical content, but also data on commercialization and sustainability of the proposed innovation idea after the project. Therefore, with the idea that they will have the most information about the research topic, the research data for this study based on innovation from state sources in various sectors of the Turkey industry. So it was decided to gather data from people who work in enterprises that deserve to receive incentives that applying for incentives through TUBITAK and KOSGEB. A link to the question form portal sent via email to the owner and senior management of 7509 businesses in these lists, and the question answered forms were delivered to us online. In the process, 891 questionnaire forms answered. However, 519 questionnaire forms containing incomplete responses and outlier responses were excluded from the sample, so that the data obtained does not decrease the validity and reliability levels. As a result, responses from 372 enterprises considered as sampling, and the research model tested with this sample. This number is an acceptable sample at a 95% reliability level (Gürbüz & Şahin, 2016). Table 1 specifies the characteristics of the organization that are responding.

Table 1. General characteristics of responding organizations

Profile	Category	Frequency	Ratio (%)
Area of activity	National / Local	121	32.53
	International / Global	251	67.47
Industry	Information Technology	118	31.72
	Defense	21	5.65
	Manufacturing	133	35.75
	Wholesale / Retail	45	12.1
	Others	55	14.78
Size	Micro (10 >=)	84	22.58
	Small (50 >= ve > 10)	95	25.54
	Medium (250 >= ve > 50)	112	30.11
	Big (> 250)	81	21.77
Age	Young (0 < 9)	84	22.58
	Old (>9)	288	77.42

3.2. Reliability and Validity Measures

Content Validity (Content Validity) is an indication of whether the items of the scale provide a representative sampling of the component intended to be measured. Our research aims to cover the subjects targeted to be measured. Each factor in the measurement model developed based on the relevant article, and the subject is pre-tested by experts. The validity of the content accepted due to the consensus of relevant questions and factors during the pilot test stages. Variables for these scales are given in Table 2.

Convergent validity measured by factor loads, Cronbach alpha value, composite reliability value, and average extracted variance values (Hair at. al., 2014). The structural equation model created in this context shows that all variables except CL8, OP4, IVC3, and IVC4 have a factor load of 0.7 and above (Table 2). Although the value

of AVE and CR is above 0.5 and 0.7, respectively. These variables (CL8, OP4, IVC3 ve IVC4) also used in the structural equation model.

Table 2. Measures and validation

Items	Loadings
Collective Leadership (Alpha = 0.912 ; CR = 0.931; AVE = 0.572)	
1. There is a mutual communication between management and employees in our organization.	0.844
2. The senior management evaluates the ideas produced by the employees in the decisions	0.791
3. There is an open information sharing environment in our organization.	0.794
4. Our employees clearly express their ideas everywhere.	0.779
5. Our employees think that they are taken care of and understood by their top management.	0.736
6. All our employees know the objectives, priorities, and strategies of our organization.	0.703
7. The messages that top management gives to employees are precise and clear.	0.715
8. Our employees are the most crucial resource for our business.	0.673
Technology Turbulence (Alpha = 0.849 ; CR = 0.819; AVE = 0.535)	
1. Technology is changing very quickly.	0.795
2. Technological changes create great opportunities.	0.846
3. Technological discoveries lead to the emergence of new product ideas.	0.788
Innovative Value Creation (Alpha = 0.844 ; CR = 0.844; AVE = 0.535)	
1. We have updated our resources and processes for innovative value creation.	0.914
2. We have acquired new resources and processes related to innovative value creation.	0.878
3. Apart from our existing stakeholders, we have also developed new collaborations.	0.575
4. Apart from our current market, we have developed products and services for new markets.	0.449

As a result of correlation analysis for discriminant validity, the extracted average variance value of each diagonal of matrix (Table 3) must be higher than the square root of correlation between the factors ((Hair, Black, Babin, & Anderson, 2014 ; MacKenzie, Podsakoff, & Podsakoff, 2011). Table 3 shows the presence of discriminant validity.

Table 3. Construct correlations and discriminant validity.

	TF	IVC	CL
TF	**0.810**		
IVC	0.393	**0.731**	
CL	0.422	0.495	**0.756**

The accepted value of the Goodness of Fit Index for the sample number (372) and the number of variables (15) describes in Table 4 (Hair et al., 2014; MacKenzie et al., 2011). In this context, the values observed in the model are consistent with the values specified in academic literature.

Table 4. Goodness of Fit Index

Indices	Fits	Value
X^2/df	1< X^2/df=<3	**1.959**
RMSEA	<0.06	**0.051**

SRMR	<0.08	**0.037**
GFI	>0.95	**0.926**
TLI	>0.95	**0.957**
CFI	>0.95	**0.963**

4. Findings

According to the regression Model 1 (Table 5) in question, Hypothesis 1 is supporting the degree of meaning of 1‰. Hypothesis 2 was also tested using Model 2 (Table 5) and Model 3 (Table 5) for the moderator effect of the Technology Turbulence between Collective Leadership and Innovative Value Creation. In this model, the Collective Leadership x Technology Turbulence (CLxTT) added to Model 3 for testing the interaction effect. In this model, the CLxTT variable was significantly significant in 5%. Hypothesis was accepted in the degree of meaning, at 2, 5%. Collective leadership and technological turbulence have a positive effect on innovative value creation. The interaction effect, called CLxTT, is minus.

Table 5. Regression and interaction moderation analysis

	Innovative Value Creation (IVS)		
	Model 1	**Model 2**	**Model 3**
Firm Size	0.05	0.047	0.042
Firm Age	0.055	0.067	0.062
Collective Leadership	0.467***	0.39***	0.363***
Technology Turbulence		0.203***	0.191***
CLxTT			- 0.097*
F	34.112***	31.007***	25.847***
R2	0.211***	0.244***	0.261***

* Significant at 5 %; ** Significant at 1 %; *** Significant at 1‰

5. Conclusion and Discussions

Organizations are legitimate with the value they interact with their environment (Czinkota, Kaufmann, & Basile, 2014). Technological turbulence and the new value paradigms offered by fluctuations affect the legitimacy of organizations by radically changing the value relationships provided by organizations. Therefore organizations need to update the values they offer to the environment according to emerging technologies and innovations to ensure their sustainability in their environment. Significant models to be proposed in issues related to the adaptation of organizations to the environment, maintain their legitimacy, responding to environmental changes, and sustainability will be essential.

Organizations can conduct environmental analysis and position themselves in their environment and make better decisions about how to behave against competitive conditions and threats, and competitively develop strategies. In this study, collective leadership had a significant impact on creating innovative value as a result of defeating structural stability within the organization. Technological turbulence has a positive effect on innovative value creation. However, the relationship between technological turbulence, collective leadership, and innovative value creation is weakening.

In this study, the relationship between collective leadership and innovative value creation about the internal dynamics of the organization examined. Especially in this context, balancing between the structural inertia of organizations and outside opportunities are crucial for predicting proactively unpredictable changes in the environment and react quickly to these changes (Weber & Tarba, 2014). The additional constructs (sensing changes in the external environment and resource management of the organization) are better to explain the concept of innovative value creation and the moderation effect of technology turbulence. Doz and Kosonen (2010) stated that structural inertia arising from defending the status quo within the organization is a significant challenge encountered during innovative value creation. Doz and Kosonen (2010) combined the capabilities of collective leadership as well as strategic sensitivity and resource fluidity called these capabilities strategic agility.

In cases of technological turbulence, defeating structural inertia is of great importance for the sustainability of organizations. To maintain their sustainability, organizations need to meet new customer demands by adapting their resources and capabilities to changes in the environment ((Buchanan, Davis, & Wight, 2009); Glick, Huber, Miller, Doty, & Sutcliffe, 1990). Organizations need to update their value creation logic to ensure its sustainability (Bock & George, 2010). In this study, it is crucial to examine the relationship between the performance of the organization of innovative value creation concept. In addition to technological turbulence, the intensity of competition is considered to be particularly important in terms of external influences that may come from the environment. Especially in subsequent studies, testing the effect of moderating relationships of competitive intensity will contribute to academic writing. Testing the model to be created under the mentioned issues according to the size and scales of organizations (micro, small, medium, and large-scale) is essential for observing the moderation effect on the proposed new model.

Technological turbulence brings opportunities and threats. In this study, the concept of technological turbulence as a constraint discussed in general. In this regard, the moderation effect observed in general. Special moderation effects on threats and opportunities from the environment cannot work. Another issue is that organizations are operating in our country, mainly as R&D centers generally work in the field of IT, defense industry, and production. In particular, the defense and production industries are one of the areas with a high entry barrier, which requires capital investment. Therefore, organizations in these areas cannot be easy to defeat the status quo within themselves. In the next work, especially for the defense and production industry will be vital for the contribution of the results of the study to academic literature.

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DRIVERS OF ENTREPRENEURSHIP AND INNOVATION

ENHANCING THE ENTREPRENEURSHIP FRAMEWORK IN SOUTH AFRICA

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Abstract

Entrepreneurship sets the pace for economic development by creating employment, spurring innovation, creating effective means of resource utilisation and improving the socio-economic wellbeing of the citizenry. This paper establishes the need for policy reform in the area of entrepreneurship by proposing the adoption of a national technology-based entrepreneurship policy in South Africa. The central research question to be answered is what elements within the national entrepreneurship framework of South Africa need to be improved to develop a robust ecosystem of innovative, high-growth start-ups and entrepreneurship. The results of this paper should assist South African regulators in spurring employment, economic growth and innovation. A survey of university academics, innovative entrepreneurs and members of anchor institutions found that the most significant barriers to technology or digital entrepreneurship in South Africa are: i) unfocused national entrepreneurship strategy; ii) suboptimal regulatory environment to facilitate innovation; iii) lack of networking and global connectivity; iv) lack of support for entrepreneurs; v) lack of access to adequate financing. The findings suggest the need for policy reform in the area of entrepreneurship, directed at facilitating high-growth, technology-based entrepreneurship aimed at promoting innovation and creating jobs.

Keywords: Entrepreneurship, innovation, policy framework, South Africa, technology

1. Introduction

South Africa is described by the World Bank as a dual economy with one of the highest inequality rates in the world (World Bank, 2019). Youth unemployment stands at an all-time high of 55.2%, among university graduates, the unemployment rate is 31.0% (Stats SA, 2019). According to the General Entrepreneurship Monitor (2017) business ownership rates are as low as 2.5% with high levels of poverty and inequality predominantly evident amongst previously disadvantages Black South Africans (Heerington, Kew & Mwanga, 2017). Policy transformation in the area of entrepreneurship to address growing youth unemployment has been a key discussion at the International Labour Organisations (ILO), Global Youth Employment Forum and the World Economic Forum (WEF) summit on Africa.

South Africa hosts over two million small businesses (SEDA, 2018). However, the majority of these entrepreneurs participate in the informal sector as necessity entrepreneurs who are predominantly motivated by unemployment and the inequality that plagues many in South Africa (SEDA, 2018). Few of these small businesses translate into sustainable jobs with only 15% of South African small businesses growing into successful companies (Allen Grey Orbis Foundation, 2019). Within the larger landscape of entrepreneurship, South Africa has a young and thriving tech start-up scene bustling with innovative and ambitious entrepreneurs (PWC, 2015). According to studies conducted by Venture Capital for Africa (2018), 68% of South African technology start-ups are creating jobs with an average of 5.8 full-time equivalents (FTE) per venture. This paper contends that economic growth through the promotion of technology centred, high-growth entrepreneurship can serve as one of the solutions to South Africa's economic and social problems (Allen Grey Orbis Foundation, 2019).

This paper advances the perspective that there is a need to establish a policy reform agenda involving the implementation of a focused entrepreneurship policy targeted explicitly at high-growth, technology-based entrepreneurship aimed at promoting innovation and creating jobs. The focus of such a policy framework should be promoting technology-based start-ups, encouraging more significant innovation and building a sound regulatory infrastructure for small, smart businesses as a solution to low-growth and high unemployment (Allen Grey Orbis Foundation, 2019). This paper attempts to enhance the entrepreneurship policy in South Africa through a combination of doctrinal and empirical research. The analysis conducted is based on recommendations by the United Nations Conference on Trade and Development (UNCTAD, 2012), Organisation for Economic Co-operation and Development (OECD, 2013), as well as international best practice as reflected by the entrepreneurship policies adopted in Tunisia and the Netherlands.

The empirical aspect of this paper takes the form of an online survey. The paper surveys twenty key players in the South African entrepreneurial ecosystem, including innovative entrepreneurs, academics, members of intermediary organisations (co-working spaces, accelerators and start-up advisors) as well as anchor institutions (legal, financial and research). The objective of the survey is to identify the factors affecting the growth of the technology-based entrepreneurial ecosystem in South Africa and the opportunities available for policy-related improvement. The survey further aims to determine the usefulness and significance of new legislative or policy measures specifically focused on supporting innovative tech entrepreneurs. The survey further acts as a tool to support the policy proposals recommended in this paper. The survey questions are designed based on existing research on technology-based entrepreneurial ecosystems.

2. Literature Review and Theoretical Framework

2.1.Technology-Based Entrepreneurship

Technology-based entrepreneurship is the utilisation of developments in science, computing, information and communication technologies (ICTs) or engineering to bring new products or services to market, or to deliver existing products and services in new innovative ways (Brem & Giones, 2017). Technology entrepreneurship in the fourth industrial revolution takes on a diversity of forms and occurs in a variety of industries (Kordel, 2018). This ranges from the traditional science-based technology entrepreneurship coming from University-based intellectual property to the new and rapidly evolving Internet-based technology start-ups, in the form of social media platforms such as Snapchat or service delivery platforms such as Uber (Kordel, 2018; Brem & Giones, 2017).

The value-creating feature of these technological developments are found in new product activity systems, distribution channels, consumer segments or intellectual properties (Ferreira *et al*, 2016; Galindo & Mendez, 2014). These tech-firms tend to generate substantial market disruption and display characteristics of high growth (Morris, 2011), having above-average impact on job creation, wealth creation and the development of entrepreneurial role models (Galindo & Mendez, 2014). Globally these entrepreneurs are pushing the frontiers of business, industry and innovation utilizing disruptive technologies such as artificial intelligence (AI), blockchain and the Internet of Things (IoT) (Ferreira et al, 2016). Technology-based entrepreneurship has proven to influence economic growth and improvements in social welfare in various developing countries (Beckman et al, 2012). The Indonesian start-up, GOJEK provides a key example of this.

Established in 2010 as a digital motorcycle ride-hailing phone service, GOJEK has since evolved to provide an on-demand transport and lifestyle services (Go-Jek, 2019). GOJEK now operates in over fifty cities across Southeast Asia equipped with a social mission to improve the welfare and livelihoods of workers in various informal sectors (Go-Jek, 2019). Researchers Walandouw, Primaldh, Wisana and Nugrouho at The University of Indonesia (2018) conducted a study accessing four GOJEK services. The study surveyed about 3,886 Go-Ride drivers-partners, 1,010 Go-Car driver-partners, 1,000 Go-Food merchants, and 836 Go-Life talents (Walandouw *et al,* 2018). The findings estimate that GOJEK contributed more than $3 Billion in added value to the Indonesian economy in 2018 (Walandouw *et al*, 2018). The average income of GOJEK workers was higher than the average minimum wage for similar sector workers in nine Indonesian cities. The study further indicated that GOJEK increased female participation in the Indonesian economy, with 70% of Go-Life partners (Go-Massage and Go-Clean services) being women (Walandouw *et al,* 2018). The study concluded that GOJEK has had a substantial impact on Indonesia both economically and socially.

In the South African context, technology-based innovative start-ups have experienced a healthy inflow of investment and growth. The most significant developments occurred in the past five years in the two major economic hubs of Johannesburg and Cape Town (VC4A, 2018). The growth of the ecosystem has largely been driven by strong efforts in the private sector to organise through associations, such as Silicon Cape (established in 2009), investments from corporate South Africa in accelerators, incubators and innovation programs. In 2018, a total of 107 technology-based deals were completed in South Africa. $250 Million in equity funding was raised over 37 deals (Ventureburn, 2018). Six start-ups raised as many rounds equal to or higher than $5 million, with Fintech companies YOCO and Jumo accounting for the bulk of the funds raised (Partech, 2018). Driven by financial inclusion, Fintech is the biggest sector in South Africa. Other dominant sectors include B2B & Tech Adoption, Insurtech, EdTech and Software as a Service (Partech, 2018).

Technology-based entrepreneurship is having a significantly positive effect on South Africa, both economically and socially. The South African start-up GetSmarter demonstrates that in the fourth industrial revolution a globally relevant, high-growth business can be built in South Africa. GetSmarter is an EdTech business that deliver short-term online certification courses to distance-learning students in partnership with top tier universities (Getsmarter, 2018). The company was established in 2008 and funded through angel investment. In 2017, it was acquired by 2U, an American EdTech giant for $103 million (VC4A, 2018). GetSmarter now offers courses to over 70,000 customers in over 140 countries. Over 500 jobs were initially created, this grew to over 1,000 jobs in Cape Town within two years (VC4A, 2018). Another example of a start-up bringing about positive social and economic impact is Cape Town based, SweepSouth. SweepSouth is a digital on-demand application cleaning service that matches domestic workers with home and office cleaning opportunities (SweepSouth, 2018). Domestic workers constitute a significant proportion of the informal workforce in South Africa, earning very low wages and having little protection (VC4A, 2018). SweepSouth has successfully created an environment to address these social issues by paying domestic workers significantly more per hour and providing benefits, training opportunities and formal protection under the Labour Relations Act (VC4A, 2018). Within one year of its launch in 2014, the start-up secured its seed round. In 2016, the company secured a new R10 million round from investors such as First Rand Group and Newtown partners (SweepSouth, 2018). This allowed them to create over 1,000 jobs and pay out over R20 million to workers in just one year (VC4A, 2018).

While a few tech-savvy youths have started making their mark on the digital economy, new policies are needed for small enterprise development to ensure a decline in youth unemployment (Brown & Mason, 2013). This requires a transition in policy focus from low-productivity self-employment to more productive innovative entrepreneurship.

3.Research Method

3.1.Sample and Data Collection

This paper surveyed twenty key players in the South African entrepreneurial ecosystem through an online questionnaire. Nine of the participants were academics; eight were South African technology-based entrepreneurs, while three were anchor institutions and organisations. All the participants were knowledgeable about the technology entrepreneurship ecosystem in South Africa. As such, they were able to provide valuable insight into the challenges facing innovative entrepreneurship, opportunities available for technology-based entrepreneurship in South Africa as well as areas where policies and legislative interventions would enhance improvement. The survey sought to ascertain the usefulness and significance of new legislation or innovative focused policies aimed at supporting high-growth technology centred entrepreneurship. To achieve these participants were first asked to identify the challenges facing innovative entrepreneurship in South Africa. Thereafter entrepreneurship policy recommendations directed at addressing the issues were proposed and participants were asked to rank the usefulness or otherwise of the recommendations.

3.2 Analyses

The data collected from the survey were analysed using thematic analyses. Thematic analyses provides a systematic framework for coding data by identifying patterns across dataset to answer key research questions (Maguire & Delahunt, 2017). The thematic analyses focused on identifying themes that were implicit or explicit ideas within the data (Guest, MacQueen & Namey, 2011). The method allowed the study to step outside of the theoretical domain and into the practical arena.

4.Findings

An evolution has occurred in the manner in which governments in advanced countries undertake entrepreneurship policies. Mason and Brown (2013) summarise this as a shift from traditional enterprise policies to growth-oriented enterprise policies. This shift involved the reclassification of entrepreneurship and a greater focus on support for growth-oriented and innovation producing entrepreneurship. The *Entrepreneurship Policy Framework and Implementation Guidance*, created by the UNCTAD acts as a guiding international document for developing country policymakers in the design of entrepreneurship measures (UNCTAD, 2012). The UNCTAD identifies the following priority areas for policy focus: **(1) formulating a national entrepreneurship strategy; (2) optimising the regulatory environment; (3) improving access to finance and (4) promoting awareness and networking**. Based on these priority areas and the findings of the survey, this paper makes

recommendations for entrepreneurship policy transformation in South Africa, using case study examples from the Netherlands and Tunisia.

4.1. National Entrepreneurship Strategy

Since the end of apartheid and the birth of democracy, the South African government has recognized the importance of fostering an enabling environment for small enterprises, especially for the previously disadvantaged Black majority. Government Policy on the development of Small Micro and Medium-sized Enterprises (SMME) was initially documented in the 1995 National White Paper on SMME development. This paved the way for the launch of a variety of new support measures and initiatives for small business in the economy. The most recent and key policy document is The Integrated Strategy on the Promotion of Entrepreneurship and Small Enterprise (2007), an action plan which focuses on increasing financial and non-financial support, creating a demand for the products and services provided by the SMMEs and reducing regulatory constraints. The current entrepreneurship policies and strategies can largely be described as E-extension and New Firm Creation Policies. These policies are criticised by scholars as scattergun approaches which focus on increasing the number of business start-ups (Shane, 2009). Academics have described this approach as 'bad public policy' on account of the limited growth, short survival rates and high failure rates (Marsh, 2019; Nightingale & Coad, 2014; Shane, 2009; Lundstrom & Stevenson, 2005).

This paper proposes a growth-oriented national entrepreneurship strategy that is focused on the high potential technology-based entrepreneurs, with the largest economic potential (Brown & Mason, 2013). The Tunisia Start-Up Act (2018) serves as an example of international best practice in the formulation of a national entrepreneurship strategy. The objective of the Act is to "set up an incentive framework for the creation and development of Start-ups based, on creativity, innovation and the use of new technologies and achieving a strong added value and competitiveness at the national and international levels" (Tunisia Start-Up Act, 2018). The Act enables the government to grow the number of clusters and competency in the tech sub-sectors which show the most promise in Tunisia. The online survey conducted for this study indicated that 65% of survey participants believe that the development of a "Start-Up South Africa Act" would be extremely beneficial to South Africa both economically and socially. This policy or legislation should be developed using a 'bottom-up' method, whereby legislators collaborate closely with ecosystem players, members of the private sector and entrepreneurs (Brown & Mason, 2013). The legislation or policy should be growth-oriented focused on connecting components within ecosystems to enable the system to better function.

4.2 The Regulatory Environment

An optimal regulatory environment requires that special attention be paid to entrepreneurs introducing new, disruptive technologies into the market, while also protecting other public policy concerns (Brown & Mason, 2013). Survey participants were asked to what extent they believed that laws in South Africa restricted innovation, specifically for entrepreneurs utilising new and disruptive technologies. The results showed that 58% of survey participants believed regulation to either be an extreme or serious impediment to innovation. 35% of participants believed this to be a serious impediment while 23% deemed it an extreme impediment.

As is the case in most African countries, South African regulators have recently begun to grapple with the idea of regulating in the face of disruptive technology. The Dutch Enterprise Policy is a key example of international best practice in the area of optimising the regulatory environment to allow for innovation (Ministry of Economic Affairs, 2011). The Dutch Enterprise policy adopts a 'Customized Approach' which is premised on facilitating innovation by reducing regulation and collaborating with innovative entrepreneurs (Ministry of Economic Affairs, 2011). The policy adopts a customized approach whereby regulatory authorities, licensing authorities, businesses, citizens and professionals collaborate to address burdens which inhibit innovation in Top Sectors. A key example of such collaboration can be found in the financial sector. The Netherlands Authority on Financial Markets and the Central Bank launched the innovation-hub to facilitate innovation in the financial sector. The hub provides a space for innovators and regulatory authorities to collaborate and communicate to facilitate reform (Ministry of Economic Affairs, 2018).

Similar to the Dutch approach, South African regulators should move beyond the expectation of finality and embrace contingency, flexibility and an openness to the new. As such, this paper recommends three key principles established by authors Vermeulen, Fenwick and Kaal. The authors favour data-driven regulatory intervention. Policymakers should rely on a variety of reliable data ranging from investment data to global

databases to obtain signals about *what, when and how* to regulate in the face of growing innovation (Vermeulen *et al*, 2018). Regulating for innovation requires a shift from a rule-based to a principle-based adaptive regulatory approach which incorporates soft law instruments, such as best-practice guidance, industry self-regulation, third-party certification and accreditation (Eggers, Kishnani & Turley, 2018). These measures should be driven by collaboration between government, local and international ecosystem players (Vermeulen *et al*, 2018).

This paper further recommends the introduction of a regulatory sandbox. A regulatory sandbox acts as a 'safe space', governed by a set of predefined rules that allows innovators to test their products and business models in live environments without having to comply with legal requirements and procedures (Vermeulen *et al*, 2018). The paper suggests that the sandboxes should initially be cluster focused on the dominant sectors within the ecosystem and emerging technologies that require more governmental investigation. The introduction of a regulatory sandbox offers legislators the opportunity to engage with entrepreneurs and learn about disruptive technologies and ways in which to further facilitate innovation whilst protecting other public policy concerns (Vermeulen *et al*, 2018). This will further act as a solution to the issue of slow response to innovation, which has been evident in the case of Fin-Tech within financial sector regulators. In this way regulators will have a pre-established unit, overseeing disruptive technology and making timeous regulation recommendations based on reliable data derived from testing and experimentation within the sandbox. These recommendations were supported by a majority of survey participants. 45% of the participants believed that the adoption of such recommendations would be extremely beneficial to South African entrepreneurs.

4.3 Access to Finance

The survey findings indicate that access to adequate finance is a major challenge facing entrepreneurs in South Africa, particularly among innovative entrepreneurs. The financing needs of entrepreneurs running innovative and/or high growth firms differ distinctly from the needs of general entrepreneurs (UNCTAD, 2012). This is because such investments involve considerable uncertainties, high risks, information asymmetries and intangible assets (UNCTAD, 2012). Furthermore, entrepreneurs in this field have to engage in considerable efforts to raise capital through various rounds of external funding ranging from seed-funding to funding focused on scaling the company. Governments have a significant role to play in facilitating access to finance by introducing policies aimed at improving access to relevant financial services as well as promoting funding for innovation (Brown & Mason, 2013).

The Dutch government seems to have acknowledged that entrepreneurs require different kinds of funding at various stages of the start-up process. As such the government implemented a variety of measures to facilitate access to capital from the idea stage of the start-up process to the stage of scale-up and internationalization. The SEED Capital scheme is a regulation which improves the risk-efficiency ratio for investors and increases the financing possibilities for tech and innovative entrepreneurs. The Scheme operates as closed-end investment funds whereby investors that invest in risky businesses with techno start-ups and/or creative start-ups can qualify for the scheme. An upper limit of the loan equals the amount of private investment, up to a maximum of € 6 million. Facility for Growth is an additional measure implemented by the Ministry of Economic Affairs. This initiative helps entrepreneurs to attract venture capital funding by extending guarantees to cover bad loans from banks and on shares from venture capital companies. The investor receives a 50% guarantee on the venture capital that they offer an entrepreneur. In the case of loss, the government covers 50% of that loss. This reduces the risk for the financier considerably and increases risk capital for entrepreneurs. Furthermore, the Dutch government has implemented the Innovation Credit whereby the Ministry for Economic Affairs finances the development of new products, processes or services that have a strong case. The credit is risk-bearing and only needs to be paid back if the development is a success. This way the government fills a gap in the capital market during the phase in which entrepreneurs are developing their ideas and engaging in research, but are not yet turning a profit (Ministry of Economic Affairs, 2018).

In the South African context, when asked how they raised or intend to raise capital, majority of the survey participants who are entrepreneurs indicated that they are either self-funded or obtained financial assistance from friends and family. Results from the survey showed that only 20% of surveyed entrepreneurs received government funding, while 13% obtained debt financing, for example a bank loan. Despite the efforts that the South African government has put towards increasing venture capital (VC) investment, only 6% of entrepreneurs surveyed had been able to access funding in this way. New alternative modes of funding such as peer-to-peer lending platforms and crowdfunding platforms seem to be largely unutilised by the participating entrepreneurs,

however, the survey indicates that funding in this way could be a viable option for some entrepreneurs if policy changes were made.

The survey findings are consistent with previous studies conducted by PricewaterhouseCoopers (2015) on South Africa's emerging companies and entrepreneurial landscape. The survey interviewed 734 participants from emerging companies, which had some form of technological enablement. The study indicated that only 19% of participants had ever applied for funding from government agencies (PWC, 2015). Few innovative entrepreneurs attempted to obtain government funding partly due to the fragmentation between government departments and the burdensome prerequisites attached to government funding (ExpertHub, 2019). Furthermore, entrepreneurs were deterred by the lack of competency and transparency that are prevalent in government funding organisations (VC4A, 2018). Some entrepreneurs indicated the high possibility of corruption in government organisations as a serious factor preventing them from seeking government funding (VC4A, 2018). Innovative entrepreneurs indicated that the primary government funding institution, SEFA fails to meet the needs of innovative entrepreneurs especially at the idea, conceptualization, proof-of-concept, research and development stages of the start-up process (PWC, 2015). Instead of spending more public funds on large government funding programmes, this paper recommends the introduction of government match funding programs. The match funding is to be conducted in collaboration with the private sector to decrease investment risk and increase efficiency when allocating funds (VC4A, 2018).

A key focus for the South African government has been addressing the funding gap by increasing risk finance. The government has taken strides to address issues of seed and equity funding. In its strategy document, the Department of Small Business Development (2017) proposed the creation of risk-sharing agreements between government and investors who enter into high-risk ventures. The department further pledges to explore the role of venture capital. These efforts have accumulated in the implementation of several initiatives (Ventureburn, 2019). First was the 2014 amendment to Section 12J of the Income Tax Act NO 58 of 1962. Section 12J was introduced in July 2009 to provide individuals, companies and trusts with a tax incentive to invest in venture capital companies who in turn fund start-ups (Income Tax Act, 1962). Section 12J was not widely utilized by investors until 2014 when amendments made full tax deduction permanent if the investor holds the shares issued by the venture capital companies for at least five years (Ventureburn, 2019). A further step was taken by the government in March 2019, when it announced the 1.4 billion Rand SA-SME fund. The fund is a public-private collaboration which invests in three venture capital companies with an established history of investing in innovation, technology-enabled start-ups (Sasme, 2019).

Despite the South African governments' efforts to close the funding gap, several academics have been critical of the over-emphasis on risk capital. Harrison and Mason (1996) argue that this approach is ineffective because only a small minority of firms utilize this form of finance. This argument is consistent with studies conducted by VentureBurn South Africa (2019) and PriceWaterHouseCooper (2015), which held that only 3% of South African start-ups attract VC funding. This was further confirmed by the survey conducted in this paper whereby only 6% of participating entrepreneurs had been able to access VC funding.

Brown and Mason (2013) argue that encouraging angel investment is arguably a more effective approach. An angel investor is a wealthy private individual who provides capital for a business start-up, in exchange for a convertible debt or equity (Harrison & Mason, 1996). The authors argue that angel investors provide seed and start-up capital. Furthermore, the hands-on nature means that angel investors typically invest in local start-ups (Brown & Mason, 2013). The authors encourage governments to underwrite the operational costs and partner with business angel networks who connect investors and entrepreneurs. In line with this argument, this paper proposes that the South African government invest more resources towards underwriting the operational costs and partnering with business angels such as Jozi Angels who connect angel investors with innovative entrepreneurs (VC4A, 2018). South Africa is home to some of the wealthiest individuals on the African continent. By participating in such networks and by providing incentives, the pool of angel investors in South Africa can be significantly strengthened (Ventureburn, 2019).

An over-emphasis on risk capital is ineffective because only a small minority of firms utilize this form of finance. It is therefore important for governments to initiate policy focusing on alternative means of financing such as peer-to-peer lending platforms and crowdfunding (PWC, 2015). However, in the South African context, a regulatory vacuum is present in these areas creating a lack of certainty amongst investors and entrepreneurs. Under current legislation, equity crowdfunding platforms will be deemed as an "offer of securities to be issued to

any section of the public" in terms of section 95 of the South African Companies Act NO 71 of 2008. This means that unless the offering of securities falls within one of the exclusions listed in section 96 of the Act (such as "offers to persons whose ordinary business is to deal in securities"), the start-ups utilising the platform will be required to be registered as a public company (Itzikowitz & Meiring, 2019). Therefore, the platform will be regulated by all the disclosure, financial reporting, auditing and general governance requirements regulating public companies in terms of the Act and other financial legislation (Itzikowitz & Meiring, 2019). Furthermore, there is an obligation on the entity controlling the platform to repay or register as an exchange under the Financial Markets Act (2012). In addition, crowdfunding platform may fall foul of the Banks Act (1990) where the funding is by way of debt. Cross-border equity crowdfunding activity will also need to comply with South African exchange control regulations, which may add another hurdle to those aiming to streamline the funding process (Itzikowitz, Meiring, 2019).

These legal hurdles and uncertainties need to be address in order to open up new streams for access to funding. Based on the survey, most ecosystem players agree with this initiative with 100% of participants indicating that this would be extremely beneficial/seriously beneficial to South African start-ups.

4.4 Facilitating Networking and Global Connectivity.

Local connectedness through strong business support networks can be valuable for entrepreneurs in diffusing information about business and export opportunities as well as programmes and initiatives (Global Start-Up Ecosystem, 2019). Business support networks can be established through mentorship connections, business-to-business linkages as well as business and educational connections. Governments take on the role of facilitator, striving to provide relational forms of support to entrepreneurs. Relational forms of support include network building, developing connections between entrepreneurial actors, institutional alignment of priorities and fostering peer-based interactions (Brown & Mason, 2019).

Results from the online survey indicated that local connectedness is lacking in the South African ecosystem. 56% of survey participants indicated that the lack of a support system is an extreme impediment to the success of entrepreneurs. Participants indicated that new entrepreneurs are unable to connect and network with seasoned successful entrepreneurs, as such there is a lack of exchange with regards to ideas, skills and resources. There is a need to develop a national network and pool of experienced mentors, coaches and advisors to support entrepreneurs.

To further improve the local connectivity, this paper recommends government intervention through the introduction of a government designed portal in the form of an Online Hub. The Hub should act as a one-stop online platform to provide ecosystem players with a means to connect, access to information and mentorship opportunities. The hub should further provide for government-initiated programs. For example, the hub should facilitate long-term skills acquisition programs where seasoned business professionals are offered incentives in exchange for supporting entrepreneurs. 50% of the participants in the survey agreed that this would be an extremely beneficial action for South African entrepreneurs.

Local connectedness goes together with global connectedness (Global Start-Up Ecosystem, 2019). Globally connected entrepreneurs can tap into a worldwide circulation of ideas, knowledge, talent and capital. Through global networks, start-ups can access global customers at early stages and develop globally leading products and business models (Brown & Mason, 2019). The survey indicated that this key factor is lacking in the South African landscape. Results from the online survey indicated only 6% of participants indicated that South African entrepreneurs are globally connected. The majority of survey participants ranked the South African ecosystem as only moderately or slightly connected with other regional and international ecosystems.

The paper recommends the development of a global mind-set among ecosystem players and policy makers. The firsts step towards global connectedness involves the adoption of a pan-African approach. This requires the government to take on the role of facilitators by fostering greater collaboration with other thriving African entrepreneurship ecosystems. The Indo-Dutch #StartUpLink partnership between the Netherlands and Indian government serves as an example of facilitating global connectivity (Ministry of Economic Affairs, 2011). Indo-Dutch Start-up Link is a one stop online platform to enable investors, incubators and aspiring entrepreneurs from India and the Netherlands to connect with one another. The platform facilitates knowledge exchange, and assists entrepreneurs through their lifecycle with specific focus on funding, market expansion, feasibility testing, business structuring advisory, enhancement of marketing skills, and technology commercialization.

4.5 Tabulation of Findings and proposed policy recommendations

Table 1 Challenges facing technology-based entrepreneurship ecosystem in South Africa

	Extreme (%)	**Serious (%)**	**Moderate (%)**	**Slight (%)**
To what extent is the regulatory environment an impediment to innovation?	23	35	24	18
To what extend is a lack of local connectedness and support an impediment?	56	25	13	6
To what extent is the South African entrepreneurship ecosystem globally connected?	6	6	50	38

Table 2 Proposed policy recommendations

	Extremely beneficial (%)	**Seriously beneficial (%)**	**Moderately beneficial (%)**	**Slightly beneficial (%)**
To what extent would the introduction of a Start-Up Act be beneficial to technology-based entrepreneurs in South Africa?	65	35	0	0
To what extent would the introduction of a regulatory sandbox be beneficial to technology-based entrepreneurs in South Africa.	45	50	5	0
To what extent would the regulation, support and promotion of new modes of financing such as equity crowdfunding, angel funding and peer-to-peer lending be beneficial to technology-based entrepreneurs in South Africa?	50	50	0	0

5.Conclusion and Discussion

South Africa needs to promote entrepreneurs that are motivated to grow and prosper within the South African environment and through engagement with the global digital economy. This paper provides a reform agenda which involves the implementation of a focused entrepreneurship strategy, explicitly directed at technology-based entrepreneurship aimed at promoting innovation and creating jobs. Based on the literature and reports investigated in the paper, coupled with the findings of the survey some policy recommendations were made. These recommendations include the revision of the national entrepreneurship strategy and further optimisation of the regulatory environment through the introduction of an online platform to facilitate the incorporation and registration of innovative start-ups. Furthermore, the paper advocates for more effective measures to regulate innovation. These measures include the utilisation of data to inform regulatory decisions, a principle-based approach and the incorporation of cluster specific minimum regulatory sandboxes. To decrease the existing funding gaps. The paper recommends strengthening angel funding networks, government and private sector collaborations through match funding programs as well as the promotion of alternative modes of funding. In order to improve local connectivity, the study recommends the adoption of a government designed portal in the

form of an Online Hub. The Hub aims to bring together all the players within the ecosystem. The paper further advocates for a pan-African approach towards international connectivity. This study adopted a limited sample size consisting of twenty survey participant, as such the findings cannot be generalised and are subject to limitations. Furthermore the history, context and economic circumstances in South Africa causes the findings of the paper to be unique. Further research areas require conducting a survey with an increased data size to optimise the reliability of the findings. Given the context of racial segregation through the apartheid system in South Africa further research would require specific examination of the technology-based entrepreneurship ecosystem in relation to Black South Africans and previously disadvantaged communities. This paper proposes further re-evaluation and expansion of the entrepreneurship framework in South Africa.

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ENTREPRENEURIAL ATTITUDES AMONG NIGERIAN STUDENTS: THE ROLE OF ENTREPRENEURSHIP EDUCATION

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Abstract

Entrepreneurship is undoubtedly being recognized as an important channel through which sustainable development can be achieved. Whatever be the form of economic and political set-up of the country, entrepreneurship and business operations are essential for economic growth and development. To this end, the current study investigated the impact of entrepreneurship education on students' entrepreneurial attitudes at university level. This study used cross sectional research design and the survey was conducted among 220 university students. To observe the possible effect of entrepreneurship education on the entrepreneurial attitudes of university students, paired sampled students' T- test was used. The study find out that engaging university students in entrepreneurship education has significant positive effect on entrepreneurial attitudes and intentions. The study concludes that students appreciate the knowledge and reorientation they received through the entrepreneurship programme by changing their mind-sets away from paid jobs and other forms of dependency. It is therefore suggested that the Nigerian government and policy makers re-strategize efforts in tapping the employment potential of entrepreneurship by increasing the effectiveness of actions aimed at promoting students awareness on the importance of self-reliance through business creation and as well making funds available at the lowest possible cost to genuine business owners across the various sectors of the economy.

Keywords: Entrepreneurial attitudes, entrepreneurship education, students

1.Introduction

There was no problem of unemployment in Nigeria in1960s and 1970s as the economy provided jobs for citizens that are willing to work. However, the situation does not remain the same as the problem of unemployment started to manifest owing to the economic downturn in the mid-1980s. This period coincided with the period of negligence on the part of the government to encourage and promote entrepreneurship development. The crises of unemployment in Nigeria and the attendant lack of development in the key sectors of the economy can be largely explained by the failure of Nigerian leaders and policymakers to formulate and implement effective framework through which entrepreneurship development can be facilitated and sustained. In recognition of this failure, and general dissatisfaction and frustration with deteriorating state of affairs in the country, particularly biting economic hardship and societal unrest, the Nigerian authorities planned and perfected various strategies and programs aimed at cushioning and drastically reducing the twin problem of poverty and unemployment in the country. One of these programs is the introduction of Entrepreneurship education in tertiary institutions.

Entrepreneurship education is intended to fundamentally changed students' mind-sets and practices away from being dependent and move toward embracing business creation as a means to permanently overcoming socioeconomic challenges and achieving grassroots development. Simply put, the programme is introduced in the university to essentially help students develop a working knowledge of entrepreneurship and its application in real life situation. Hitherto, the university education in Nigeria did not properly includes philosophy of self-reliance based on the culture of research, creativity, invention and innovation which can boost students' competence and confidence in creating viable businesses with high potentials for new value addition and high income. Following a continuously an upward trend in unemployment and its attendant negative consequences, the Nigerian government has become very serious by apparently showing interest in the promotion of entrepreneurial culture especially among the youth in the country. In fact, the introduction of entrepreneurship study in all the tertiary institutions in Nigeria shows the strategic intention of the government to educate, train and motivates younger generation (students) on how to become self-reliant through venture creation and growth even before graduation, so that after they graduate they can have viable business alternatives. It is important therefore, to evaluate the impact of these not -too old courses in our universities.

Thus, the main aim of the paper is to examine the role entrepreneurship education plays in the development of Nigerian students' entrepreneurial attitudes and intention towards obstacles to and factors of entrepreneurship success. Thus, the hypothesis identified here is that entrepreneurship education contribute significantly to changes in students' attitudes toward future career choice, obstacles and factors of business success. Following this section, first, we present brief literature review on some important concepts, few empirical studies and a theoretical framework. Then, we provide methodology for the study, present the result of the survey thereafter and finally draw conclusion and discussions.

2.Literature Review and Theoretical Framework

2.1. Conceptual Literature

Entrepreneurship Education is not just about teaching someone on how to create and manage a business venture, rather it is all about inculcating a total entrepreneurial spirit through creative and/or innovative thinking and promoting a strong sense of self-work and accountability. Shephered and Douglas (1997) states that the essence of entrepreneurship education is to envision and chart a course for a new business venture by combining information from the functional discipline and from the external environment in the context of the extraordinary uncertainty and ambiguity which faces a new business venture. Paul (2005) opines that entrepreneurship education builds a pipeline that creates productive and thoughtful citizens who contribute to local, states and national competitiveness. Simply put, entrepreneurship education is defines as the process of providing individuals with the concepts and skills to recognize opportunities that others have overlooked and to have the insight and self-esteem to act where others have hesitated (Souitaris, Zerbinati, and Al-Laham, 2007). Human capital attributes such as education, relevant experiences and specific knowledge have long been argued to be critical for entrepreneurial success (Iyigun and Owen, 1998). However, many studies suggest that a broad mixture of skills is more important for entrepreneurial success than a specific education or degree (Lazear, 2004; Wagner, 2003).

Entrepreneurial attitude is the ability and capacity to recognize or identify and effectively exploit business opportunity and ability to take a calculated risk in order to achieve unpredictable success. It can also be define as an ability to recognize an opportunity and acquire the necessary resources to exploit that opportunity (Fitzsimmons and Douglas, 2005). Put differently, entrepreneurial attitude represent how an entrepreneur think and act. It provides the necessary competences and institutional development of the right attitude among younger generation (Nybakk and Hansen, 2008). Entrepreneurial attitude help an entrepreneur to stay optimistic under tough condition. Entrepreneurial attitude has its cognitive origin in individual motivation and is understood to be the detonating factor which sparks behavior and obtain energy to support and steer it towards achieving a specific objective (Hynie, Sheoherd, Mosakowski, amd Earley, 2010). Consequently the decision to start a venture revolves around two factors; the rational and motivational factor. The former is reinforce or hinder by environmental conditions and the latter which is subjective in nature, emanates from individual expectations propelled by motivational forces (Barber-Sanchez and Atienza-Sahuquillo, 2017). Entrepreneurial attitude lead to entrepreneurial action which can be understood to be any creative and innovative action that, through an organized system of human relationships and the combination of resources, can lead to achievement of a specific goal (Liao and Gartner, 2006).

2.2.Empirical Literature

Niklas, Fredrik, and Karl (2014) employs propensity score matching to study the impact of entrepreneurship education in high school on long-term entrepreneurial performance. The result shows that while JACP participation increases the long-term probability of starting a firm as well as entrepreneurial incomes, there is no effect on firm survival. Oosterbeek, Praag, and Ysselstein (2010) used a difference-in-difference framework to evaluate the effects of a JACP targeted at Dutch junior college students, whose locational choice was used as an exogenous instrument. The study did not find any significant effect on students' self-assessed entrepreneurial skills but did find a negative effect on entrepreneurial intentions. Furthermore, Fairlie, Karlan, and Zinman, (2014) examined the efficacy of the GATE project, which offered free self-employment training to individuals interested in self-employment. The study found a strong short-run effect on firm ownership for those unemployed when entering the program, but no long-term effects for participants who were employed or self-employed. In their study Barba-Sánchez and Atienza-Sahuquillo (2017) adopted principal component factor analysis and regression analysis to analyze the role of entrepreneurship education on entrepreneurial intentions

among engineering students. Results indicate that the 'Need for independence is the key factor in the entrepreneurial intent of future engineers and confirms the positive role of the entrepreneurship education on students' entrepreneurial intention. Similarly, Yeoryio and Achilleas (2014) used questionnaire & paired samples t-test to examine the impact of entrepreneurship education on student attitudes for some selected students at university of Thessaly. The findings recorded a significant difference on student attitudes before and after attending entrepreneurship programme. Rosendahl, Sloof and Praag (2012) used a randomized field experiment to gauge the effects of the program "Bizworld," which focuses on developing of competencies relevant for future entrepreneurship for children ages 11 to 12. They found no effect on cognitive competencies such as calculus or reading ability, but a positive effect on non-cognitive competencies, such as persistence, creativity, and forward-looking behavior. Moreover, Gine and Mansuri (2014) studied the effects of an eight-day business training program in rural Pakistan, in a random field experiment covering 1,400 participants. They find that training increased business knowledge and practices and reduced business failure, but that these benefits were concentrated among male participants. Lastly, in his study, Onuma (2016) researched on entrepreneurship education in Nigeria tertiary institutions as a remedy for graduate's unemployment. The result indicates that entrepreneurship education equip students with skills for venture creation ability rather than job seeking.

2.3. Theoretical Framework

The Psychological theory of entrepreneurship centres on the mental aspect that propel entrepreneurial spirits in individuals. This theory was postulated by psychologist, David McClelland (1961), a Harvard emeritus professor, he argued that entrepreneurs possess a need for achievement that drives their entrepreneurial intention. McClelland explained why few countries are more economically booming as compared to others. He further argued that elements or traits of entrepreneurship can be acquired by individuals through learning and this learning process can be motivated to achieve higher level. Entrepreneurship is a major factor in the national economy, thus, it is important to understand the motivational characteristics spurring people to become entrepreneurs. It is argued that personality traits such as creativity, resilience and optimism propel entrepreneurial attitude. The psychologist was of the view that there is an inner urge in someone that makes him to desire for a change of status that may lead to innovation. This inner urge or force should be rejig and motivated for students to see a desire for a change of status that inspires them to generate ideas and also energize them create a viable businesses with potential of high income and for inclusive economic growth. This became imperative as the enthusiasm of most university students in entrepreneurship especially in developing countries like Nigeria has traditionally been low. Therefore, the above theory was used to provide a theoretical framework in order to underpin this study of assessing the role of entrepreneurship education among university students.

3. Research Method

3.1. Sample and Data Collection

The data collation were planned and implemented from 2017 to 2019 academic year. Multi stage (3 stage) sampling techniques was applied for the selection of sampled respondents. The first stage was the purposive selection of four faculties, the second stage was the selection of the two departments from each faculty, while the final stage involved a proportional sampling of students from each of the departments. In fact, the sample consisted of 220 students that attended both courses (i.e. GST 202 & GST 302) of entrepreneurship programme. Therefore, the selected students completed the questionnaires themselves both before taken the entrepreneurship courses to identify the starting situation in terms of their entrepreneurial perception, and also after the entrepreneurship programme in order to evaluate the effects of knowledge and experiences of entrepreneurship education they received on their entrepreneurial intention. Thus, the impact of entrepreneurship education on students' perception is studied in two time period; ex ante and ex post as the students were asked shortly before and rightly after attending the entrepreneurship courses.

3.2. Instruments

To critically examine the difference between students' attitudes about entrepreneurship before and after receiving lectures on entrepreneurship, paired samples t- test has been applied. In consideration of how the proposed variables should be properly captured and appropriately measured. It has been necessary and convenient to adopt (with some modifications) and use the existing format found in the literature pertaining questionnaire design and content. Thus, the questionnaires has been divided into four sections; the first section covered demographical characteristics including age, gender and students' parent literacy level. In the second

part, students were asked about their future career plan or expectations, whether they perceived entrepreneurship as an option. While the third section asked questions on students' perception of obstacles related to entrepreneurship. In the final part, questions consisting of items regarding the students' perception of factors that affect the success of a business venture has been included. The commonly used likert- scale was used.

4. Findings

As stated earlier, a paired sampled t-test was conducted to compare the individual pairs of observations i.e. students' perception of obstacles to entrepreneurship and factors for business success. Therefore, the mean of differences between individual pairs is tested. Thus, all values before and after successfully learning fundamental courses in entrepreneurship were compared.

The result for reliability and/or internal consistency (Cronbach's alpha) shows all reliability estimates were greater than .70 (see table 1).

Table 01. Means and Cronbach's alpha values before and after taking entrepreneurship programme

Dimension	**Obstacles to entrepreneurship**		**Factors for business success**	
Periods	Before	After	Before	After
Means	3.82	2.78	3.05	3.84
Cronb. Alpa	.89	.81	.72	.85

As expected, most respondents indicate a lower perception rates regarding obstacles to business creation after taken entrepreneurship courses. However, the same respondents had shown a higher perception scores in terms of factors for entrepreneurship success (see table 1). It can be observed that there occurred a change in students orientation in terms impediments to becoming entrepreneur and exhibited more interest and readiness to squarely confront those obstacles and challenges.

Table 02. Paired sample statistics. Before and after receiving entrepreneurship education

Items	**Public sector**		**Private sector**		**Self employed**	
Periods	Before	After	Before	After	Before	After
Yes (%)	135 (62%)	143(66%)	69 (32%)	73(34%)	52(29%)	103(58%)
No (%)	84(38%)	75(34%)	146(68%)	144(66%)	128(71%)	76(42%)

Results in table 2, presents paired sample statistics on future career plan before and after receiving entrepreneurship education. The results indicated that students' have their behavior changed toward entrepreneurship and shows willingness to create and own a venture after completing entrepreneurship programme. Specifically, there was approximately a 50% increase in the number of students that answered in the affirmative (before; 52, & after; 103) at the end of year (level) three (see table 2). Although, both public and private sector employment career choice increases, however, the increases is very slight, and that public sector received a higher patronage in terms of students' career aspirations, where 62% and 66% were recorded before and after the programme, while a relatively lower percentage for private sector employment (before; 32% & after; 34%) were calculated in the two time periods. The preference of public sector over private sector may be largely attributed to the nature of the economy in general, and the labour market in particular, especially in the study area where most waged job opportunities come from the public sector because the private sector is not well developed as there are very few companies and/or large businesses. On the other hand, the positive change in students' entrepreneurial intention may be attributed to the entrepreneurship education they received.

Table 03. Paired sample statistics for obstacle to entrepreneurship.

Item	**Before**		**After**	
	M	SD	M	SD
Irregular income	3.4	1.35	3.1	1.21
Tough competition	2.8	1.23	2.9	1.15
Possibility of failure	2.6	1.28	2.8	1.04
Absence of business idea	2.9	1.06	3.3	1.10

Fear of debt	3.1	1.23	3.0	1.14
Bureaucracy & legal hurdles	3.2	1.22	3.1	1.07
Incompetence & la of skills	2.4	0.92	2.1	1.18
Averse to entrepreneurship	2.2	0.95	1.8	1.05
Inadequate external funding	3.1	1.11	3.5	1.23
Lack of business services	2.8	1.16	2.8	1.08

Paired sample statistics for obstacles to entrepreneurship is presented in table 3, we can observed that some variables exhibit a strong change in their scores, notably 'Averse to entrepreneurship' ex ante (M: 2.2, SD: .95), ex post (M: 1.8, SD: 1.05) and t (217) = 3.99 P<.001. There was also a remarkable change in 'incompetence and lack of skills' having ex ante (M= 2.4, SD= .92) and ex post (M= 2.1, SD= 1.18) with t values of -1.72.

Table 04. Paired sample test for obstacle to entrepreneurship.

Item	**T**	**Df**	**Sig. (2-tailed**
Irregular income	3.36	203	.009
Tough competition	1.78	201	.004
Possibility of failure	3.12	211	.006
Absence of business idea	1.83	199	.854
Fear of debt	0.91	216	.613
Bureaucracy & legal hurdles	0.70	214	.711
Incompetence & la of skills	1.71	217	.002
Averse to entrepreneurship	3.99	217	.000
Inadequate external funding	-1.71	204	.108
Lack of business services	-024	211	.713

Additionally, table 4, presents paired sample test for obstacle to entrepreneurship. 'Averse to entrepreneurship', 'incompetence and lack of skills', 'Tough competition', 'Irregular income' and 'Possibility of failure' indicate a statistically significant t values. This perhaps cannot be unconnected with the fact that the reorientation received by the respondents through entrepreneurship education have positively rejig their general view about entrepreneurship. Other variables (Absence of business idea and inadequate external funding) have their statistical values risen statistically, though, not significant. This can be partly attributed to the deteriorating economic condition occasioned by the recent economic recession in the country.

Table 05. Paired sample statistics. Factors for business success.

Item	**Before**		**After**	
	M	SD	M	SD
Favourable environment	3.8	0.61	4.2	0.75
Family business background	4.0	0.80	4.1	0.93
Available finance	3.7	0.86	3.3	0.72
Good marketing strategy	4.3	0.64	4.1	0.63
Efficient management	3.8	84.0	4.0	0.97
Competent employees	4.1	0.72	4.3	1.04
National interest & funding	3.6	1.07	3.9	1.09
Experience and ability	4.4	0.73	4.2	0.81

Furthermore, table 5 and 6 show the paired sample statistics and t- test for factors of business success. A strong and statistically significant factor has been 'Family entrepreneurial background' ex ante (M= 4.0, SD= .86) and ex post (M= 4.2, SD= .93) and its t- values was t (206) = 1.23, P<.005. This is expected and is conformity with

the findings of Niklas E, Fedrik A and Karl W (2014). In support of the above, Benz and Frey argued that growing up in an entrepreneurial household is commonly seen as a silent theoretical indicator for entrepreneurial propensity.

Table 06. Paired sample test. Factors for business success.

Item	T	Df	Sig. (2-tailed
Favourable environment	0.68	203	0.463
Family business background	1.62	206	0.001
Available finance	1.51	210	0.104
Good marketing strategy	2.34	208	0.007
Efficient management	-6.89	201	0.469
Competent employees	-1.22	210	0.211
National interest & funding	2.17	211	0.862
Experience and ability	2.01	212	0.008

Remarkably other variables with significant statistics includes 'Good marketing strategy' and 'Experience and ability'. The former has ex ante (M= 4.3, SD= .64) and ex post (M= 4.1, SD= .63) with t values at t (208) = 2.34, P<.01, while the latter has ex ante (M= 4.4, SD= .73) and ex post (M= 4.2, SD= .81) and t values t (210) = 2.012, P<.01 respectively. Table 6 above shows all the remaining variables have statistically non- significant increase.

5. Conclusion and Discussions

This paper examined the impact of entrepreneurship education introduced and implemented in Nigerian universities. The contents of these courses includes entrepreneurship and innovation, identifying business opportunity, business creation and growth, financing entrepreneurial ventures, family business, social entrepreneurship, feasibility study and business plan. This courses were designed as a framework to provide university students with the chance to train and develop entrepreneurial skills through theoretical and practical approach. The results of this study as displayed in the paired sample test showed that there was substantial and significant impact on some aspects of students' entrepreneurial attitudes and perception. Remarkably, it has been observed that there occurred a change in students' entrepreneurial attitudes in terms of students' entrepreneurial intention and they exhibit a clear sense of direction for their career choice. Furthermore, the students' general view of the obstacles as well as factors for business success indicated a high importance the students attached to the entrepreneurship teachings they received. This aptly confirm the positive role that entrepreneurship education played on their personal attitudes and behaviour. Virtually all the respondents highlighted their concern on the provision of financial and other form of resources most especially various vocational and skills acquisition centres to complement the lectures and seminars they received on students' entrepreneurship.

However, this study was conducted in just one university out of more than hundred. Hence the conclusions obtained cannot be generalized to other groups of students. Therefore, further research should use new, larger and diverse samples. Larger and more diverse sample would provide useful insights on entrepreneurship education versus entrepreneurial attitude. Moreover, the methodology used, i.e. the instruments of data collection is also another limitation as the closed structured questionnaires constrained the respondents in terms of the information they supplied. The use of paired sample t test as an instrument of data analysis can also be supplemented with more suitable techniques of analysis like linear or logistic regression.

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THE EFFECT OF MANAGEMENT PRACTICES ON THE BUSINESS INCUBATORS PERFORMANCE: TOWARDS STRATEGIC ENTREPRENEURSHIP

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Abstract

This research aims to evaluate the effect of management practices on the business incubators performance towards strategic entrepreneurship. The study was tested on incubators in Chile, Israel and Italy. The research had specialists' intervention, with knowledge and experience in the innovation management field, selected by the technical and scientific criteria. The data will be extracted by a judging matrix with a scale type, in which the specialists gave their opinions, establishing priorities to the variables, by level of importance. Soon after this procedure, the data were analyzed from the application of statistical method using Software R and SPSS Statistics, Neurofuzzy Technology and Multi-Criteria Analysis, with the support of the Electre III, Compromise Programming e Promethee II methods. There is a gap in the literature concerning the management practices and business incubators performance towards strategic entrepreneurship in the three countries. It is hoped that this study will stimulate a broad debate on the issue and it is acknowledged that more studies are needed to build more robust results in the near future. Therefore, the management policy for business incubators in this category should be anchored by efficient planning.

Keywords: Business incubators performance, , Chile, Israel and Italy, management practices, strategic entrepreneurships

1.Introduction

Business incubators have traditionally been recognized as new organizational forms for promoting entrepreneurship and stimulating new business formation (Amazcua 2010; Chan and Lau, 2005; Özdemir and Sehitoglu, 2013; Lindholm-Dahlstrand and Klofsten, 2002; Lyons and Li, 2003; Allahar and Brathwaite, 2016; Al-Mubaraki , Muhammad , & Busler, 2015; Monsson and Jørgensen, 2016). Business incubators are primarily seen as organizations that create a favorable environment for enterprise development (Peters et al., 2004). Business incubators are institutions which support startups in terms of physical space, capital and investment, administrative services, and networking connections to allow them to survive the critical startup phase (Aaboen, 2009; Aerts et al., 2007; Chan and Lau, 2005; Lofsten and Lindelof, 2001, 2002; Mian, 1994; Kuratko and LaFollette, 1986; Aernoudt, 2004). In return, the economy is expected to receive benefits, like newly generated high value-added jobs (Colombo and Delmastro, 2002; Link, 2002; Lofsten and Lindelof, 2001, 2002, 2003). Gstraunthaler, 2009). Business incubators, in turn, provide the entrepreneurs with necessary facilities and expertise and hence enable them to turn their creative business ideas into practice (Al-Mubaraki and Busler, 2013). Thus, they are considered to be one of the instruments to promote innovation, technology transfer and commercialization, as well as to raise the success rate of start-ups (Aerts et al., 2007; European Commission, 2002; Al-Mubaraki and Busler, 2013). In this way, business incubators can significantly contribute to a country's economic growth and employment (Moraru and Rusei, 2012; Hackett and Dilts, 2004) (Kuryan, Khan, and Gustafsson, 2017). An incubator is justified based on superior innovation performance (Barbero et.al., 2012).

Systematic evaluations are needed to understand whether business incubation is na effective and efficient tools. Systematic evaluations are needed to understand whether business incubation is na effective and efficient tools. Considering the great credence for and the large amounts of money invested in incubators by governments, universities, research institutions, municipal agencies and other interested parties, the question of what return society gets on these investments has been raised. Consequently, and in line with a general demand for more rigorous evaluations (OECD, 2006), the evaluation of incubator performance has attracted some attention (Aernoudt, 2004; Allen and McCluskey, 1990; Bhabra-Remedios and Cornelius, 2003; Chan and Lau, 2005; Grimaldi and Grandi, 2005; Hackett and Dilts, 2004a; Lindelo¨ f and Lofsten, 2004; Mian, 1996, 1997; Nolan, 2003; OECD, 1997; Pena, 2004; Phan et al., 2005; Bergek and Norrman, 2008). Thus, systematic evaluations are needed to understand whether business incubation is an effective are effective and efficient policy tools in those

countries (Ozdemir and Sehitoglu, 2013). In this sense, this research aims to verify the effect of management practices on the business incubators performance towards strategic entrepreneurship. The study was tested on incubators in Chile, Israel and Italy. Entrepreneurship has long been regarded as the source of job creation and an engine of economic growth (Chu et.al., 2011), particullarly the strategic entrepreneurship, that is defining entrepreneurial activity from a strategic perspective helps companies raise their performances and develop sustainable competition advantage via increasing profitability or market share (Dogan, 2015).And strategic entrepreneurship is entrepreneurial action with strategic perspectives (Luke and Verreynne, 2006)(Sriboonlue, 2019).Finally, value creation requires providing products and services that customes more highly. The success of a company can be understood in many ways. Kay (1993) emphasizes how a corporation is able to add value for its stakeholders (Salo, 2015). Within this context, this paper is structured according to the following sections: background theoretical, methodology, results and underlying analyses, the paper concludes with the final considerations.

2. Literature Review

Business incubators have traditionally been recognized as new organizational forms for promoting entrepreneurship and stimulating new business formation (Amazcua 2010; Chan and Lau, 2005; Özdemir and Sehitoglu, 2013; Lindholm-Dahlstrand and Klofsten, 2002; Lyons and Li, 2003; Allahar and Brathwaite, 2016; Al-Mubaraki , Muhammad , & Busler, 2015; Monsson and Jørgensen, 2016). Business incubation is an important strategy to foster entrepreneurship and innovation (Dogan, 2015). An increase in entrepreneurship implies an increase in competition, employment, innovation, quality and efficiency and acceleration of economic development (Özkul and Dulupçu, 2007: 89). In this sense, the business world has to be entrepreneurial and strategic in order to create wealth and to be competitive. In this perspective, the entrepreneurship gain importance in the rapidly globalizing world (Dogan, 2015). Strategic entrepreneurship is based on the integration of entrepreneurship and strategic management (Genç, 2012: 72,73) (Dogan, 2015). Therefore, today's companies have to be strategic and entrepreneurial and with the greatest potential to create value for customers and other stakeholders. Business incubators exist widespread worldwide as an entrepreneurship policy intended to help new businesses avoid the risks of failure and generate economic growth in worldwide (Amazcua 2010a; Chan and Lau, 2005; Lindholm-Dahlstrand and Klofsten, 2002; Lyons and Li, 2003). An incubator is justified based on superior innovation performance (Barberoet.al., 2012). There are a variety of measures of incubation performance or outcomes such as occupancy rate, added value of incubator service, the number or proportion of firms graduated, growth of the tenant firms, jobs and wealth created (Phan et al. 2005, Chan and Lau 2005, Hackett and Dilts 2008) number of patent applications per firm (Colomba and Delmastro, 2002). Although survivability of new businesses are often used as a measure to assess the performance of Business Incubators many researchers argue that it should be accepted as a necessary but insufficient condition for success and emphasize the significance of the extent to which Business Incubators contribute to the growth of firms and creation of jobs (European Commission 2002, Aerts et al. 2007). In the literature survival measures has been widely used as indicators of incubator performance, since the (Adegbite 2001, Allen and Rahman 1985, Schwartz and Gothner 2009). Recently, Al-Mubaraki and Schro¨dl (2012) studied and proposed a measurement model that concerned the international context. The four measured indicators were: (1) graduation of businesses incubated; (2) success of businesses incubated; (3) jobs created by incubation; and (4) salaries paid by incubator clients. One of the major problems in assessing the impact of the Business incubators is that although there is vast amount of empirical studies on the performance of business incubators, there is still lack of consensus on the measurement of the performance of Business Incubation. Thus, there is no single standard method to measure the performance which makes it complicated to measure the incubation performance and make comparisons (Ratinho and Henriques 2010, Bergek and Norrman 2008, Schwartz and Gothner 2009, Phan et al. 2005). Second problem is that most of the researches on business incubators are conducted in developed countries (Akcomak and Taymaz, 2007). As the studies have been inconclusive, we argue that performance differs according to the management practices of business incubators.

3. Data and Methodology

Research Framework

3.1 Conceptual Model: Constructs and hypotheses

Figure 1 shows the conceptual framework for the current study. This section examines the conceptual model (Figure 1) and presents the hypotheses to be tested throughout this work.

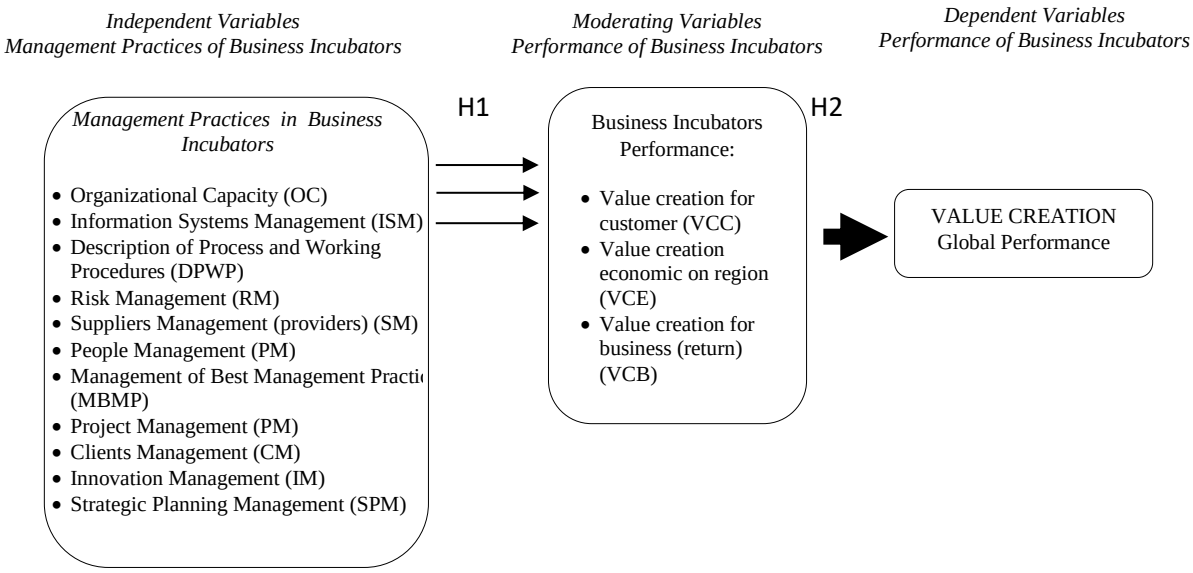


Figure 1: Conceptual model

The current study proposes a conceptual framework for a specific model designed to explain the link between management practices and performance (Outcomes) of the business incubators, as value creation for clients, economic and business return. The current research lays out a conceptual framework designed to analyze the sectors different in business incubators in Chile, Israel and Italy. This framework is then used to analyze how this variable may impact the business performance. Figure 1, which illustrates the essential constructs included in this study, will serve to guide subsequent discussions. From the conceptual model, the following independent variable, dependent variable and hypotheses were made:

Independent Variables: from the findings in the literature the following management practices of business incubators were identified: Organizational Capacity, Information Systems Management, Description of Process and Working, Procedures, Risk Management, Suppliers Management (providers), People Management, Management of Best Management Practices, Project Management, Clients Management, Innovation Management, and Strategic Planning Management.

- *Dependent Variables:* The dependent variables were extracted from the specialized literature and assessed by experts for confirmation. The following independent variable was business incubators performance in perspective of value creation for client, economic and business return.

  Hypothese 1: The management practices have effect to a greater or lesser degree on the Business Incubators *Performance (Outcomes), in perspective Chile, Israeli and Italy.*

  Hypothese H2: The effectiveness rate global performance (ERGP) of the business incubators in Chile, Israel and Italy depends on the combination and interaction of the management practices on the business incubators performance (Outcomes). The sample and data collection are described below.

3.2 Sample and Data Collection

The population of this study was in business incubators in Chile, Israel and Italy (Survey). The authors investigate the effect of the characteristics on outcomes/performance of business incubators in sectors different. The data were extracted using an assessment matrix (questionnaire scalar). The interview instrument for the semi-structured, in-depth interviews was developed after a thorough literature review. The instrument was pre-

tested with business incubators managers. The pilot interviews served as a pre-test for instrument validation and changes were made to the interview instrument based on the findings and comments. The instrument was translated for Spanish, English, Italian and Hebrew. The questionnaire incorporated sections dealing with: general information of incubators, characteristics of incubators, measures of results, effect of characteristics on outcomes. The actual survey was carried out between April and June 2019, which involved 97 specialists. The samples were selected by random sampling technique. Of the 92 specialists in our sample, 85 completed questionnaires were retuned. However, seven cases had to be excluded from further analysis due to excessive missing data. Therefore, the present sample comprised of 85 specialists in business incubators in the three countries. The number of respondents of this study is sufficient to carry out the analysis. The questionnaire was sent to the respondents through email. The self-administered questionnaire was chosen as the mode for data collection. Respondents were given one month to complete the questionnaire. After one month, emails were sent to remind the respondents that the questionnaire should be sent out to the researchers. Respondents who do not yet complete the questionnaire were given another additional month to complete it. The specialists have experience in innovation, business, technology, knowledge, business incubators, projetc management in incubators investigated, and with the following skills: Managers of business incubators and staff, policy makers (government) and academics, Director, managers, Engineering, Senior R&D Engineer, Director Research & Innovation, Director New Technologies & Innovation, others. In Chile, the data were collected of managers of 22 business incubators and specialists. In Italy, the data were collected of managers of 39 business incubators. In Israel, the data were collected of managers of 26 business incubators and specialists. To reduce subjectivity in the results achieved the following methods were used complementarily and in combination: Software R, Law of Categorical Judgments psychometric scaling method (Thurstone 1927), multicriteria analysis, and neuro-fuzzy technology. Next, these procedures are detailed.

4. Conceptual Model Verification: Results and Underlying Analyses

The results and analysis of this study are structured according to the following phases:

- Phase 1: Identification of management practices of business incubators in Chile, Israel and Italy
- Phase 2: Evaluation of the effect of management practices on the business incubators performance towards strategic entrepreneurship on incubators in Chile, Israel and Italy in perspective of value creation for clients, economic and business return
- Phase 3: Evaluation of the E*ffectiveness Ra*te Global Performance (ERGP) in Chile, Israel and Italy
- Next, these procedures are detailed.
- Phase 1: Identification of management practices of business incubators in Chile, Israel and Italy

The first phase is related to the comprehension of the problem and deepening on the subject. It was divided into two stages, which are:

Stage 1 - Identification, to the light of literature, of independent and dependent variables. We conducted a bibliographic research aiming to understand the main concepts about management practices in business incubators. During this stage, more than 200 articles were researched. They were taken from basis like Isi Web of Science, Science Direct, IEEE, and Emerald. As a results, we obtained a list with 2789 management practices.

Stage 2 - Grouping of Variables of the conceptual model. Before the great number of practices found and aiming to make the research feasible, the practices were grouped based on the similarity of their radicals in a way to preserve the coherence amongst the terms. To calculate the similarity among the practices we used the Euclidean distance, a resource that is usually applied in situations like this study (HAIR et al., 2009). Along with the calculation of the distance and focused on the grouping of practices we conducted tests with some agglomerative methods. After a series of tests with the provided methods, we obtained - with the Ward method - the most consistent result of grouping. It happened by scripts on the software R. The results can be observed on the Word Clouds on Figure 2, which can be considered a simple resource but with great visual appeal (Heimerl et al.; 2014), once it offers a general view of a set of texts which more frequently present specific terms.



Figure 2 - Word clouds with the most evident terms of the clusters

Based on the description of the practices of each group and with the help of the word clouds, the grouping of practices could be characterized. We now present the groups and their respective names:

- *Group 1*– of the six hundred and forty-seven (647) practices grouped we identified the strongest terms by the words: product, practice, capacity. After contextualizing, this group was named as "Organizational Capacity";
- *Group 2* – this is the biggest group with one thousand four hundred and one (1.401) associated practices. The most frequent terms were: system, work, report, information. We could observe that the practices related pointed to the use of information systems in different levels of the organization. Then, this group was named as "Information System Management";
- *Group 3* – With ninety-two management practices associated, the word which highlights in this group is "Process". By observing the associated practices, this group was named as "Description of Processes and Working Procedures";
- *Group 4* – This group reunited eighty (90) practices. The most notable word was "Risks". By observing the practices associated, we could verify that they referred to risk management. Then, this group was name as "Risk Management";
- *Group 5* – With sixty-three (63) management practices associated, the most frequent term was "project". The practices in this group embody project management (grouping projects, redistribute teams in function of projects, amongst others). Then, the group was named as "Project Management";
- *Group 6* – This group presented eighty-seven (87) management practices associated to it and had as its most frequent term the word "client". It was possible to observe that the practices within this group were linked to the client, since the perception of its needs to the follow up of its demands. Then, the group was called "Clients Management";
- *Group 7* – With forty-six (46) management practices associated, the second smallest group presented as most frequent terms the words: "new", "product", "development" and "process". By observing this

group it was possible to realize that the practices associated were related to the creative processes and even disruptive ones - in some measure - in the organization. Practices as involvement of providers and clients on the development of process and products in the organization could be noticed. Thus, the group was named "Innovation Management";

- *Group 8* – This was the smallest group, with forty-four (44) management practices and the terms "plan" and "strategic" as the most important ones. The practices of this group were somehow related to strategic planning (realization of periodical strategic sectoral plans, elaboration of institutional development plans, amongst others). Thus, the group was named as "Strategic Planning Management".
- *Group 9* – With fifty (50) management practices, this group presented the word "provider" as the most important one. We could observe that the related practices pointed to management practices which, somehow, involved providers (adoption of criteria for selecting providers, feedback to providers). Thus, the group was named as "Suppliers/Providers Management";
- *Group 10* – This group presented one hundred and sixty-eight (168) management practices associated. The most important term was "practice". By observing the group it was possible to see practices which pointed to the search for management practices itself (use of benchmarking, adaptation of practices internally and externally realized). Then, the group received the name "Management of Best Management Practices";
- *Group 11* – This group presented one hundred and seventeen (117) management practices, and the most important words were "employee" and "training". By observing the associated practices, it was possible to realize many practices (periodical training, career management) which related to people management. Then, this group was named "People Management".
- *Phase 2: Evaluation of the effect of management practices on the business incubators performance towards strategic entrepreneurship on incubators in Chile, Israel and Italy*

This section evaluates the management practices on the business incubators performance in Chile, Israel and Italy. This procedure was developed using the multi-criteria analysis (Figure 3).

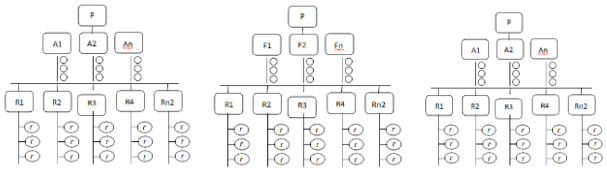
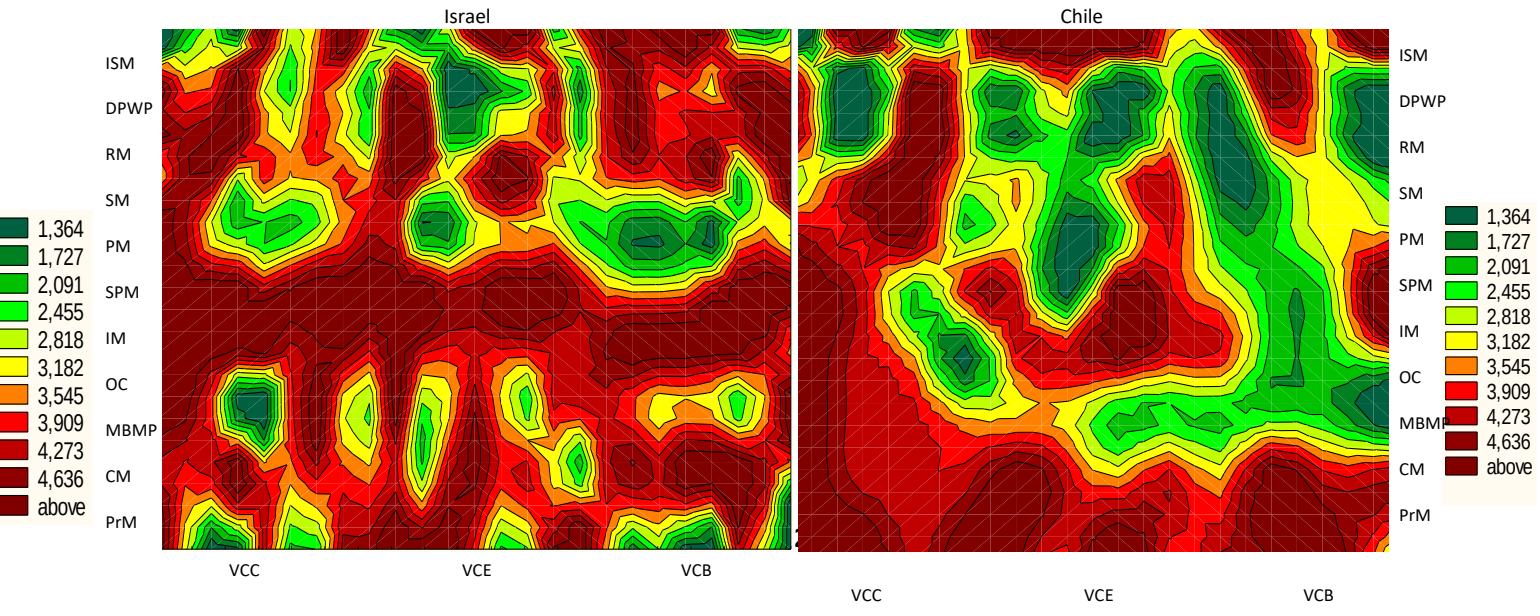


Figure 3: Evaluation of management practices on the business incubators performance in Chile, Israel and Italy

The methods used are Compromise Programming, Electre III and Promethee II. The multicriteria methods are viable instruments to measure the evaluation of the management practices on the business incubators performance in Chile, Israel and Italy. These methods rendered their contributions in determining the (degree) influence of management practices on the business performance.



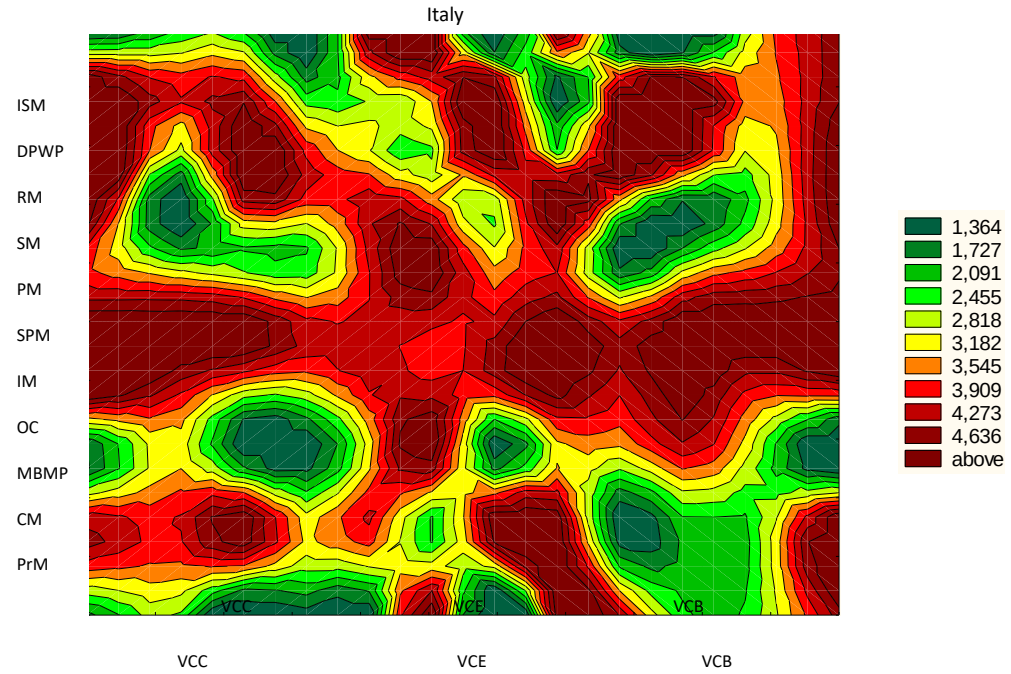


Figure 4: Evaluation of the effect of management practices on the business incubators performance towards strategic entrepreneurship on incubators in Chile, Israel and Italy in perspective: value creation for client (VCC), economic (VCE) and business return (VCB)

The results achieved confirm Hypothesis H 1: Hypothese 1: The management practices have effect to a greater or lesser degree on the Business Incubators Performance (Outcomes), in perspective Chile, Israeli and Italy. With the results of the judgment matrix, the methods were applied: Promethee II, Electre III and Compromise Programming to evaluate the management practices on the business performance. Figure 4 shows the results produced. On the value creation for: clients, economic and business return in business incubators are more dependent of management practices "strategic planning management (SPM)", "innovation management (IM)", "organizational capacity (OC)" and "people management (PM)" in Israel and Italy. In Chile, value creation, there is a greater intensity on "people management", "clients management", "strategic planning management", "innovation management", "organizational capacity and project management. By observing the value creation for clients, economic and business return, there is a greater intensity of dependence to the management practices "strategic management", "people management", "innovation management" and project management. The results showed that "strategic planning management" is the practice that more influence the value creation for clients, economic and business return in business incubators. In fact, strategy means an united and general model that links the strengths and weaknesses of the company by concerning the environmental opportunities and threats and make the company's goals possible and one can define it as the resource allocation. (Mousa Rezvani et al,2011) (Sarfaraz et.al., 2015).

- *Phase 3: Evaluation of the Effectiveness Rate Global Performance (ERGP) in Chile, Israel and Italy*

This phase focuses on determining effectiveness rate global performance (ERGP) of the business incubators in Chile, using neuro-fuzzy modeling (Figure 5). It is a process whose attributes usually possess high subjectivity characteristics, in which the experience of the decision maker is very significant. Thus within this spectrum there is the need for a tool that allows adding qualitative and quantitative variables that converge towards a single evaluation parameter (Oliveira and Cury, 2004; Von Altrock, 1997).

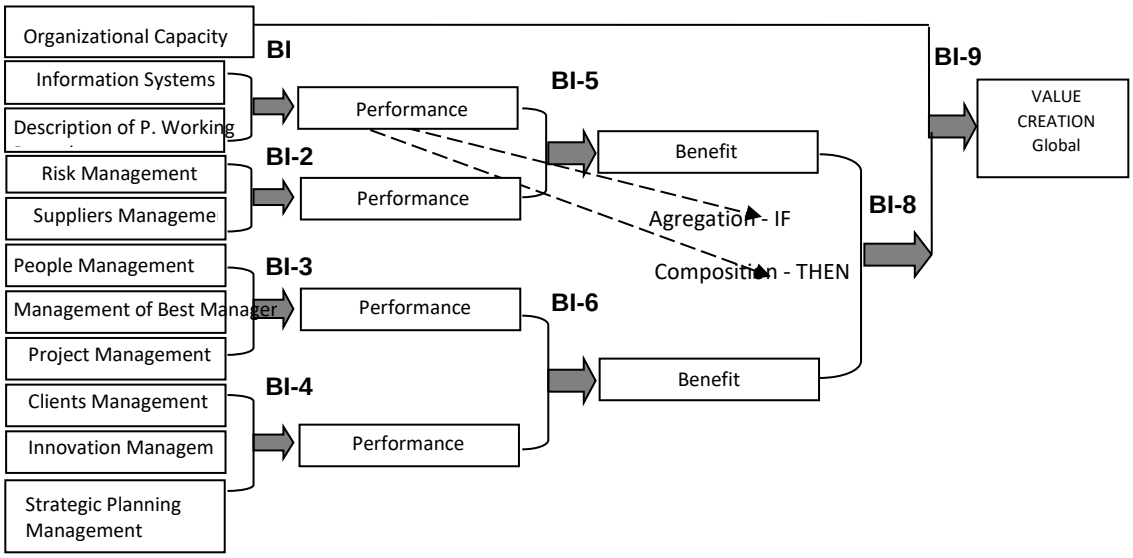


Figure 5: Assessment of the effectiveness rate global performance (ERGP) in Chile, Israel and Italy.

Here this model supports the management of business incubators, as it allows to evaluate the desirable rate toward the acceptable business incubators performance from interation among management practices. The model shown here uses the model of Oliveira and Cury (2004). The neurofuzzy model is described below: *Stage 3.1: Determination of Input Variables (IV) and Linguistic Terms:* This section focuses on determining the qualitative input variables (IV). These variables were extracted from Phase 1, results of effects of the management practices on the business incubators performance. Accordingly, Figure 5 shows the IVs in the model. *Stage 3.2: Determination of the Intermediary Variables and Linguistic Terms:* The intermediate variables were obtained from Performance: Organizational Capacity, Information Systems Management, Description of Process and Working, Procedures, Risk Management, others.

The architecture proposed is composed of nine (9IB) expert fuzzy system configurations, 11 IV (input variables), 3 IVar (Intermediate variables) and 1 OV (Output variables), i.e., qualitative input variables that go through the fuzzy process and through the inference block, thus producing an output variable (OV), called intermediate variable (IVar). The results confirm the *H2: The effectiveness rate global performance (ERGP) of the business incubators in Chile, Israel and Italy depends on the combination and interaction of the management practices on the business incubators performance (Outcomes)* (IV- results of the Phase 3). *Stage 3.3: Determination of Output Variable – Effectiveness Rate Global Performance (ERGP) in Chile, Israel and Italy*

The output variable (OV) of the neurofuzzy model proposed was called effectiveness rate global performance (ERGP) of the business incubators, resulting in the processes of:

Fuzzyfication: The fuzzification process determines the pertinence functions for each input variable.

Fuzzy Inference: The fuzzy inference rule-base consists of IF-THEN rules, which are responsible for aggregating the input variables and generating the output variables in linguistic terms, with their respective pertinence functions.

Defuzzification: For the applications involving qualitative variables, as is the case in question, a numerical value is required as a result of the system, called defuzzification. Thus, after the fuzzy inference, fuzzification is necessary, i.e., transform linguistic values into numerical values, from their pertinence functions (Von Altrock, 1997). To illustrate this, assuming that the study-object business incubator demonstrate the following performance rates for of the business incubators Chile, Israel and Italy: 0.5435; 0.8841; and 0.7431. The expected reference for performance for all incubators is 0.7022 (hypothetical). It is concluded that the effectiveness rate global Outcomes of the business incubators in Chile, Israel and Italy depends of the combination and interaction of the management practices of the business incubators (Hypothesis 2). Business incubators of Israel (88%) and Italy (74%) show efficiency in the combination of their management practices. The effect of the management practices on the business incubators global performance is dynamic and

dependent on constraints and uncertainties that come from the environment at any given time. The environmental contingencies are crucial and essential to adapt the management practices. Figure shows the results produced based on specialists opinion (Figure 6).

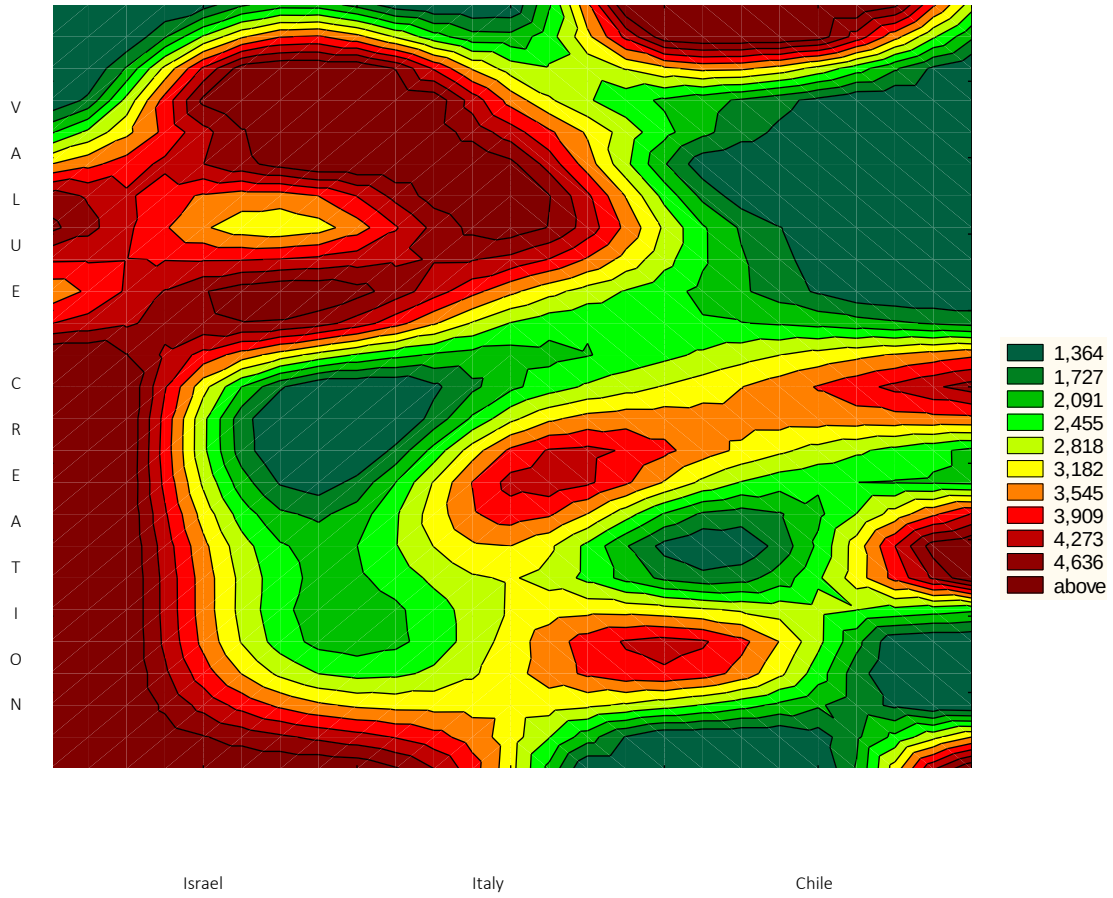


Figure 6: Effectivity of the business incubators global performance for VALUE CREATION in Chile, Israel and Italy

Business incubators make use of its innovative management practices to achieve sustainable competitive advantage and value creation. Essentially the value creation system is an analytical tool; it facilitates the identification and evaluation of strategic alternatives (Walters and Rainbird, 2007).

5.Conclusions: What Can Be Learned?

This research aims to evaluate the effect of management practices on the business incubators performance towards strategic entrepreneurship in perspective of value creation for client, economic and business return. The study was tested on incubators in Chile, Israel and Italy. In this study, we attempted to take a first step in closing this gap in literature on business incubator. By using these priorities, managers can decide which enabling management practices they will focus on first, next, and then last. In promoting the success of business incubators, the "strategic management, innovation management and people management" has the highest priority for value creation for client and others stakeholders. The incubators, with their entrepreneurial teams, support start-ups, primarily with the following guidelines: consulting, network of activities with customers and suppliers, network of activities with companies, marketing assistance, key figures recruitment, support to the administrative and legal services, among others. Government and universities act in concert to support incubation efforts in the three countries. This research presents theoretical and practices implications. The obtained findings could be of potential value to future researchers in business incubation. On the other hand, this study also contributes main managerial implications. First, it helps incubator managers' and policy makers' resource allocation decisions. An effective management can ensure that they have resources and capabilities

required to serve its start-up firms. Regarding this effort, the research on such priorities should be applied permanently and periodically and value creating for clients and others stakeholders. In the face of such environments, strategic entrepreneurship has been potentially viable means for promoting and sustaining firms' competitive advantage (Hitt et al., 2011; Hitt et al., 2001; Zhao, Ishihara, & Jenning, 2019).

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THE RELATIONSHIP BETWEEN INNOVATION CAPABILITIES, DIFFERENTIATION STRATEGIES AND MARKET PERFORMANCE

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Abstract

Nowadays, in the face of increasing competition, firms gain competitiveness when they analyze their internal and external environment against competitors and determine appropriate strategies for their capabilities. In this research, it is aimed to reveal the contribution of innovation capabilities to market performance through the relationship of differentiation strategies. To test the propositions, a field survey using questionnaires was conducted on 321 senior managers of high performing firms operating in manufacturing industry in Turkey. The obtained data from the questionnaires are analyzed through the statistical packaged software. After the validation of measures, structural equation modelling and series of regression analysis was conducted to test the hypotheses and to define the direction of relations. The most striking result to emerge from data is that commitment to innovation capabilities, direct and indirect the effects of differentation strategies on market performance. These findings are consistent with the literature innovations made by the companies using their capabilities increase their market performance through differentiation strategies. When we evaluate the market performance of the company with its innovation capabilities, the innovations that the companies make in their products increase (indirectly) the market performance through differentiation strategies. The magnitude of this effect was measured as 0.837. In other words, one unit increase in innovation capabilities (product, process, market, organizational) indirectly increases market performance by 0.321 units. These relationships are expected to be positive in firms in developed markets. This relationship was confirmed in our study.

Key Words: Differentiation strategies, innovation capabilities, market performance

1. Introduction

Companies need to have one or more competitive strategies in order to have competitive advantage, survive, develop new products, keep their customers improve their performance. Companies should improve their performance while developing new products and services. In our study, innovation capabilities (product, process, market, organizational), differentiation strategies and market performance variables were examined and proved to be positive. In the general framework, it was determined as a result of the examination that companies that want to gain competitive advantage will make positive progress in market performance when they integrate the capabilities developed with the differentiation strategies. The aim of our research is to reveal the contribution of competitive advantage to market performance as a result of the integrity of innovation capabilities and differentiation strategies. For this reason, innovation capabilities and differentiation strategies are primarily focused on. Then, it was revealed how market performance will be affected by differentiation applications. Our findings show a strong and positive relationship between innovation capabilities and differentiation strategies. The reliability and validity of the scales used in the studies to measure the variables in the scope of the research were utilized. According to the 2018 data in Turkey, our survey was carried out in the first 500 and second 500 ISO manufacturers who import and export. The reliability and validity of the survey data were questioned through statistical programs and the findings were determined to be reliable and valid. Investments made by companies to improve their capabilities without adhering to a strategy may cause resources to be wasted and the expected performance may not be achieved. Or the strategies the firm chooses without evaluating its capabilities may fail.

Company managers should think in two ways. They must both choose their strategies according to their resources and abilities, and invest in appropriate strategies by adapting their resources and abilities to the competitive environment. Therefore, managers should prioritize their skills in determining their strategies and invest in their skills in implementing the strategies they have to in a competitive environment. Acar & Zehir (2010) investigated the effects of Michael Porter's Competitive Strategies on firm performance.

The result was that differentiation strategies had more positive effects on growth performance than cost leadership strategies. However, there is no direct relationship between differentiation strategies and the market performance of the company (Acar & Zehir, 2010). In studies related to the relationship between innovation capabilities and market performance (Martínez-Román et al. 2011; Hogan et al. 2011; Guan & Ma, 2003; Andrawina et al. 2008; Camisón & López 2012; Liao et al. 2010; it was observed that firms were positively affected. The impact of innovation on performance was investigated in the studies Erdil and his colleagues conducted and the positive effects were observed (Erdil et al. 2004). In a study in the Northern Marmara region, the impact of product, process, marketing and organizational innovations on performance was examined and it was seen that other than process innovation positively affects performance (Gunday et al. 2011).

Within the framework of these views, it has been seen that the company's capabilities and the diversification strategies, which are variable, have a positive impact on the company's market performance by integrating with each other. When we look at the studies in the literature, there are no studies related to our variables (innovation ability, differentiation strategies, market performance). Furthermore, it is thought that this research will be utilized by academicians and companies in the sector and will make a significant contribution to the literature.

Literature Review and Theoretical Framework

2.1. Innovation Capability

The ability of the company is defined as the capabilities that provide advantages to the companies, it is an important element in the competitive advantage. Under intense competition, it becomes While increasingly difficult to avoid other competitors. For this reason, when companies develop their skills by using their resources, the environment in which their knowledge and perspectives will make a difference in the market environment and develop their missions and visions that will distinguish them from others will occur.

In order to evaluate a skill as a talent, it is necessary to show continuity; the capabilities needs to reach a certain level in order to be tested and applied. Capabilities should be applied in coordination between individuals and teams (Helfat & Peteraf 2003, 997). Competitiveness has been described by various authors in the literature. In the areas where the firms become more specialized or in the long-term periods where they make profit above the average (Özdoğan, 2006, 5). When the firm's concrete and abstract resources grow, so does its capabilities. If managers continuously develop their skills and add new ones, high growth and performance increase will be provided (Hiroyuki, 2003, 187). Jeffrey Lowenthall, the ability to identify and use information in an organization that allows the use of data, methods and tools defined as a combination (Dogan, 2004, 24). According to Nelson, unimaginable strategic values provide competitive advantage in the firm. Accordingly, capabilities include specialization rather than a wide range of capabilities (Eren, 2005).

Innovation: The definition of innovation was first made by economist J. Schumpeter (1912), and it was stated that innovation is necessary for development. According to Schumpeter, innovation is the addition of a new feature to a previously unknown product, service or product, the application of a new method in production, the entry into a new and different market, the availability of new resources and the transition to a new organization. Presenting a value in innovation is the value obtained after reaching the customer, in which ideas are evaluated as concrete and abstract, which turn into useful and profitable activities that offer solutions to problems (Frambach & Schillewaer, 2002, 164).

Product Innovation Capability: Product innovation is defined as the improvement of the properties and usage of a good or service by changing it. In addition to producing new products, product innovation aims to meet the demands of consumers through different applications and changes by acquiring new customers and markets. Transformation of mobile phones to state-of-the-art smartphones, Advanced technologies in the automotive market, GPS and location applications, Tablets, voice recorders, digital cameras (OECD 2002, VI), Generating electricity with solar louvers, Examples of product innovation capabilities such as wireless touch mice mentioned. Product innovation is the further improvement of the product according to its existing properties or uses. Technical features include significant improvements such as components, materials and ease of use (Adıgüzel, 2012,29).

Process Innovation Capability: Process innovation is the development of new production and distribution systems or improvement of existing systems. Process innovation capability is the application made in the process of working with changes in the technical equipment or software in the production, distribution of new or existing products. Making the product or service offered to the market more effective and efficient. Improvements in

support activities, developments, information communication, quality and efficiency studies are seen as process innovation. Process innovation is the development of new production and distribution systems or improvement of existing systems (Elçi, 2007,9). One of the most popular applications for process innovation is the in Just in Time used by Toyota Company in production and the Bant Production Line System of Ford Motor Company. Flexible and lean production systems, agile production system, self service in restaurants, booking applications in hotels, GPS applications in transportation are examples of process innovation.

Marketing Innovation Capability: Innovations are made to differentiate and develop marketing methods in order to respond to the wishes and expectations of the customers and to improve the existing ones. Changes in the design of the product or service, packaging with the idea of recycling, focusing on brand positioning, making changes in the price element are seen as marketing innovation activities. Activities such as buying concert tickets on the internet, giving small toy gifts to children in fast food restaurants, price applications, brand positioning and packaging are seen as marketing innovations. With these capabilities, companies create value for their brands. It is the development and improvement of different designs and different marketing methods (Elçi, 2007,12).

Organizational Innovation Capability: Organizations are one of the important factors that determine innovation. Participation of employees in innovation activities and enabling them to put forward ideas show that organizations have a strong infrastructure for innovation. Developing operational methods in organizations or adapting them to company conditions and responding to internal and external environment indicate that organizational innovation capabilities are improved. Innovation capability in organizations starts with the discovery of previously unused methods as a result of strategic decisions made by management. Examples of organizational innovation are the 6 Sigma implemented by Arçelik and Kaizen (continuous improvement and development) methods designed by Japanese companies. In the continuous improvement method, all employees have the authority to make decisions in their processes. They present their ideas to management on improvement issues, and management evaluates these ideas and puts them into action. Kaizen methods are currently accepted and implemented. Organizational innovation strategy plays an important role in the successful management of innovation for organizations. With organizational innovation, triggering innovation and creativity within the company is not considered alone; With the help of organizational innovation, companies will be able to apply a new organizational method in business practices, workplace organization or external relations (Tuzcu, 2008).

2.2.Differentiation Strategies

In order to exist in the sector, companies have to develop and implement various strategies. Differentiation strategies from these strategies are among the strategies that should be applied in competitive advantage. With differentiation strategy, companies can achieve success by overcoming their competitors. According to Porter (2000), it is important to differentiate the product or service offered in companies and to create and present it in a way that is accepted uniquely throughout the industry. It is also very important to create value for customers as differentiation alone is not enough to create something unique (Porter 2000). The companies work to meet the demands and needs of their customers by identifying the features that they think are important in the sector and differentiating them in product, distribution channels, after-sales services and marketing. The product is unique and superior to the customer due to differentiation (Porter, M.1980, 14). Conditions for creating unique value in many ways are provided by product features, after-sales service, timing, vertical or horizontal integration and economies of scale.

Differentiation Types: To keep the existing customer, to obtain new customers, to compete with competitors, to make profit and to continue the life of the company needs to be differentiated and diversified products. The differentiation of the products is to change one or more of the basic features to differentiate the previous features. Differentiation can be implemented in a variety of ways. These:

Vertical Product Differentiation: Vertical product differentiation is differentiation within the product group that is on sale. For example, the sale of filter coffee is the sale of flavored or decaffeinated coffee. What is important here is the addition of another feature to a product.

Horizontal Product Differentiation: Horizontal product differentiation is the production of products which are considered compatible with each other in a product category. For example, Gilette brand razor blades and facial care creams are produced and sold. It is also the differentiation made in the appearance, color and model of the

previously produced product. Here customer preference is at the forefront. The subjective tastes of the customer vary (Apella, I. 2008, 179).

Differentiation in Price: To attract the attention of the customer by offering low prices in the products which are more standard, and to realize the differentiation by offering the same quality and features to the customer's taste at lower prices. This is because the difference in the product is more than the difference in production cost by making use of very small differences in the same product.

Image differentiation: Image differentiation is about creating a certain image in the minds of users and is more difficult to measure than other differentiations. In order to create a perception about the product in the minds of the consumer, differentiation is applied to the product rather than function, design, usage situations and appearance. Here, the aesthetic presentation of the product without destroying the image gives (Mintzberg, H. 1998). The image can be created with the use of all communication tools and can bring together many elements (symbols, colors, slogans, sponsors, etc.). Companies create the image that their products are different, even though there are no product differences between brands.

Differentiation in Support Services: Differentiation in support services is realized by differentiation of support services provided with the product. Support can be defined as products and services that enable the user to purchase the product. Services made for the purchase of the product, special loans, after-sales service, warranty, delivery service around the clock, various gifts are also included in the issue of support differentiation (Timur, 2003).

Quality Differentiation: Differentiation made to improve the quality of the product or service. Quality can be achieved by increasing the reliability and durability of the product. With the increase in quality factor, the product becomes durable, easy to use and reliable. Customer satisfaction increases and differentiation occurs. Here, changes are made on the existing property of the product is not made complete changes (Timur, 2003). If a change in specifications occurs over the standards, quality differentiation occurs.

Differentiation in Design: Differentiation in design differentiation is made using unique features different from the direct design of the product. Changing the designs of old cameras and making digital cameras using new technology is design differentiation. It is the differentiation in design by adding unique features to the products, following fashion and innovations with new technologies (Mintzberg 1998).

2.3. Market Performance

Performance is an important factor that is needed in every stage of life and in every action. Firms use various methods to answer questions about where they are and where they should be. Achieving the desired level of performance is ensured by an objective examination according to the company structure and sector structure. Performance is an important critical value for companies that want to survive. The level of performance of firms is important for both investors and country development. Performance is a measure of success and shows how the plans have achieved the goal. The reasons of the plans that do not reach the target should be determined and precautions should be taken. Thus, by encouraging managers and employees, development can be brought to desired levels (Parker, 2000, 63). Market performance is a very important concept in strategic management. In the development of competitive advantage depending on performance, growth is inevitable as a result of sales and profits. In this way, gaining competitiveness in the business environment in today's dynamic variable and mobile market environment has a significant impact on market performance (Banker et al, 2006). In terms of competitiveness, the market performance of the firm is expressed as the success achieved with the aim, as a measure of the company's position, objectives, and capabilities used against the competitors in a useful way (Demir & Okan, 2009, 60). In the light of the literature, we argue that innovation capabilities increase the market performance through the differentiation strategies and propose the hypotheses following:

H_1: Innovation capabilities have positive effect on differentiation strategies.

H_2: Innovation capabilities have positive effect on market performance.

H_3: Differentiation strategies have positive effect on market performance.

H_4: Differentiation strategies mediates the relationship between innovation capabilities and market performance.

3.Research Method

3.1. Sample and Data Collection

In this part of the study, the findings obtained from the analysis of research data collected in order to determine the effect of innovation capabilities, differentiation strategies applications on market

performance are shown in the tables. The research was carried out with the data obtained from the

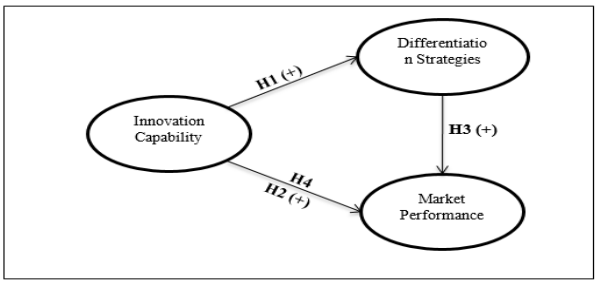
public and private sector companies that import and export. In the study, a total of 321 data were

obtained after getting back from 400 questionnaires and clearing the data. The analysis results obtained for the research model are given below.

3.2. Analyses

In the measurement of the variables involved in the research, the scales that were used in literature studies and whose reliability and validity have been verified have been used. 5 likert-type scale was used measure innovation capabilities, differentiation strategies and market performance. Innovation scale is adopted from Knowles et al, (2008), Alegre et al, (2006), Liao et al, (2007), Calantone et al, (2002), Hogan et al, (2011), Çalık, (2016). Differentiation strategies scale is adopted from Lynch et al. (2000) Porter (1980) Kohli & Jaworski (1990). Market performance scale adopted from Antoncic & Hisrich (2001), Baker & Sinkula (1999), Zahra et al. (2002), Venkatraman & Ramanujan (1986).

Figure 1. Research Model



4. Findings

In this study, analysis is conducted to test the hypotheses and to define the direction of relations. When we examined the Table 1, it can be seen that the three dimensions of the innovation (product, process, market, organizational) have significant effect on both dimensions of differentiation strategies and market performance.

Table 1. Descriptive statistics, Cronbach's alpha, and correlations for the research model variables

Variables	*Mean*	*Std. Dev.*	*Cronbach's Alpha*	*1*	*2*	*3*	*4*	*5*	*6*
Product innovation capability	3,975	0,77	0,86	1					
Process innovation capability	4,057	0,714	0,84	.724**	1				
Market innovation capability	3,999	0,723	0,84	.693**	.749**	1			
Organizational innovation capability	3,938	0,842	0,91	.632**	.725**	.713**	1		
Differentiation Strategies	4,076	0,714	0,96	.714**	.648**	.712**	.713**	1	
Market Performance	3,951	0,689	0,96	.544**	.501**	.532**	.519**	.605**	1

**. Correlation is significant at the 0.01 level (2-tailed).

In Table 1, descriptive statistical values, correlation values and scale reliability values of the variables included in the analysis are given. When the reliability coefficient values are examined, it is seen that the reliability values of the questions are higher than 0.80 which is the most commonly used value in the scale reliability measurement. The fact that this value is greater than 0.80 indicates that the internal consistency of the variables used in the analysis is very high. The Cronbach's Alpha value obtained for all variables was found to be 0.971.

Table 2. Kaiser-Meyer-Olkin (KMO) and Bartlett Sphericity Test results for the research model variables

Factors	*Kaiser-Meyer-Olkin (KMO)*	*Bartlett Sphericity Test*
Product innovation capability	0.727	433.438***
Process innovation capability	0.724	382.920***
Market innovation capability	0.728	384.802***
Organizational innovation capability	0.753	629.414***
Differentiation Strategies	0.975	3820.555***
Market Performance	0.873	923.091***

KMO: 0.957 and Bartlett: 8717.824*** for all variables

* p < 0.05, ** p < 0.01,*** p < 0.001

For the variables included in our research model, first, the suitability of the factors to the analysis should be investigated. As a result of the study, it was observed that the KMO values for the sub-factors were above 0.50, which is considered the lowest value (Hair et al., 2014). The KMO value calculated for all questions was 0.957, which indicates that our data were excellent enough for factor analysis. In addition, since the Bartlett Sphericity test was significant at a significance level of 0.001, it was determined that the variance-covariance matrix of the data set was not a unit matrix and that the data were suitable for factor analysis.

Table 3. Factor Analysis Results

	Differentiation Strategies	*Market Performance - tional*	*innovation capability*	*Process innovation capability*	*Product innovation capability*	*innovation capabilit*
Diff_Str13	.770					
Diff_Str10	.766					
Diff_Str12	.757					
Diff_Str3	.742					
Diff_Str1	.736					
Diff_Str4	.717					
Diff_Str8	.716					
Diff_Str14	.714					
Diff_Str11	.705					
Diff_Str9	.699					
Diff_Str6	.687					
Diff_Str7	.683					
Diff_Str2	.675					
Diff_Str5	.610					
Mark_Perf4		.797				
Mark_Perf8		.775				
Mark_Perf10		.771				
Mark_Perf11		.770				
Mark_Perf7		.750				
Org_inn1			.776			
Org_inn2			.737			
Org_inn3			.692			
Proc_inn1				.698		
Proc_inn2				.698		

Proc_inn3				.556		
Prod_inn1					.773	
Prod_inn2					.614	
Prod_inn3					.574	
Mark_inn2						.698
Mark_inn1						.600
Mark_inn3						.546
% Variance Explained	28.077	13.826	9.422	9.176	7.629	6.770
Notes	*(i) Varimax Rotated Principal Component Analysis* *(ii) Total Variance Explained: % 74.900*					

The results of the explanatory factor analysis obtained from the data are given in Table 3. Varimax was chosen as the most appropriate factor rotation method for the data (Pallant, 2013). The lowest factor load was 0.50 (Hair et al., 2014; Field, 2007). Accordingly, a total of 6 factors were determined. 14 questions were asked for Differentiation Strategies, 5 questions for Market Performance and 3 questions for innovation capabilities. In addition, it was found that the total explained variance was 74.90%. Of the variance explained, 28.077% were by Differentiation Strategies, 13.826% by Market Performance, 9.422% by Organizational innovation capability, 9.176% by Process innovation capability, 7.629% by Product innovation capability and 6.770% Market innovation capability.

Table 4. Mediation Analysis Results

Dependent Variable	Independent Variable	Direct Effect	Indirect Effect
Differentiation Strategies	Innovation Capabilities	0.837***	
Market Performance	Differentiation Strategies	0.388***	
Market Performance	Innovation Capabilities	0.321***	0.324***

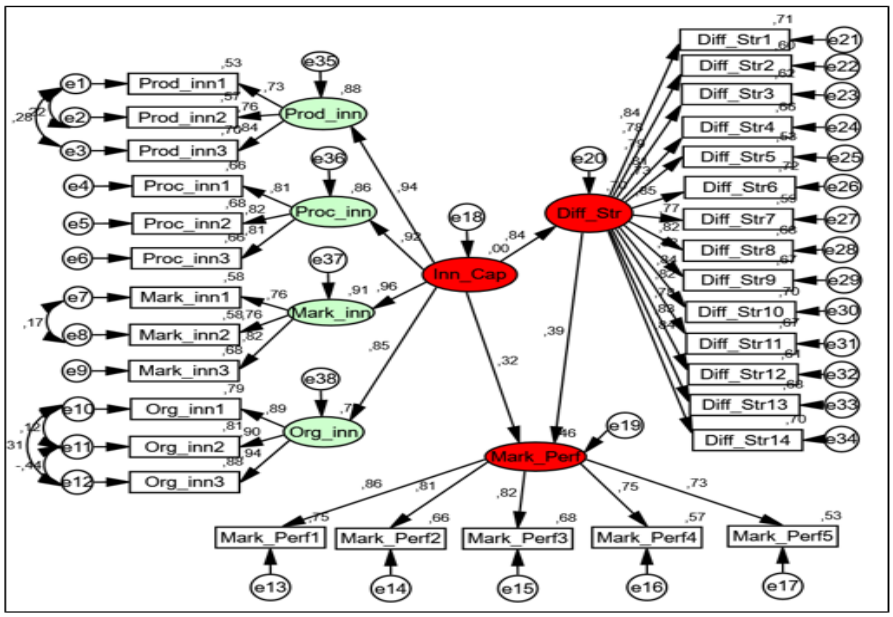
$\chi 2/df = 2.61$; GFI=0.828; CFI=0.921; TLI=0.913; RMSEA=0.071

* $p < 0.05$, ** $p < 0.01$,*** $p < 0.001$

When the results given in Table 4 are examined, it is seen that the goodness of fit values of the model are among the acceptable values (Hayes, 2009; Hair et al., 2014). The direct and indirect relationships given in the model (Hayes, 2009) were found to be significant at p = 0.001 significance level. Accordingly, the positive impact of Innovation Capability on Differentiation Strategies (β = 0.837 ***) is remarkable. Differentiation Strategies also have a positive and significant effect on Market Performance (β = 0.388 ***). In addition, Innovation Capabilities have a positive direct effect on Market Performance (β = 0.321 ***) and an indirect effect (β = 0.324 ***). According to these results, all of the research hypotheses were confirmed.

In order to determine the mediation relationships proposed by Baron & Kenny (1986), structural equation modeling was preferred in our study. When Figure 1 is examined, regression and correlation coefficients between variables and questions are observed. The mediation relationships for the determination of direct and indirect effects are given in Table 4.

Figure 2. Structural Model for Innovation Capability, Differentiation Strategies and Market Performance



5. Conclusion and Discussions

In our age, there is a rapid change with globalization and new competitive environments are created as new markets emerge. When firms create more value for their customers against their competitors, they retain their competitiveness. When they create superior customer value, that is, differentiation efforts, they will provide a strong market share compared to their competitors and higher than average profitability in the industry. When considered strategically, it shows that superior performance firms are advantageous if they have differentiated abilities in competition than their competitors. In study the different perspectives in the literature have been evaluated and a comprehensive field research has been carried out to reveal the relationship between inovation capabilities, differentiation strategies and their impact on market performance. Considering the fact that our country is in the status of developing countries, it is thought that the large number of selected firms has this effect. As we did research with large companies, the results were reliable and valid. By operating in theTurkey was declared in 2018 revealed the relationship between the first ISO 500 and second ISO 500 manufacturers with the concept of field work carried out in the company. After cleaning 400 data in the study, 321 valid questionnaire data were obtained. In the measurement of the variables, a questionnaire form based on 5-point likert type questions was used. Statistical package programs and dependent and independent variables were subjected structural equation modeling was preferred in our study. In addition, the Cronbach Alpha values of the factors above 0,7 showed that the scales used were reliable. Correlation analysis was used to test the hypotheses and regression analysis was performed (Awang, 2012). When Figure 1 is examined, regression and correlation coefficients between variables and questions are observed. The mediation relationships for the determination of direct and indirect effects are given. As all effects are significant, it appears that innovation capabilities and differentiation strategies have a positive impact on market performance. When we evaluate the firm's market performance with the innovation capabilities of the firm, the innovations made by the firms' products increase (indirectly) the market performance through differentiation strategies. Accordingly, the positive impact of innovation capability on differentiation strategies is remarkable. Differentiation Strategies also have a positive and significant effect on market performance. According to these results, all of the research hypotheses were confirmed.

The top management in the companies should evaluate the opportunities that arise for the competitive position in the market and make the necessary investments by using the resources and capabilities of the firm in the decisions to be taken and produce the products and services in a new and different way with the experiences they have, thus providing superiority in terms of market performance. Management should make the necessary investments by making good use of the resources and capabilities of the firm in the decisions to be taken, and produce products and services in a new and different way by continuously developing with the experiences they have, thus obtaining a competitive advantage. For the competitiveness, companies should follow the

technological developments and work on the change taking into consideration the market, activities and firm structures. By choosing a competitive environment, a loose and comfortable environment should be abandoned, local markets should be reduced by focusing on the global market. A company that has this idea will create development by creating added value both for itself and for its country and will be able to compete in national and international markets.

As a result of our research, the findings are obtained within the framework of various research limitations and should not be generalized for companies operating in other regions since it covers only one region. The number of samples can be expanded in future studies on different provinces and companies. Different results can be obtained in different sector groups and different sample sizes. However, this survey is conducted on high performing firms of Turkey; findings might not be transferable to all types of organizations. Thus, it is recommended that further researches can be conducted on small-scale organizations and, also in different countries for the generalizability of findings. Another limitation of this survey is that same respondent answer the all questions related to innovation capabilities, differentiation strategies and market performance. Further surveys can be designed in a way that market performance related questionnaires are filled out by different respondents, in order to prevent same-source bias.

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MARKETING AND BRAND MANAGEMENT

THE EFFECT OF CULTURAL DIMENSIONS AND SELF-EFFICACY OF THE INDIVIDUAL ON THE ATTITUDE OF GREEN PRODUCTS AND CHANGE IN BEHAVIOR

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Abstract

Environmental problems threaten the lives of all living beings, especially human beings, in our environment. With the rapid increase in environmental problems, consumers are directed to protect the environment by the fact that they are aware that they directly have an effect on these issues. Nowadays, the growing awareness of consumers about environmental issues has mobilized green marketers. For this reason, enterprises consider the future of the consumers, and they conduct all their activities in an environmentally friendly manner from the design of the products to the distribution of them. It is important for consumers to have a positive attitude towards green products, because the transformation of these attitudes into behavior will positively affect both the profitability process of the firms and the future of the communities. In this study, the impact of the individual's culture and self-efficacy on the attitude towards green products has been examined with a holistic approach. In addition, the effect of the attitude towards the green products on the behavior of purchasing has also been examined. According to the results of the research, it has been seen that collectivism and self-efficacy have an effect on the individual's attitudes towards green products. Besides, the attitude towards green products has an effect on the behavior purchasing green products.

Keywords: Attitude, cultural dimensions, green product, self-efficacy

1.Introduction

As a result of the environmental problems experienced, both businesses and consumers have increased interest in green products; because, in the intertwined life adventure of nature and human beings, damaging to the environment triggers people's future anxiety. In this context, due to the signs of global warming and the abuse of the world's scarce resources, more attention has been paid to environmentally friendly products. Now, consumers support environmentally friendly applications and products much more. In other words, consumers want less pollution of the product, less waste, more recycling, more renewable resources in the production process, and environmentally friendly products (Karaca, 2013). Improvements in the level of education and culture of people also have an effect increasing the sensitivity of the society to the environment. That is why the market, which is composed of consumers demanding green products, is growing day by day (Yaraş et al., 2011). Culture is one of the most important variables affecting consumer behaviors (Keleş, 2007). Businesses, an economic unit, produce goods and services to meet the needs of the society and make profit in return. However, in addition to financial gains, enterprises have also functions such as responding to the economic, social and cultural needs of the society and helping to solve social problems (Erbaşlar, 2012). In this context, cultural differences change individuals' priorities. Considering nature is in the foreground in the developed countries while the priority of the people in the less developed countries is to meet the main needs of individuals (Ayyıldız and Genç, 2008). In this study, the dimensions of culture that are supposed to have an impact on the attitude towards green products are discussed under three titles. Collectivism is the first of the dimensions of culture. Research shows that individuals with collectivist culture have more green values and more green buying behaviors (McCarty and Shrum, 1994; Keleş, 2007; Nguyen et al., 2017). The other two dimensions of culture are long-term orientation and man-nature orientation (Sreen et al., 2018). Research also shows that long-term oriented individuals have a positive attitude towards environmental and green products because they think they will be beneficial in the future (Leonidou et al., 2010). Besides, man-nature orientation affects environmental attitudes positively (Sugandini et al., 2018).

Self-efficacy is the self-judgment of a person for organizing the activities that are required to show a certain performance and for performing them successfully. Self-efficacy is a belief that develops over time and through the individual's experiences. Individuals can improve their self-efficacy through direct experience, observing

other people, or listening to others' comments (Lee, 2005). Consumer concerns on environmental issues may not easily be translated into pro-environmental behaviors. In this context, self-efficacy belief affects individuals' green purchasing behavior (Kim and Choi, 2005). Studies that evaluate cultural dimensions and attitudes towards green products are frequently encountered in the literature. However, the aim of the study in terms of contribution to the literature is to provide a holistic approach by considering both the cultural and individual characteristics of the individual together. Accordingly, in this study, it is aimed to examine the changes in green purchasing behavior in the effect of culture structure and self-efficacy of individuals on attitude towards green products.

2. Literature Review and Theoretical Framework

2.1. Cultural Dimensions

Culture is the unity which is formed by the rules and responsibilities that shape the behavior of a society, make each society a distinct environment, and give the societies their own shape (Mutlu, 2008: 201). Due to the rapid globalization of markets and the diversification of consumer segments, the interest towards the impact of culture on consumer behavior is increasing day by day (Douglas and Craig, 1997). It is also assumed that the diversity of behavior in social relationships directs consumers' reactions and perceptions in order to understand the differences in consumer participation in cultural processes (Bolton et al., 2010). Therefore, it is important for marketers to understand consumer culture and norms (Sreen et al., 2018). In addition, it affects the cultural attitudes of individuals (Abdul Rashid et al., 2004). In the study, the dimensions of the concept of culture were examined under three main titles. Collectivism and long-term orientation dimensions were taken from the study of Hofstede (2011), and man-nature orientation were taken from the study of Kluchhohn and Strodtbeck (1961).

Long-Term Orientation: Long-term orientation is the degree to which a society has a perspective towards a utilitarian future (Furrer et al., 2000: 361). In another definition, long-term orientation is the promotion of rewarding virtues, especially stability and savings, for the future (Hofstede, 2001: 359). Long-term oriented individuals see themselves as financially responsible, loyal and innovative, since they tend to save heavily (Soares et al., 2007). In long-term oriented cultures, individuals are also expected to establish long-term relationships with service providers. The concepts of reliability, responsiveness and empathy are therefore crucial for individuals as a result of their close relationship with service providers (Furrer et al., 2000). In this context, individuals in this culture maintain their social traditions and adhere to their family values (Sreen et al., 2018), and when they are unsure of their future benefits, they seek opinions from others before making any purchase decisions (Sharma, 2010). When the literature is examined, it is possible to come across studies dealing with the terms of long term orientation and attitude towards green products. Joireman et al. (2004) found that long-term oriented individuals had a positive attitude towards environmental or green products. Sarıgöllü (2009) investigated the impact of cultural, socio-demographic and contextual characteristics on shaping environmental attitudes across the country. As a result of the research, they found that individuals with long-term orientation have a positive attitude towards environmental products. Nguyen et al. (2017) found that consumers' long-term orientation values positively affect their attitude towards environmentally friendly products. Sreen et al. (2018) concluded that the long-term orientation indirectly affects the attitude towards green products. Studies in the literature show that long-term orientation positively affects green product demand. Accordingly, the hypothesis was developed as follows.

H1: Long-term orientation is effective on attitude towards green products.

Collectivism: Collectivism is the degree of integration of individuals in a society into powerful and harmonious groups from the moment they are born (Hofstede, 2001: 225). Collectivism is concerned with values such as philanthropy, tradition and harmony (Schwartz et al., 2001). In collectivist cultures, individuals see themselves as part of one or more groups and are willing to give priority to the goals of these groups rather than their own goals (Sharma, 2010). In addition, individuals in this culture are willing to share scarce resources with other individuals in the same community (Sreen et al., 2018) and to develop a positive attitude towards behaviors that help the community to develop (McCarty and Shrum, 1994). In the literature, it is possible to come across many studies dealing with the concepts of collectivism and attitude towards green products. Samarasinghe (2012) examined the impact of cultural values and environmental attitudes on green consumer behavior. As a result of the study, she concluded that collectivism affects environmental attitudes. Kirmani and Khan (2016) investigated the relationship between consumers' environmental concerns and their attitudes towards green products. As a

result of the study, they found a positive relationship between collectivism and attitude towards environmental products. Erciş et al. (2016) examined the effect of collectivist culture, green attitude and behavior on willingness to pay more for green products. They concluded that collectivist culture positively affected green attitude. Studies in the literature show that collectivism positively affects the attitude towards green products. Accordingly, the hypothesis was developed as follows.

H2: Collectivism is effective on the attitude towards green products.

Man-Nature Orientation: Man-nature orientation is defined as an individual's ability to live in harmony with nature (Sreen et al., 2018: 181). In another definition, man-nature orientation is expressed as the ability to direct human relations with nature (Sugandini et al., 2018: 268). That is, while societies with low man-nature orientation believe that they dominate nature, man-nature oriented societies believe that they should live in harmony with nature (Jandt, 2004). When the studies in the literature dealing with man-nature orientation and attitude towards green products are examined, Chan and Lau (2000) investigated the effects of cultural values, ecological influences and ecological information on green purchasing behaviors. As a result of the study, they found that man-nature orientation had a positive effect on the attitudes of individuals when purchasing green products. Sreen et al. (2018) concluded that man-nature orientation has a direct positive effect on attitude for green products. The studies in the literature show that man-nature orientation positively affects the attitude towards green products. Accordingly, the hypothesis was developed as follows.

H3: Man-nature orientation has an impact on attitude towards green products.

2.2. Self-Efficacy

Self-efficacy is the judgment of individuals about their ability to organize and conduct the actions that are necessary to perform a certain performance (Bandura, 1986: 391). In other words, self-efficacy is a personal belief that individuals can tackle the difficulties they faced and fulfill the responsibilities that are expected from them (Uzun, 2018: 29). Self-efficacy belief is also thought to be effective on behaviors, thought systems, motivation, emotional and physiological states (Bandura, 1997). As a result, it is seen that this belief is an element affecting people's choices, goals, how much effort they should make, how much resistance they can resist to the difficulties, how long they can recover themselves when they face negativity, the level of anxiety or stress they have and their final successes (Pajares, 1997). According to the studies dealing with the concepts of self-efficacy and attitude, Torkzadeh and Van Dyke (2001), Hsu and Chiu (2004) and Lee and Hsieh (2009) found that self-efficacy has an effect on attitude. Qader and Zainuddin (2011) concluded that self-efficacy positively affects consumers' environmental attitudes. Studies in the literature show that self-efficacy has a positive effect on attitude. Accordingly, the hypothesis was developed as follows.

H4: Self-efficacy is effective on attitude towards green products.

2.3. Attitude towards Green Products

Attitude is a psychological tendency expressed by evaluating a particular object with positive or negative thoughts (Khoiriyah and Toro, 2018: 622). The notion of attitude can be conceptually classified as general and specific attitude (Sun and Wilson, 2008). While general attitude refers to the general tendency towards behaviors towards the object to be exhibited, the special attitude is a strong preliminary indicator of a single behavior towards a particular object (Ajzen and Fishbein, 1977; Hines et al., 1987; Eagly and Chaiken, 1993). Therefore, consumers' beliefs or feelings about their decision to buy eco-friendly products and the effects of such behaviors on environmental results often lead to the perception of the concept of special attitude as attitude towards green products (Kaiser and Gutscher, 2003; Riethmuller and Buttriss, 2008). In addition, the attitude towards green products, which is an important mediator between environmental awareness and green product purchasing behavior, is a result of consumers 'appreciation and discontent and has an impact on consumers' willingness to buy a product for environmental protection (Chyong et al., 2006; Tanner and Kast, 2003). According to the studies dealing with the concepts of attitude towards green products and green purchasing behavior, Lee (2008) found that attitude towards green products had an effect on green purchasing behavior. Chen and Chai (2010) and Joshi and Rahman (2015) found that consumers who show positive attitudes towards green products exhibit green purchasing behavior. Studies in the literature show that the attitude towards green products positively affects green purchasing behavior. Accordingly, the hypothesis was developed as follows.

H5: The attitude towards green products is effective on green purchasing behavior.

2.4. Green Purchasing Behavior

Green purchasing behavior is that individuals buy environmentally friendly products or the products which are recyclable and thus provide benefit and that they avoid the products which harm nature and society (Jaiswal and Kant, 2018: 61). In another definition, green buying behavior is defined as the preference and use of products that are produced using environmentally friendly or ecological processes and materials (Leonidou et al., 2010: 1327). The increasing concern of the future with increasing environmental problems shapes consumers' purchasing behaviors and consumers prefer to purchase products/services which are environmentally friendly and which are offered by companies that implement environmentally friendly policies. In other words, the tendency of consumers to exhibit green purchasing behavior rather than general purchasing behavior increases. Accordingly, companies are directed to implement environmental policies and strategies. Determining the attitudes of consumers towards environmental problems and the factors affecting green product purchasing behaviors are of great importance for the success of enterprises in marketing activities (Yadav and Pathak, 2017; Liobikiene *et al*., 2016).

3. Research Method

3.1. Purpose, Scope and Limitations of the Research

The aim of this study is to examine the effects of long-term orientation, collectivism, man-nature orientation and self-efficacy on the attitude towards green products. It is also aimed to address the impact of attitude towards green products on green purchasing behavior. When the literature about variables was searched, it was seen that there are many studies investigating the relationship between cultural dimensions and attitude towards green products among the variables discussed within the scope of the study, but the studies conducted based on the concept of self-efficacy were limited. Therefore, it is aimed to contribute to the literature with a holistic approach by considering both the cultural variables of the individual and the concept of self-efficacy together. The sample of the study consists of individuals who purchase green products and who live in Erzincan. Therefore, the results obtained are valid for this sample and cannot be generalized for other product groups and cities.

3.2. Data Collection Method and Process

The main population of the study consists of 18-year- and over individuals who buy green products and who live in Erzincan. The research data were obtained by using face to face survey method. Convenience sampling method was used as the sampling method. Long-term orientation scale was obtained from the study of Yoo and Donthu (2005). Collectivism scale was obtained from the study of Kim and Choi (2005) and man-nature harmony scale was taken from the study of Bong Ko and Jin (2017). The self-efficacy scale was obtained from the study of Qader and Zainuddin (2011). The attitude scale for green products was obtained from the study of Hsu et al., (2017) and the green purchasing behavior scale was taken from the study of Jaiswal and Kant (2018).

While translating the scales, language experts were consulted and the scales were translated in order to eliminate the mistakes that might arise during the translation of the survey questions. After the scales were translated, a preliminary study of 20 samples was applied and the questionnaire was finalized. The survey was conducted between April 22, 2019 and May 16, 2019. After the final questionnaire was prepared, 395 people were surveyed and 350 questionnaires were evaluated after eliminating the wrong and incomplete questionnaires. SPSS 22 package program was used to analyze the data and descriptive statistics, reliability analysis and regression analysis were benefited from.

3.3. Research Model

Based on the relevant theory, variables of long-term orientation, collectivism, man-nature harmony, self-efficacy, attitude towards green products and green purchasing behavior were included in the scope of the study. The research model is shown in Figure 1.

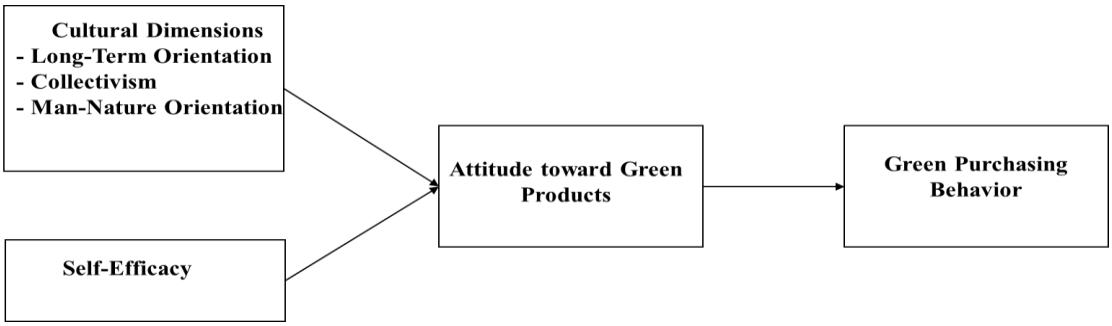


Figure 1. Research model

4. Findings

4.1. Demographic Characteristics of Respondents

Demographic characteristics of the participants were as follows: 60% of the participants are male and 40% are female. In the distribution of the respondents according to age groups, the majority is between 18-28 age group, which is 40%. In addition, 55% of the respondents are married and 38% are university graduates. In terms of professions, 21% of the respondents are workers and 19% are civil servants. In the income level, the participants with the income of 1000-2001 TL are the first with 23%.

4.2. Reliability Analysis

Cronbach's Alpha Values for Variables; Long-Term Tendency is 0.84; Collectivism is 0.89;

Man-Nature Orientation is 0.87; Self-efficacy is 0.73; Attitude towards green products is 0.92; Green purchasing behavior is 0.90. The scales are seen to be reliable.

4.3. Regression Analysis

Multiple regression analysis was conducted to examine the effects of long-term orientation, collectivism, man-nature orientation and self-efficacy, which are of cultural dimensions, on attitude towards green products. The results are shown in Table 1.

Table 1. Effects of self-efficacy and cultural dimensions on attitude towards green products.

	R	R^2	Adjusted R^2	Std. Error of the Estimate	
	0,534	0,285	0,277	0,58059	
ANOVA Values	Sum of Squares	df.	Mean Squares	F	p value
Regression	46,426	4	11,607	34,397	0,000
Residual	116,415	345	0,337		
Total	162,841	349			

As seen in Table 1, cultural dimensions and self-efficacy explain the attitude towards green products by 29%. According to ANOVA table, the model is significant

Table 2. Beta values related to the effects of self-efficacy and cultural dimensions on attitude towards green products.

	Unstandardized Coefficients		Standardized Coefficients	t	p value
	B	Std. Error	B		
Long-Term Orientation	0,038	0,054	0,037	0,695	0,487
Collectivizm	0,199	0,045	0,229	4,455	0,000
Man-Nature Orientation	-0,037	0,100	-0,019	-0,375	0,708
Self Efficacy	0,419	0,067	0,378	6,239	0,000

As can be seen in Table 2, collectivism and self-efficacy of cultural dimensions affect the attitude towards green products. On the other hand, long-term orientation and man-nature orientation of cultural dimensions are not effective. Accordingly, H2 and H4 hypotheses were accepted. However, H1 and H3 hypotheses were rejected. In the light of these results, it is important for individuals to have a positive perspective on environmental products and their judgments about social pressure and their own abilities.

A simple regression analysis was conducted to examine the effect of attitude towards green products on green purchasing behavior. The results are shown in Table 3.

Table 3. Effect of attitude towards green products on green purchasing behavior.

	R	R^2	Adjusted R^2	Std. Error of the Estimate	
	0,494	0,244	0,242	0,58044	
ANOVA Values	Sum of Squares	Sd.	Mean Squares	F	p value
Regression	37,803	1	37,803	112,207	0,000
Residual	117,244	348	0,337		
Total	155,047	349			

The attitude towards green products, as seen in Table 3, explains the green purchasing behavior by 24%. According to ANOVA table, the model is significant.

Table 4. Beta values related to the effect of attitude towards green products on green purchasing behavior.

	Unstandardized Coefficients		Standardized Coefficients	t	p value
	B	Std. Error	B		
Attitude towards Green Products	0,482	0,045	0,494	10,593	0,000

As shown in Table 4, attitude towards green products is effective on green purchasing behavior. In the light of this result, H5 hypothesis was accepted. How well individuals see and tolerate these products, in other words, their positive attitudes, are effective in the process of purchasing environmentally friendly products.

4. Conclusion and Discussions

The use of green products is known to have many benefits for society. However, it is important to identify variables that will raise awareness in this regard and make these products more preferable to consumers. In this way, the green product market will revive and as a result both businesses and individuals will benefit from this shopping process. Within the scope of the study, the factors that may affect the purchasing behavior of green products, in other words, environmentally friendly products were investigated. According to the results of the

research, collectivism, one of the cultural dimensions, is effective on attitude towards green products. The culture of the society in which the individual lives, in other words, traditions and customs, shapes his choice of goods and services. People's way of thinking is affected by how much they value the group they are in. Collectivism is significant in the sense of the organizational value structure of Turkish society (Fikret Paşa et al., 2011). It is important for the society that environmentally friendly products are presented to the market in line with the collectivism values and that positive attitude is established; because there is a positive relationship between collectivism and environmental concern (Yeniçeri, 2008). In this process, companies need to apply strategies based on an individual's social self-concept. The groups in which consumers are, their families and the people around them have a guiding effect on their environmentalism and green product perspectives. Therefore, social-oriented goals and group collaborations should be emphasized for people to adopt green products. Because the environmental value judgments of the society enable the individual to prefer environmental products and create a social impact on the consumer. Companies should take into consideration the opinions of the society in the decision process. Individuals should be consulted for their social integration. They should be allowed to express their feelings and thoughts. After the purchase, green consumers need to be constantly monitored. Another result of the study is the effect of self-efficacy on attitude towards green products. Knowing the environmental impact of the situation as a result of individuals' activities contributes to their positive thinking about green products. In addition, consumers should be convinced that each individual activity within the scope of green marketing will positively affect the process. In this context, individuals should be persuaded to make the necessary effort. It is necessary to support people to find a way out for the solution of environmental problems and to share these alternative proposals with the companies. The correct functioning of such a process is under favour of that people feel themselves important. An individual's feeling sufficient about a subject is related to having knowledge about it. Companies should inform consumers about the contribution of the use of environmentally friendly products and their impact on nature. They must convince the consumers with concrete data.

Finally, the attitude towards green products has been found to be effective on purchasing behavior. Investigation of green purchasing behavior is important in terms of the strategies to be determined by the producers; because the purchasing behavior of environmentally friendly products affects both production policies and marketing policies (Yeniçeri, 2008). Consumers review the contents label to analyze their environmental sensitivity when purchasing a product. This analysis process of consumers affects their attitudes towards products. In addition to this, it is effective for consumers to consider green products as good, pleasant and satisfying in favoring the purchase of the environmentally friendly products. These positive attitudes are a major factor in the fact that products can be preferred even if they are more expensive.

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EXAMINATION OF SELF STRUCTURE, INTERPERSONAL INFLUENCE, TRUST AND ATTITUDE TOWARDS THE BRAND THROUGHOUT THE PROCESS OF DEVELOPING EMOTIONAL BRAND ATTACHMENT

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Abstract

The fierce competition among brands is manifested in many sectors. Brands that want to be distinguished from their competitors are trying to establish emotional bonds with their consumers in this environment of intense competition. Therefore, it is very important to identify the motivations that enable individuals to establish emotional ties with brands. In this context, regarding the brand, the attitude and trust variables, which are thought to have a direct influence on emotional brand attachment are discussed in this study. Susceptibility to interpersonal influence, which indirectly affects emotional brand attachment and directly affects the attitude and trust variables regarding the brand and again the concept "self" that affects this variable were examined within the scope of the study. The research model formed was tested with structural equation analysis; it was found that the self-structure affects the susceptibility to interpersonal influence, that the interpersonal influence affects the attitude and trust towards the brand, and that all these variables have a significant effect on the emotional brand attachment.

Keywords: Emotional brand attachment, ınterpersonal ınfluence, self structure

1.Introduction

Today, building emotional brand attachment is one of the most important issues for businesses from all sectors (Malär et al., 2011). Brands that can establish emotional bonds with their customers can express their core values (Berry, 2000), thus ensuring loyalty and therefore profitability (Grisaffe and Nguyen, 2011). In this context, it is necessary to investigate the factors that are needed to establish emotional brand attachment and to identify important precursors (Grisaffe and Nguyen, 2011).

The researches conducted reveal that many variables are effective on emotional brand attachment (Bouhlel et al., 2011; Levy and Hino, 2016). The results obtained from these studies show that individuals who have positive attitudes towards the brand and trust in the brand (Levy and Hino, 2016) develop emotional brand attachment (Sukhu et al., 2019). In addition, studies reveal that interpersonal influence affects consumers' decision-making mechanisms (Mourali et al., 2005) and that it has a positive influence on individuals' developing a positive attitude towards the brand and trusting in the brand (Doney et al., 2007; Uddin and Khan, 2018; Thurasamy et al., 2002). In addition to all these, the self-structure that affects sensitivity to interpersonal influence should also be considered. It is seen that the distance of individuals with independent self structure to interaction has been increasing (Holland et al., 2004). Within the scope of this information, in this research where the aim is to investigate the primary forces of emotional brand attachment, the effect of brand trust and attitude towards the brand on emotional brand attachment was examined, also considering the related literature support. In addition, the effect of interpersonal influence on brand trust and attitude towards the brand was discussed and finally, the effect of individual's self-structure on interpersonal influence was investigated.

2. Literature Review and Theoretical Framework

2.1. Emotional Brand Attachment

Emotions refer to responses given to a stimulus that is usually more intense, has a long-term effect and the reason of which is definite (Deniz and Erciş, 2010: 146). It is not enough to act solely on performance to create a big brand. Because consumers are living in an emotional world. In other words, the emotions of the individual have an important place in decision making (Webber, 1997). In addition to the ultimate solution is to create emotional linkages in a competitive environment in which companies try to differentiate their brands from

others. In this way, brands strive to build deep, long-term, strong ties with their customers (Akgün et al., 2013). Identifying the variables that can strengthen emotional brand attachment both improves brand equity and enables more durable relationships (Krohmer et al., 2009). For this reason, it is very important to observe/know the emotional reactions of individuals towards brands to create consumers who show emotional brand attachment. Consumers' usage time of brands may vary. While some consumers use a brand only once for reasons such as poor quality, lack of functionality, overpricing or poor experience, some consumers are able to approach a particular brand lovingly and continue to prefer it despite all its costs. It is possible to say that the consumers who continue to buy the same brand for a long time develop emotional loyalty for that brand and even become the strong supporters of these brands they are emotionally connected to (Cheong, 2013). On the other hand, when we consider that there are many brands around consumers today, that brands have become a part of our lives, it is inevitable that managers tend to adopt addictive marketing strategies that render their brands adorable (Pourazad and Pare, 2014). In other words, brand managers who know that the emotional dimension of the consumer-brand relationship has a great impact on consumer behaviors are attachment to creating passionate brands (Bauer, et al., 2007).

2.2. Attitude towards Brand

Attitude is a reactive predisposition that an individual has regarding anything around him. The subject of attitude may be concrete entities or abstract concepts. In addition, determining the attitudes of individuals is important in terms of predicting their behavior (Göksu, 2007: 87). Attitudes develop over time through the learning process and are shaped by the knowledge and experiences an individual obtains from his/her family, and the social groups to which s/he belongs to or wants to belong to (Fandos and Flavian, 2006). The attitude towards the brand can be expressed as an individual's internal assessment of the brand (Mitchell and Olson, 1981). According to Chung et al. (2013), the attitude towards the brand consists of the positive/negative evaluations of the customers regarding the brand. All these reveal that there is a positive relationship between an individual's attitudes towards the brand and his/her attachment to the brand (Chen et al., 2017).

H1: The attitude towards the brand affects emotional attachment.

2.3. Brand Trust

The consumer belief developed regarding the brand's being honest and trustworthy is defined as brand trust (Chatterjee and Chaudhuri, 2005: 2). In other words, the customer's willingness to rely on the brand's ability to perform can be explained as brand trust (Chaudhuri and Holbrook, 2001). The most important point in the context of consumer brand relationship is trust in the brand (Ulusu, 2011). Trust in a brand also means that consumers are willing to trust against the risk because of their expectations that the brand will lead to positive results (Lau and Lee, 1999: 344). Customers who are satisfied with the brand can turn to the same brand when they need it, and this situation strengthens the relationship in time. As a result of this strong relationship, emotional attachment is formed. In addition, with the emotional attachment formed, the customer becomes unable to think of other brands since s/he starts to see the brand as a friend (Sağlam and Sağlam, 2016). However, the phenomena of trust in the brand and satisfaction are highly effective in the formation of emotional attachment (Chinomona, 2013; Esch et al., 2006). According to Frasquet et al. (2017), as brand trust increases, brand loyalty also increases, that is trust in the brand affects loyalty positively (Bouhlel et al., 2011).

H2.Trust in the brand affects emotional attachment.

2.4. Interpersonal Interaction

In the literature, sensitivity to interpersonal influence is treated in two categories. The first one is informational interpersonal influence and the other is prescriptive interpersonal influence (Bearden et al., 1989). Informational interpersonal influence is described as "the interaction regarding acceptance of information based on evidences of a truth" (Deutsch and Gerard, 1955). "The impact formed to adapt to the expectations of other individuals," defines normative interpersonal influence. Informational effect both indicates accepting information and having a good tendency to purchase and proving the truth reliably (Saleem and Ellahi, 2017). The normative interpersonal influence reflects the psychological needs of individuals to comply with group norms and standards to be accepted by the group concerned (Shen et al., 2010; Wang et al., 2005). Normative sensitivity is also related to the social effects that result from wanting to look good in the face of other individuals (Hoon Ang et al., 2001; Girma, 2016). Therefore, predisposition to interpersonal influence affects people's generally accepted behaviors, thoughts and beliefs about products (Alkailani and Kumar, 2016). The sensitivity of consumers to

interpersonal influence especially indicates their degree of being influenced by others in their consumption preferences (Kropp et al., 2003). In other words, to which extent the information obtained from the society affects consumers depends on their sensitivity to interpersonal interaction (Hoffmann and Broekhuizen, 2009; Chen et al., 2005).

H3: The tendency of consumers to interpersonal influence affects brand trust.

H4: The tendency of consumers to interpersonal influence affects the attitude towards the brand.

2.5. Self Structure

It is known that there is a relationship between the brand preferences and selves of individuals who meet the need to express their self with brands (Escalas and Bettman, 2005). Because individuals tend to prefer products that are compatible with them. In the related literature, the self-structure is considered as two variables as "interdependent self" and "independent self". The basic principle of the dependent self structure is based on the connection of the individual with other individuals. Individuals tend to think and act in such a way as to emphasize their connections with others and strengthen their existing relationships in order to maintain and develop this structure based on interdependence (Cross et al., 2000). Interdependent self structure means that one sees him/herself as an individualized being or as someone who thinks s/he is related to others. Therefore, it is stated that there is an interaction between the dependent self structure and susceptibility to interpersonal influence (Sun et al., 2009). Individuals who have an independent self structure see themselves as unique and different from group members and think that they have valuable features (Agrawal and Maheswaran, 2005). While individuals with interdependent self structure tend to make choices according to functional benefits, it is seen that individuals with independent self structure make product choices by considering symbolic benefit (Başar and Erciş, 2015).

H5: The self-structure of consumers affects their tendency to interpersonal influence.

H5a: The interdependent self-structure of consumers affects their tendency to interpersonal influence.

H5b: The independent self-structure of consumers affects their tendency to interpersonal influence.

3. Research Method

3.1. Purpose, Scope and Limitations of the Research

It is important to establish emotional bonds with the consumers to establish long-term relationships with them and to strengthen the relationship. Therefore, it is necessary to determine which variables are effective for brands to establish emotional attachment with their customers. In this context, regarding the brand, the attitude and trust variables, which are thought to have a direct influence on emotional brand attachment are discussed in this study. Susceptibility to interpersonal influence, which indirectly affects emotional brand attachment and directly affects the attitude and trust variables regarding the brand and again the concept "self" that affects this variable were examined within the scope of the study. In this study, the issue treated is the mobile phone market, which is a sector that has been growing day by day, in which competition has been increasing and it has become hard to convince the consumer and even forming emotional attachment and retaining the consumer is seen as the main solution. Therefore, the results obtained are not inclusive for people who do not use mobile phones. Besides, the results are limited only to the sample in which data is collected for this study and cannot be generalized for other product groups, brands and cities.

3.2. Data Collection Method and Process

The main population of the research consists of individuals using mobile phones and aged 18 years and older living in Erzurum. The research data were obtained by using face to face survey method. Easy sampling method was preferred as the sampling method. All of the scales used in the study were taken from the studies in the literature and the expressions were adapted in line with the purpose of the research. The self-structure scale was obtained from the study of Singelis (1994) and comprised of twenty four item likert type scale. The interpersonal influence scale was obtained from the study of Bearden et al. (1989) and comprised of twelve item likert type scale. Attitude towards the brand scale was obtained from the research of Eshgi et al. (2017) and comprised of five semantic type scale. In the brand trust scale, the study conducted by Chinomona (2016) and comprised of four item likert type scale. Emotional brand attachment scale Thomson's (2005) study were utilized and comprised of ten item likert type scale.

The translation of the scales was made by the language experts and the mistakes that could arise by using the translation-back translation method were tried to be minimized. Pilot scheme was applied on a sample of 20 people and the survey was finalized. The survey was conducted between 18.07.2019 and 25.08.2019. After the surveys filled wrongly and incompletely were eliminated 326 surveys were evaluated. In the analysis of the data, descriptive statistics, explanatory and confirmatory factor analysis and structural equation modelling were utilized by using SPSS 22 and AMOS 22 package programs.

3.3. Research Model

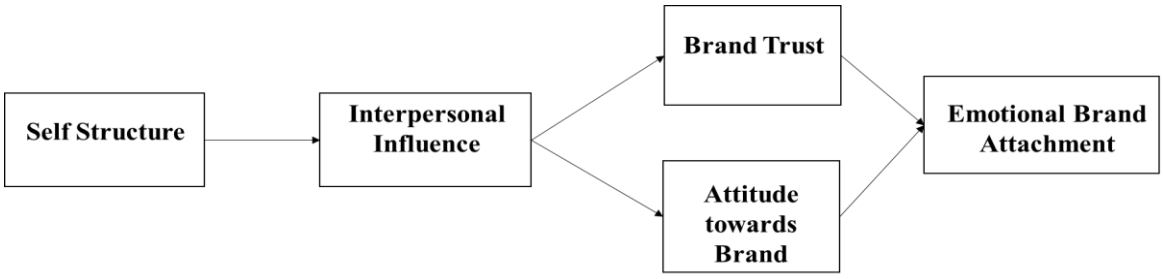


Figure 1. Research model

4. Findings

4.1. Demographic Characteristics of Respondents

The majority of the participants were observed to consist of males (60%), be in 18-28 age range (65%), single (67%), have an income of 2001-3000 TL (28%), be university graduates (57%), and private sector employees (29%).

4.2. Explanatory Factor and Confirmatory Factor Analysis

For the scale dimensions used in the research to be determined clearly, Explanatory Factor analysis was made. In the analysis in which the structural validity of the scales was tested, factor loads of 0.40 and above were considered (Nakip, 2006) and it was found that 2 expressions of sensitivity and 5 expressions of self were eliminated because the factor loads were lower than the reference value. Obtained factors explained 61.7% of the total variance. The KMO sample qualification criteria was found to be 89%, Bartlett Sphericity Test 10571.774 and Degree of Freedom 1128. It was determined that factor loadings of the self-variable vary between 0.48-0.70 for the interdependent self, 0.54-0.76 for the independent self, 0.44-0.74 for sensitivity to informational effect in the variable of susceptibility to interpersonal influence, 0.54-0.75 for sensitivity to normative effect, 0.58-0.71 for the brand trust variable, 0.63-0.78 for the attitude towards the brand, 0.79-0.88 for the affection in the variable of emotional brand attachment, 0.83-0.85 for connection and 0.77-0.83 for passion.

The reliability coefficients (cronbach's alpha) of the scales used were measured as 0.84 for the Self Structure, 0.85 for Interpersonal Influence, 0.90 for Brand Trust, 0.91 for Attitude towards the Brand and 0.97 for Emotional Brand Attachment. Before testing the model, it was checked whether there was a multicollinearity between the variables; VIF values in the range of 1.078 to 1.497 and the tolerance values in the range of 0.666 to 0.927 was seen to be in the range, it was accepted that no multi-connection problem (Hair et al, 1998). In addition, when the relationship between error terms (autocorrelation) is examined, it is seen that the Durbin-Watson test result is 1,645 and this value is in the range of 1-3 accepted as the general criterion, no autocorrelation was found in the analysis.

After the exploratory factor analysis, Confirmatory Factor Analysis was performed to test the measurement model. As a result of the analysis, it was seen that the expressions had acceptable compliance values. fit indexes are as follows: CMIN/df= 1.62; RMSEA=0.04 ; RMR=0.09 ; AGFI=0.90 ; GFI=0.93 ; NFI=0.95 ; CFI= 0.94

Table 02. CR and AVE values of the scales

Variables	CR	AVE
Inderdependent Self	0,747	0,507
Independent Self	0,763	0,518
Normative	0,822	0,539
Informational	0,779	0,542
Brand Trust	0,870	0,629
Attitude towards Brand	0,882	0,601
Affection	0,944	0,810
Connection	0,905	0,760
Passion	0,910	0,772

Table 03. Results of confirmatory factor analysis of scales

Variables	Standardized Coefficients	Error Variances	(t) Value	P	R^2
Interdependent					
If my brother or sister fails, I feel responsible.	0,628	,139	8,013	***	0,395
I will stay in a group if they need me even when I'm not happy with the group.	0,627	,134	8,054	***	0,393
It is important to me to respect decisions made by the group.	0,617	,158	7,849	***	0,381
I should take into consideration my parents advice when making education\career plans	0,522	,146	7,139	***	0,273
I often have the feeling that my relationships with others are more important than my own accomplishments	0,586	,152	7,057	***	0,344
I will sacrifice my self-interest for the benefit of the group I am in	0,642	,147	8,090	***	0,412
I respect people who are modest about themselves.	0,475	,137	6,773	***	0,225
I would offer my seat in a bus to my professor.	0,591	,146	7,700	***	0,350
My happiness depends on the happiness of those around me.	0,677	,140	8,319	***	0,458

Variables	Standardized Coefficients	Error Variances	(t) Value	P	R^2
It is important for me to maintain harmony within my group.	0,553	,138	7,370	***	0,306
I have respect for the authority figures with whom I interact	0,516			***	0,266
Independent					
I value being in good health above everything	0,681	,094	10,545	***	0,464
I prefer to be direct and forthright when dealing with people I've just met	0,568	,094	9,013	***	0,323
Being able to take care of myself is a primary concern for me.	0,619	,094	9,735	***	0,383
I am the same person at home that I am at school	0,512	,093	8,224	***	0,262
I am comfortable with being singled out for praise or rewards	0,627	,093	9,892	***	0,393
Having a lively imagination is important to me	0,703			***	0,494
Normative					
When buying products, I generally purchase those brands that I think others will approve of.	0,327	,110	6,463	***	0,407
If other people can see me using a product, I often purchase the brand they expect me to buy	0,472			***	0,223
I achieve a sense of belong ing by purchasing the same products and brands that others purchase	0,803	,221	8,792	***	0,645
If I want to be like someone, I often try to buy the same brands that they buy.	0,654	,231	6,954	***	0,528
I often identify with other people by purchasing the same products and brands	0,717	,215	8,241	***	0,514

Variables	Standardized Coefficients	Error Variances	(t) Value	P	R^2
they purchase.					
Informational					
I frequently gather information from friends or family about a product before I buy.	0,641	,087	10,559	***	0,411
If I have a little experience with a product, I often ask my friends about the product.	0,831	,090	12,029	***	0,691
To make sure I buy the right product or brand, I often observe what others are buying and using	0,741			***	0,549
Brand Trust					
I rely on this brand	0,788			***	0,621
I trust this brand.	0,932	0,058	18,489	***	0,869
This is an honest brand.	0,801	0,058	15,786	***	0,641
This brand is safe.	0,756	0,060	14,643	***	0,571
Brand Attitude					
Unfavorable\Favorable	0,767			***	0,588
Unlikeable\Likeable	0,863	0,071	14,528	***	0,745
Unpleasant\Pleasant	0,860	0,068	16,582	***	0,739
Bad/Good	0,780	0,069	16,507	***	0,609
Unappealing/Appealing	0,774	0,060	17,374	***	0,599
Emotional Brand Attachment					
Loved	0,857				0,735
Friendly	0,923	0,035	28,055	***	0,852
Affectionate	0,948	0,042	24,999	***	0,898
Peaceful	0,888	0,044	21,997	***	0,788
Attached	0,866				0,749
Bonded	0,895	0,045	23,063	***	0,800
Connected	0,893	0,045	22,874	***	0,798
Passionate	0,910			***	0,828
Delighted	0,831	0,041	21,356	***	0,690

Variables	Standardized Coefficients	Error Variances	(t) Value	P	R^2
Captivated	0,903	0,040	25,606	***	0,815

The results of the confirmatory factor analysis showed that the dimensions were reliable. Therefore, the results confirm the factor structure of the scale. The research model formed behind factor analyses was tested with structural equation analysis. The structural model, statistical values and model fit indexes obtained as a result of the analysis are as shown below.

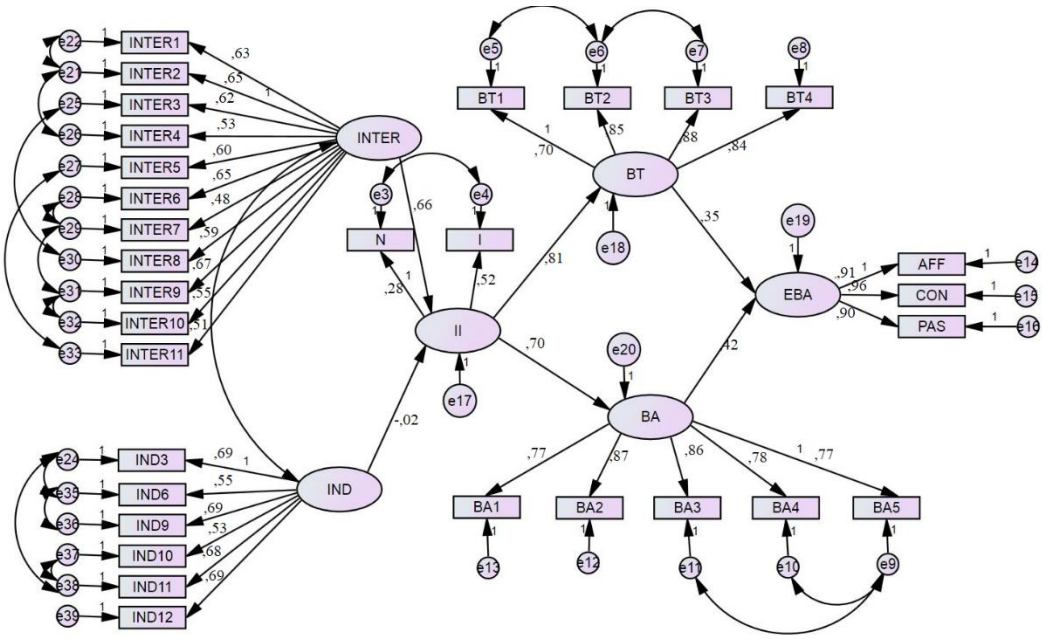


Figure 2. Structural model

Key: INTER: Interdependent Self, IND: Independent Self, II: Interpersonal Influence, N: Normative, I: Informational, BT: Brand Trust, BA: Brand Attitude, EBA: Emotional Brand Atttachment, AFF: Affection, CON: Connection, PAS: Passion

X^2/sd: 1,63, ***RMSEA:*** 0.04, ***RMR:*** 0.10, ***AGFI:*** 0.91, ***NFI:*** 0.94, ***CFI:*** 0.95, ***GFI:*** 0.90.

Table 04. Results of the research models

Statistically Important Paths	Standardized Coefficients	Error Variances	(t) Values	P	R^2
Interdependent Self Benlik→Interpersonal Influences	,663	,058	3,986	***	,431
Independent Self→ Interpersonal Influences	-,020	,022	-,303	,762	
Interpersonal Influence→Brand Trust	,810	,647	4,221	***	,655
Interpersonal Influence→Attitude towards Brand	,700	,600	4,227	***	,490
Attitude towards Brand→ Emotional Brand Attachment	,417	,110	6,775	***	,465
Brand Trust→ Emotional Brand Attachment	,353	,120	5,654	***	

*** $p<0.01$*

As shown in Figure 1 and Table 4, the path coefficients and model fit values of the variables are within acceptable limits and significant. In this context, it was observed that, brand attitude and brand trust variables are observed to have an effect on emotional brand attachment (H1, H2). Besides, it is understood that interpersonal influence has an effect on brand trust (H3) and attitude towards the brand (H4). Interdependent self, which is one of the sub-dimensions of the self-variable has a significant effect on interpersonal influence (H5a) and that independent self does not have a significant effect (H5b). In addition, this result coincides with the current literature. In this case, H5 hypothesis, which is considered as one of the sub-hypotheses and which states that the self has a significant effect on interpersonal influence, was accepted.

5. Conclusion and Discussions

The research model, which combines the variables of brand trust and attitude, sensitivity to interpersonal interaction and self-structure, which are determined to affect emotional brand loyalty was tested; the following results were obtained and related suggestions were made:

As a result of the analysis, it was found that brand trust had an effect on emotional brand attachment. In other words, an individual can develop emotional attachment to the brands s/he trusts (Japutra et al., 2014; Vlachos et al., 2010). Trust in the brand is perceived as an important factor in an individual's thinking that the brand is interested in him/her, in his/her establishing a healthy relationship with the brand including attachment and even in the formation of a passionate interaction. Individuals' belief that the brand will fulfill its promises, their trust in the brand's sincerity will strengthen their relationship with the brand and ensure the surfacing of positive emotions. In this context, it is imperative that companies head towards gaining the trust of consumers. Companies need people who are emotionally attached to the brand in order to retain the customer for a long time in today's conditions. This need is met through the relationship of trust. In order to establish this connection, companies can both choose famous people trusted by the society as a brand face and encourage the sharing of positive customer experiences. Consumer confidence will be kept alive and the foundations of brand attachment will be strengthened through word of mouth communication, which will be formed in this way. Another result is that the attitude towards the brand affects the emotional brand attachment. In other words, attitudes have a positive effect on people's emotions (Shiong et al., 2019). The positive thoughts of customers regarding the brand is an effective factor in their establishing emotional attachment. That the brand has attractive, tasteful designs and pleasant looks will increase the positive emotions in the consumer. In this context, the company's reflecting that it considers the wishes and expectations of its customers and asking for their ideas in the design process or in the preparation phase of new products will be effective ib the development of the positive emotions concerned. The key point here is the need to determine exactly what the elements that brands evaluate to create a positive attitude actually associate for the customer. In today's era of communication and technology, the most effective way to learn this is to use social media. It will be beneficial to use mutual communication that will be provided through virtual environments by also considering ethical rules not only to learn the customer's thoughts but also to guide their attitudes. Distribution of new products through sweepstakes to promote this process is considered to be one of the effective methods.

According to the findings, interpersonal influence affects both attitude towards the brand attitude and trust (Hoon Ang et al., 2001). Khare (2014) stated that there is a positive relationship between attitude and interpersonal interaction. In addition, the element of trust, which is an integral part of successful relationships, is influenced by the indirectly acquired information exchange (Zaroli, et al. 2017). McAllister (1995) stated that the frequency of interaction affects trust. The results obtained are consistent with the results expressed in the related literature. Factors that can be the driving force for the variables of trust and attitude that are necessary to establish the emotional attachment that expresses the way to establish pleasant, passionate, loving and friendly intimacy with the customers should be considered. In other words, it is important to gain the trust of the customer and to know the variables that will create positive attitude in them. At this point, we encounter social norms and information flow. Throughout the process of the individual's developing trust in the brand, the thoughts of other individuals around him/her give clues. The individual who exchanges information with others collects information about the product and tries to capture the sense of a reliable brand by actually avoiding risk. Furthermore, the individual who thinks s/he will like the brand that other people will buy, tends to find that brand much more attractive and enjoyable. For this reason, companies can have people who have gained the appreciation of the target audience and have succeeded in attracting their attention advertise or recommend products. Likewise, they can get in

contact with information channels, which the target audience uses the most and access the right people through the right channels.

Finally, the individual's self-structure is effective on his/her susceptibility to interpersonal influence. Owned self-structure affects their relationships with other people (Cross & Madson, 1997; Gardner et al., 1999). Whether a person has an interdependent or independent self-structure determines his/her response to interaction. Accordingly, while individuals with interdependent self-structure show sensitivity to interpersonal interaction, individuals with independent self-structure do not. Because while individuals who have interdependent selves act as collectivists, those who have independent selves think individually (Markus & Kitayama, 1991). Individuals who try to maintain harmony within the group they are in or individuals who associate happiness with the happiness of the people around them show sensitivity to interaction. Accordingly, people who consider the advices of the ones around them are careful about what other people buy while choosing products. By acting in this way, they do not break their connections with them and taste the sense of belonging. It is aimed to fully understand the customer together with treating the concept of self as the precursor of the interaction that has an effect on the emergence of brand trust and attitude in creating emotional brand attachment. It is clear that in order to address the emotions of the individual, we need to know him/her very well. The researches conducted show that the individual with dependent self-structure is sensitive to the interaction and this interaction affects the trust in and attitude towards the brand. Ultimately, the process results in emotional brand attachment. For this reason, companies should initially try working with celebrities that customers respect or those that the groups the customers are in like and follow and use opinion leaders effectively in this process. They should also use themes that can be approved by the target audience and the people around in the advertising or promotion process. In this way, they will address the personalities of the individuals and groups in question, will create positive attitudes and trust towards the brand by activating the interaction between individuals, and consequently will have developed emotional brand attachment.

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PSYCHIC DISTANCE AND INTERNATIONAL MARKET SELECTION: THE MODERATING EFFECTS OF FIRM CHARACTERISTICS AND MANAGERIAL ATTITUDES

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Abstract

Psychic distance, which is defined as the uncertainty of decision makers due to lack of knowledge about foreign markets, is one the preliminary aspects that is considered while making international marketing decisions. The effects of psychic distance on international marketing strategies was perpetuated as an academic focus of interest, however the possible effects of firm-scale indigenous characteristics and managerial attitudes are barely studied. In this study, the relationship of psychic distance with international market selection, and the moderating effect of firm characteristics and managerial attitudes on this relationship are conceptualized. According to the proposed model, firm characteristics, such as size, export experiences, market research capabilities, knowledge management competences, and managerial attitudes such as trust and risk appetite, moderates the relationship between psychic distance and target market selection. The examination of moderator effects yielded important results such as the strong negative association between psychic distance and international market choice of international enterprises. Perceived potential of foreign markets and managers' knowledge eclipses the role of psychic distance. This study highlights the impact of psychic distance factors on firms' internationalization processes. Also, the study enhances knowledge on foreign market selection behavior of firms. Conceptual model of this study indicates that substantial additional research is needed before the role of psychic distance is fully understood. Besides, this study challenges the extant hypothesis that the selection of international markets corresponds to a simple pattern of reducing psychic differences between origin and targeted international markets.

Keywords: Firm characteristics, international market selection, market selection, psychic distance, trust

1.Introduction

International market selection has traditionally been one of the key issues in international marketing literature. Hymer (1976) described this concept as "responsibility of foreignness". International market selection refers to a strategic decision that needs to be meticulously determined on which foreign markets an enterprise enters or which does not (Douglas & Craig, 2011). This strategic decision can affect the specific advantages, transaction costs and knowledge transfer capabilities of the company (Brouthers, Mukhopadhyay, Wilkinson, & Brouthers, 2009). Therefore, many researchers have emphasized that international market selection decision is critical success factor in international market expansion (Papadopoulos & Martín Martín, 2011).

According to Uppsala Internationalization model, the process of internationalization of enterprises follows a gradual and evolutionary transformation (Johanson & Vahlne, 1990). Within this framework, an internationalized business goes through logical international behavioural steps, based on gradual procurement, integration and the use of information on foreign markets and operations and increased commitments to foreign markets. According to the mentioned model; different international markets are assumed to be different in terms of factors such as language, culture, business environment, education, industrial development and political systems. Johanson and Wiedersheim-Paul (1975) described this difference as physical distance. Physical distance in entering international markets is often a factor associated with geographical distance. According to internationalization models, when the physical distance of the target export market increases, it becomes more difficult to gather information from that market and develop strategic interpretations based on this information. Therefore, businesses initially enter the international markets with the lowest physical distance and then gradually enter into more distant markets. As businesses enter more international markets, their experience and knowledge of foreign cultures and markets increase and their capacity to enter more remote markets develops with this experience and knowledge. Thus, export exists as a learning process, not as a static process that progresses step by step, as Chetty (1999) suggests.

In this study, a conceptual model is proposed which comprehensively describes essential aspects of psychic distance and its relationship with international market selection. The three aspects of the model address major questions of concern to academics and managers alike: (1) What factors are included in psychic distance? (2) Which managerial and organisational attributes affect the relationship between psychic distance and international market selection? and (3) What is the market knowledge's role on psychic distance and international market selection?

2.Literature Review and Theoretical Framework

Despite the importance of international market selection in the international literature, little is known about how international market selection decisions are made, and the majority of research on this topic focuses on manufacturing enterprises (Andersen & Buvik, 2002; Brouthers et al., 2009). Due to the lack of empirical findings and academic studies examining the different components of the business that explain the international market choice behaviours of enterprises, a solution is generally sought with a combination of existing theories (Leonidou, Katsikeas, & Samiee, 2002; Brouthers & Nakos, 2005; Brouthers et al., 2009; Papadopoulos & Martín Martín, 2011; Ragland, Brouthers, & Widmier, 2015).

One of the important decision areas in the internationalization of a firm is the determination of the right target markets (Andersen & Strandskov 1998). In this respect, market knowledge is the key to choosing profitable markets (Brewer, 2007). The importance of managers' knowledge in the internationalization process has been emphasized in many studies. Johanson & Wiedersheim-Paul (1975) conceptualized this topic as psychological distance. From this perspective, according to Uppsala model, international market choice is closely related to psychological distance due to risk aversion and lack of knowledge about foreign markets (Johanson & Vahlne, 1977). On the other hand, many researchers (Melin, 1992; Andersen, 1997; Petersen, Pedersen, & Sharma, 2003) have criticized the Uppsala model because of the tendency of determinism in handling the issue. According to the International Entrepreneurship trend, another model aimed at explaining the behaviour of businesses in international market selection, businesses have been able to target psychologically distant markets since the early stages of internationalization processes, and this is mostly based on managers' experiences and personal networks (Zahra, Matherne, & Carleton**,** 2003).

2.1. Psychic distance

Psychic distance is principally the perceived differences between the local and foreign markets (O'Grady & Lane, 1996). The psychic distance in the internationalization process depends not only on the nature and degree of compliance of the particular business, but also on the administrative qualifications. These different environments, the distinction between the home country and the foreign country, is the basis of psychic distance.

According to Lado, Martinez-Ros and Valenzuela (2004) the degree of similarity of the local market with specific countries, makes these foreign markets more attractive than the other foreign markets. According to the same study, the psychic distance between the domestic market and the foreign market plays a guiding role in the selection, as well as making strategic decisions in the companies' internationalization process. In particular, businesses with a lack of knowledge and expertise in international management tend to internationalize in markets with low psychic distance. Several authors, such as Sakarya, Eckman and Hyllegard, (2007), as well as Griffith and Dimitrova (2014) have argued that, larger businesses more tend to select mature markets, while small and medium-sized companies select markets with low psychic distance where they can easily compete for growth and market opportunities.

For the last few decades, Hofstede's model of culture has established the basis of studies focusing on the effects of culture. Referencing the mentioned model, power distance, individuality, masculinity and avoidance of uncertainty are widely used to examine and define the role culture in international business (Hofstede, 2001; Minkov & Hofstede, 2011). Besides, culture strongly affects the organizational culture, leadership style and strategic orientation of the companies (Abdul Rashid, Sambasivan & Abdul Rahman, 2004). Taking into account the impact of cultural differences and formulating business strategies in the foreign market in this context is an important issue for the businesses' success in intranational operations. As foreign cultures are more difficult to predict, careful selection of strategies and rigorous planning is essential. Because strategies formulated for the local market may fail in foreign markets (Barkema, Bell & Pennings, 1996). Culture-oriented formulation of strategies for different foreign markets subsequently will increase the chances of success (Minkov & Hofstede, 2011).

According to Dow and Karunaratna (2006), although cultural distance is an important factor affecting psychic distance, in the literature, it is importance has been over-emphasized. Culture may influence not only the behaviour and communication of people, but also decision-making processes of international businesses. Thus, cultural differences may increase risks and uncertainty in international business operations. Language, religion and level of education strongly affects the communication between people from different cultures. These factors also affect the interpretation of exchanged information and may cause miscommunications.

Psychic distance is subjective feature; therefore, it is strongly affected by the perception of individuals. A study conducted by Dow and Karunaratna (2006) shows that managers' perceptions on psychic distance are influenced by educational factors, international experience and age. According to Petersen and Pedersenen (2002) psychic distance should be examined at the individual level, since it is a feature linked to individual experience and skills rather than differences between local and foreign markets. Sousa & Bradley (2006) puts emphasis on "psychic distance captures the manager's individual perception of the differences between the home and the host country and is a highly subjective interpretation of reality". As a result of this, psychic distance does not affect all employees equally. Some employees may be more sensitive to differences between local and foreign market than the others. Therefore, psychic distance basically stands for managers' and decision-makers' perceived differences between two markets. Johanson and Vahlne (1977) argued that the lack of information which is embodied in psychic distance highly affects international business operations. The lack of information on foreign markets and international operations is the main obstacle to internationalization and it affects international business performance.

2.2. Psychic distance in international business

Beckerman (1956) introduced the concept of psychic distance in his study in which he stated that international trade is not only affected by geographical distance between countries and transportation costs, but also by importer companies' perception of psychological distantness. This concept was translated into international trade literature by a group of researchers, later to be known as Uppsala School, studying the internationalization models of Swedish firms. Based on Uppsala School's studies several authors, such as Hörnell, Vahlne and Wiedersheim-Paul (1973), Johanson and Wiedersheim-Paul (1975), and as well as Johanson and Vahlne (1977) define psychic distance as objectively measurable barriers to the information flow between international trade counterparts in different countries. Whereas Beckerman uses the individual perceptions of managers, a concept at the micro level, for explaining the trade flows between countries which is a concept at the macro-level, contrary, Uppsala school uses a macro level concept, the psychic distance between countries to explain the internationalization of companies which is a micro-level concept (Hörnell et al., 1973). The association of psychic distance with subjective perceptions led to an emphasis on objective information allocations costs (Blomkvist & Drogendijk, 2013; Hakanson & Ambos, 2010). While information allocations costs are measured by macro-level indicators, research has focused on measuring cultural differences between countries and their impact on micro-level outcomes such as entry mode and international market selection decisions. As a result, cultural distance, which signifies the national cultural differences between countries, substituted psychic distance (Kogut & Singh, 1988). Lately, cultural distance has become a frequently used concept in international business studies (Ambos & Hakanson, 2014; Beugelsdijk, Ambos & Nell, 2018).

Recently, a research trend has begun to question psychic distance. A study conducted by Dow and Karunaratna (2006) shows that objective factors at the country level are perceived as psychic distance stimuli. In line with this argument several authors, such as Hakanson and Ambos (2010), and as well as Hakanson and Dow (2012) argue that measurement of perceptions and macro-level distance stimuli affect psychic distance perceptions and its outcomes.

On the other hand, several authors, such as Dichtl, Koeglmayr and Mueller (1990), Harzing (2003), and as well as Nebus and Chai (2014) emphasized that the role of individuals and the importance of differences in individual perceptions were not sufficiently acknowledged in the literature. Additionally, some researchers, such as Child, Sek Hong and Wong (2002), Chapman, Gajewska-De Mattos, Clegg and Buckley (2008), and as well as Smith, Dowling and Rose (2011) investigated the antecedents of perceived psychic distance by conducting case studies, experiments, or theoretical discussions. Nevertheless, antecedents of psychic distance perceptions at individual-level are barely supported with empirical findings. In line with this, Nebus and Chai (2014, p. 11) suggest that that the studies on psychic distance should be based on experience of the manager and the manager's perception of the international business environment.

The role of psychic distance is one of the most discussed themes on the internationalization of firms. The psychic distance concerns the distinction between a nation of origin business environment and an external one, which is the foreign marketplace. The first concept was defined around 1970 by a group of researchers in Uppsala as: "Factors preventing or disturbing the flow of information between firm and market." (Evans, 2010).

The Uppsala model has been revised and developed over time. However, there is still a widespread view that these two basic theoretical perspectives contain problems due to determinism (Johanson & Vahlne, 2009). The network approach, another theory based on the Uppsala model, explains that enterprises use short cuts to overcome the barriers of being alien in international markets (Autio, 2017). What these models lack is explaining the reasons behind the selection of markets that are distant to them without having organizational or managerial experience or affiliate network links (Magnani, Zucchella, & Floriani, 2018). According to Petersen et al. (2003), managers' initiatives can shed light on this problem However, strategic objectives are considered as another reason for enterprises to enter distant markets (Chetty & Campbell-Hunt, 2004). Unlike the classical models of internationalization that classify businesses in specific behavioural patterns and approach the problem from a deterministic point of view, the inclusion of the subjective intentions of managers at the individual-level and the strategic orientation at the organizational-level, underlines the fact that each businesses can have unique pattern of behaviour. In this way, the problem can be better explained from a situational perspective. This attribute, which can be defined as market knowledge, is the ability to respond to customer demands shaped by different cultural patterns.

According to Daniels, Radebaugh and Sullivan (2015, p. 533), the use of information takes place on two levels in international market selection. In the first of these, according to the screening method, managers evaluate the countries in a broad framework and choose the most suitable ones among them. The information used in the screening method is publicly available. In the second, detailed analysis method, countries determined by the screening method are compared according to applicability and attractiveness criteria. The information used for the detailed analysis method is primary data as well as public secondary data. In this respect, detailed analysis uses data collection and analysis methods used in advanced competition intelligence applications.

2.3. Adaptation strategies for international markets

For businesses, the concept of marketing means understanding and meeting consumer demands. As in every basic business process, success in marketing requires complex, interdependent and sometimes even conflicting tasks (Drummond, Ensor, & Ashfor, 2007, p. 3). However, under these challenges, competition takes place in a business environment full of uncertainties. Marketing strategy is therefore an important component of business success. Academic studies in marketing have come to the point where marketing is emphasized as a functional management issue and focuses on the strategic role of marketing in business strategy (Kotler & Keller, 2015, p. 39). This change in the understanding of marketing, including strategic and tactical decision-making, results in the overlap of marketing and strategic management areas. Almost anywhere in the world today, executives recognize the importance of marketing strategies to succeed in global markets. The emergence of a more open world economy, the globalization of consumer aspirations and preferences and the development of world-wide commercial networks increase the interrelations and interdependence of global markets (Furrer, 2009, p. 81).

The global marketing strategy of an enterprise has a positive effect on the performance of that enterprise in global markets (Zou & Cavusgil, 1996). Zou and Cavusgil (2002) suggest that businesses should form their marketing strategies based on three main perspectives in a global business environment. The three main perspectives identified by the researchers are standardization, configuration-coordination and integration. Table 01 shows the basic conceptual logic, key variables, causes and effects of these three perspectives.

According to the standardization perspective, which is the first of the global marketing perspectives, a company's marketing programs in different countries are standardized especially in terms of products, promotion mix, prices and distribution channel structure (Zou & Cavusgil, 1996; Keegan & Green, 2008, p. 10. In addition, standardization is considered as the most powerful approach in determining international marketing strategies of multinational enterprises (Laroche, Kirpalani, Pons & Zhou, 2001). The main reason why standardization is such a large-scale approach is the homogenization of world markets through advances in communication and transport technologies (Jain, 1989). Every day around the world, an increasing number of consumers show similar reactions in terms of preference and demand for the same products (Jain, 1989). As a result of this similarity, the way to gain competitive advantage in international markets is to provide high quality and low-priced products to global markets by making use of economies of scale in production and marketing as

standardization permits (Levitt, 1983). Although standardization is so widespread, some researchers warn businesses against unconditional adaptation. According to Usunier and Lee (2005, p. 227), the greatest obstacle to standardization is cultural differences. In this respect, the standardization strategy only improves the performance of enterprises in the industrial sectors where competition is experienced globally (Zou & Cavusgil, 2002).

Table 01. Global marketing strategies

Perspective	Basic Logic	Key Variables	Causes	Effects
Standardization	- Economics of scale - Lower costs - Leaning	- Product standardization - Promotion standardization - Distribution channel standardization - Price standardization	- Convergence of cultures - Similarity of demand - Reduction of trade restrictions - Technological advantages - Business adaptation	- Productivity - Consistency - Transfer of ideas
Configuration-Coordination	- Comparative advantage - Interdependence - Specialization	- Enrichment of value chain activities - Coordination of value chain activities	- Reduction of trade restrictions - Technological advantages - Business adaptation - International experience	- Productivity - Synergy
Integration	- Cross subsidy - Change in competition - Rationalization	- Integration of competitive moves - Global market participation	- Reduction of trade restrictions - Business adaptation - International experience - Integrated markets	- Efficiency in competition - Competitive advantage

The second perspective in international marketing strategies focuses on the issues of configuration and coordination in the value chain activities of enterprises (Hout, Porter, & Rudden 1982). The international marketing strategies of the companies that adopt this strategic approach are built on the philosophy of benefiting from the synergy and comparative advantages in different countries and markets (Zou and Cavusgil, 2002). In order to be effective in global competition, businesses should structure and optimize their value chain activities and coordinate marketing efforts in different markets (Craig & Douglas, 2000). There are two basic opposing methods in the configuration of value creation activities (Furrer, 2009, pp. 84-85):

- Concentration
- Dispersal

According to the concentration method, it is possible to obtain competitive advantage in some industrial areas by concentrating business activities in a limited number of countries and exporting products from these countries to other country markets (Quelch & Hoff, 1986; Knetter & Slaughter, 2001). In contrast, competitive advantage can

also be achieved by extending business activities to multiple countries (Dunning & Lundan, 2008, p. 245). When the dispersal strategy is the most accurate method:

1- Transportation, communication and storage costs are high,

2- Factors such as exchange rates or political risks are important,

3- National markets are different due to culture,

4- Governments take protective measures such as customs duties and subsidies.

Businesses that determine international marketing strategies based on the configuration-coordination approach gain competitive advantages by using comparative advantages specific to different markets through specialization and adapting their global strategies to different markets (Lascu, 1994). Each country has its own comparative advantage. In this respect, with the configuration-coordination strategy, enterprises can maximize their total productivity by concentrating each of the value chain activities in a country or region with comparative advantage that will enable them to perform in the most efficient way (Zou & Cavusgil, 2002). Coordination strategy means the sharing of information among the business units, the distribution of responsibilities and the harmonization of activities (Furrer, 2009, p. 85). There are differences in language, culture, politics, law, technological and economic factors depending on the geography and distance that cause problems that require coordination throughout the world.

The third of the global marketing strategies is the integration approach. This perspective emphasizes how enterprises should make their plans and implementations for competition in different countries (Zou & Cavusgil, 2002). According to the integration strategy, the way to success in global markets is to gain competitive advantage by acting in all major markets worldwide and integrating their activities in these different markets effectively (Lascu, 1994). In this context, if businesses can support their activities in one country by using their resources in another country, they can integrate competitive moves in different markets (Birkinshaw, Morrison, & Hulland 1995). It is possible for enterprises that have adopted the integration strategy to make strategic moves in different countries for different purposes (for example, in another country to consume resources for a competitor in one country or against the competitor's competitive attack in one country) (Jayachandran, Gimeno, & Varadarajan, 1999).

As shown in Figure 02, according to Keegan and Green (2008, p. 347), international strategy of a business consists of four key market adaptation decision alternatives.

Strategy 1, “dual extension”, is chosen when purchasing behaviours as well as the usage conditions and standards remain the same among international markets. In this case, the same value propositions can be offered with some changes in the promotion strategies. This strategy is considered to be cost effective, because promotion adaptation is less expensive than adaptation of a product to the local market.

Communication			
	Different	**Strategy 2: Product extension – Communication adaptation**	**Strategy 4: Dual adaptation**
	Same	**Strategy 1: Dual extension**	**Strategy 3: Product adaptation – Communication extension**
		Same	Different
		Product	

Figure 01. Strategic alternatives for adaptation to international markets (Keagan & Green, 2008, p. 347).

The second strategic decision option “product extension – communication adaptation” strategy is preferred when the reasons for purchasing a product vary from country to country, but the conditions and standards of use are identical. In this case, marketing programs are created by standardizing the same product to different countries

but changing the promotion strategies. This strategic alternative is a relatively low-cost strategy, since adapting promotional efforts to a foreign market is less costly than changing the product to suit the market.

The third strategic decision option "product adaptation – communication extension" strategy is preferred when the physical factors of product use vary from country to country, but sociocultural reasons remain the same. In this case, the product should be changed to meet the requirements of the foreign market and consumer preferences (Keegan & Green, 2008, p. 348).

In the last strategic decision option "dual adaptation" strategy, both product and promotion are adapted to different markets. This strategy is preferred when both the conditions of use of the product and the reasons for socioeconomic use vary from country to country.

3. Conceptual Model

Offered here a conceptual model to describe the the nature of the relationship between psychic distance and international market choice. As can be seen in Figure 03, the conceptual model provides a proposal for the role of macro and micro level characteristics as well as managerial and organizations attributes on the relationship between psychic distance and international market selection. In this context, the factors that determine psychic distance are characteristics of people and characteristics of country. managers' level of knowledge about the international market is modelled as a factor moderating the relationship between these factors and the psychic distance perception of the organisation. The main reason for this is that although characteristics of people and country are subjective attributes, psychic distance is a concept that differs from business to business. The theoretical framework discussion shows that the conceptualization of these subjective qualities is the market knowledge of managers. When managers' level of knowledge about the market increases, psychic distance decreases even if it is distinctly different from the characteristics of people and characteristics of country from the domestic market. This is a possible explanation why some businesses choose markets with high psychic distance and why psychic distance cannot be explained only by the difference of sociocultural motives in the international market from the domestic market. This difference leads to a high psychic distance when the level of market knowledge - of the manager or decision maker is low, but to a low psychic distance when the level of market knowledge is high. Therefore, the moderator effect of market knowledge is expected to be negative.

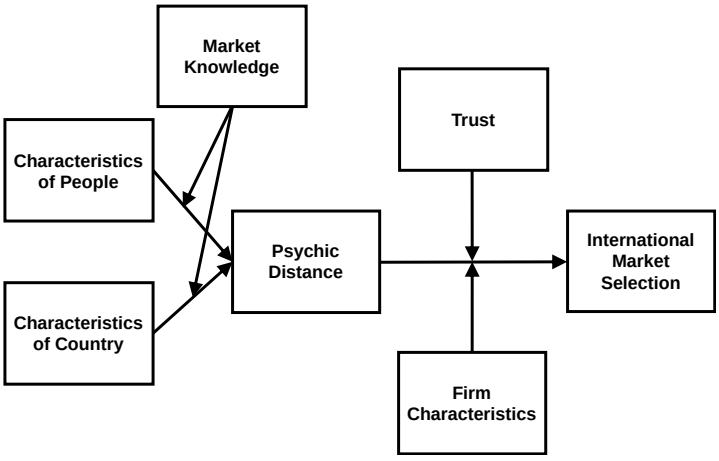


Figure 02. Conceptual model

The second part models the relationship between psychic distance and international market selection. In this context, trust, which is a managerial attribute, and firm characteristics, which is an organizational attribute, moderates this relationship. The relationship between psychic distance perceived by the organisation and international market selection decisions has a mechanistic and highly deterministic nature when managerial and organizational attributes are neglected. However, empirical findings show that not every business makes similar market selection decisions when the psychic distance takes a certain value. According to the proposed conceptual model there are two main factors underlying this contingency. Trust, the first of these, is an attribute of managers and explains the possibility of international market selection even in cases where psychic distance is high. Because the high trust levels of the managers for the market with high psychic distance makes it possible to make market selection decisions, on the contrary, low trust levels for the market with low psychic distance clarify the decisions not to enter such a market. In the proposed model, another variable that is assumed to

moderate this relationship is firm characteristics. Indicative characteristics such as firm size, export experience, export intensity and export diversity are the factors that can affect the decision-making in the markets with different psychic distances.

Perceived potential of international market and managers' knowledge eclipses the role of psychic distance. This study highlights the impact of psychic distance factors on firms' internationalization processes. Also, the study enhances knowledge on foreign market selection behaviour of companies. Conceptual model of this study indicates that substantial additional research is needed before the role of psychic distance is fully understood. Besides, this study challenges the extant hypothesis that the selection of international markets corresponds to a simple pattern of reducing psychic differences between origin and targeted international markets.

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EFFECT OF SOCIAL MEDIA MARKETING ACTIVITIES ON BRAND LOYALTY: THE MEDIATOR ROLE OF E-BRAND LOVE AND BRANDING CO-CREATION

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Abstract

In this study, it was aimed to determine the effect of social media marketing activities on brand loyalty. In this direction, it was targeted to determine whether the e-brand love and branding co-creation have a mediator role in the relationship between social media marketing activities, by which conducted clothing brands, and brand loyalty. Another aim of the study is to reveal the effect of e-brand love and branding co-creation variables on brand loyalty. As a result of the research, it was determined that the entertainment, e-word of mouth and interaction have an impact on e-brand love and branding co-creation. Additionally, e-brand love and branding co-creation have effect on brand loyalty. At the same time, e-brand love and branding co-creation have a mediator role in the relationship between social media marketing activities and brand loyalty.

Keywords: Brand loyalty, branding co-creation, e-brand love, social media marketing activities.

1.Introduction

Social media marketing (SMM) is the use of social media to achieve the organizational objectives in terms of enterprises (Felix, Rauschnabel, and Hinsch, 2017, p. 123). SMM has been studied by different researchers in different ways and dimensions (Kim and Ko, 2012; Seo and Park, 2018). In this study, SMM is discussed in five dimensions in line with the purpose of the research. These dimensions are entertainment, interaction, trendiness, customization and e-word of mouth. Brand love is to have strong emotions and attitudes towards a brand (Batra, Ahuvia, and Bagozzi, 2012). In terms of social media platforms, loyalty, which is defined as "constantly following fan pages and suggesting them to other users" (Ruiz-Mafe, Martí-Parreño, and Sanz-Blas, 2014, p. 365), is an important element in providing sustainable competitive advantages for brands (Gounaris and Stathakopoulos, 2004). Co-creation, which is one of the strongest success indicators of today's brands, is a customer-oriented teamwork and consists of the innovations and improvements performed based on the mutual communication between the customer and the enterprise (Ehlen, van der Klink, Stoffers, and Boshuizen, 2017; France, Merrilees, and Miller, 2015; Piller, Vossen, and Ihl, 2012). When the literature was examined, it was seen that the concepts such as loyalty and trust were also evaluated through online platforms and there were studies in which the concepts such as e-loyalty and e-trust were defined (Gommans, Krishman, and Scheffold, 2001; Merrilees and Fry, 2003). At this point, although there are studies conducted on brand love through social media, there are limited studies directly addressing the concept of "e-brand love." In addition, the research is one of the few studies examining the effect of SMM activities on branding co-creation. Detailed information regarding the research variables is presented below.

2. Literature Review and Theoretical Framework

2.1. Social Media Marketing Activities

Social media marketing, which has been one of the effective marketing methods in recent years, is to conduct various marketing activities related to the current products and services of companies through social media platforms (Yadav and Rahman 2017, p. 1296). Through SMM, brands can find the opportunity to introduce their brand to their current or potential customers via social media tools such as Facebook, Twitter and YouTube (Saravanakumar and SuganthaLakshmi, 2012). In the studies conducted on SMM, it was observed that different dimensions were created and these dimensions were applied in different sectors (Kim and Ko, 2012; Seo and Park, 2018; Yadav and Rahman, 2017). The study of Kim and Ko (2012)'s dimensions were utilized in this study and as SMM dimensions, entertainment, interaction, trendiness and customization were used. The variable

of e-word of mouth was added to these dimensions. The dimensions of SMM are explained as follows: Entertainment is the result of the pleasure and satisfaction obtained through social media (Agichtein, Castillo, Donato, Gionis, and Mishne, 2008). Contents thought to be enjoyable have a higher level of participation and contribution (Cvijikj and Michahelles, 2013; Muntinga, Moorman, and Smit, 2011). Interaction is to share information and exchange ideas with others through social media (Godey, et al., 2016, p. 5835). It was determined that consumers who had high interaction with the brand were more willing to provide feedback (Chung and Austria, 2010). Trendiness is to provide customers with the latest and up-to-date information regarding products (Godey et al., 2016, p. 5835). This variable is accepted as one of the important SMM activities that positively affect brand awareness and brand image (Seo and Park, 2018). Customization is the degree at which social media channels provide customized information search and service for customers (Godey et al., 2016, p. 5835). It was detected that a customized service experienced by consumers positively affected the intention of repurchase and word of mouth communication (Cifci and Sözen, 2017). E-word of mouth refers to the positive or negative feedback provided by the customers about the available products in an internet-mediated environment (Hennig-Thurau, Gwinner, Walsh, and Gremler, 2004, p. 39). E-word of mouth has a positive effect on purchase intent and brand loyalty (Balakrishnan, Dahnil, and Yi, 2014). In the researches conducted on this subject, it was seen that SMM activities had a positive effect on brand loyalty, brand awareness and brand image (Algharabat, 2017; Godey et al., 2016; Ismail, 2017). Accordingly, the following hypotheses were developed regarding SMM activities.

H1: SMM activities are effective on e-brand love.

H2: SMM activities are effective on branding co-creation.

2.2. E-Brand Love

Brand love is generally described as "the passionate emotional commitment of the customer to a particular trading name" (Carroll and Ahuvia, 2006, p. 81). E-brand love, on the other hand, can be defined as *"the strong bond established through social media by the development or formation of emotions that lead to a passionate intimacy between the consumer and the brand."* In the studies conducted within the scope of social media, it was determined that the consumers, who loved their brands, were willing to publish the shares of the related brands through their social media accounts (Baena, 2016). It was also suggested that the positive consumer reactions given to the "love" icon on Instagram and "like" icon on Facebook were a reflection of brand love (Vernuccio, Pagani, Barbarossa, and Pastore, 2015; Wallace, Buil, and Chernatony, 2014). In the study conducted by Machado, Vacas-de-Carvalho, Azar, André, and dos Santos, (2019), it was determined that consumer-brand engagement via Facebook had a significant effect on the formation of brand love. Kaufmann, Loureiro, and Manarioti (2016), on the other hand, put forward that consumers who were committed to the brand with love were more willing to join branding co-creation. In the light of the information presented above, the following hypotheses were developed:

H3: E-brand love is effective on brand loyalty.

H4: E-brand love has a mediator role in the relationship between SMM activities and brand loyalty.

2.3. Branding Co-Creation

Co-creation, which is an important variable in terms of branding, is defined as "the intention of customers to exchange information with other customers for the purpose of increase the value of the brand." In this process, social media is used as an effective tool in terms of facilitating communication and enhancing consumer-brand relations as well as involving the consumer in the process of branding and co-creation (Hajli, Shanmugam, Papagiannidis, Zahay, and Richard, 2017; Piller et al., 2012). In the studies conducted, it was determined that the consumers involved in the co-creation process perceived the brand value at a higher level; and they had higher levels in terms of providing brand-related information to other consumers, giving feedback to the brand and purchase intention (France et al., 2015; Hsieh and Chang, 2016). In addition, each consumer involved in the co-creation process was seen as an alternative source of new ideas for the brand (Hoyer, Chandy, Dorotic, Krafft, and Singh, 2010). In a few studies conducted within the scope of branding, it was observed that the quality of the relationship on social commerce sites positively affected the co-creation intention of consumers (Wang and Hajli, 2014). Likewise, consumers' trust in their brands encourages them to engage in the process of branding co-creation (Kamboj, Sarmah, Gupta, and Dwivedi, 2018). In the light of the information presented above, the following hypotheses were developed:

H5: Branding co-creation is effective on brand loyalty.

H6: Branding co-creation has a mediator role in the relationship between SMM activities and brand loyalty.

2.4. Brand Loyalty

According to Oliver (1999, p. 34) brand loyalty "exhibiting a behavior of repurchasing a previously purchased brand in the future, too." It was revealed that activities such as conducting advantageous campaigns through social media, presenting brand-related contents and producing popular contents had a positive effect on brand loyalty (Erdoğmuş and Çiçek, 2012). Furthermore, establishing closer brand-customer and customer-customer relationships in social media brand communities was seen as a path going to brand loyalty (Laroche, Habibi, and Richard, 2013). In a study conducted by Gamboa and Gonçalves (2014), it was stated that following brand fan pages by consumers via Facebook had an effect on the development of trust, satisfaction, perceived value and commitment, and this situation resulted in brand loyalty. Kim, Sung, and Kang (2014) determined that "retweeting" the shares of the brand via Twitter affected brand loyalty.

3. Research Method

3.1. Purpose, Scope and Limitations of the Study

In this study, it was aimed to determine the mediator role of e-brand love and branding co-creation in the effect of SMM activities on brand loyalty. The main population of the research consisted of the consumers living in Samsun, aged 18 and over, having various social media accounts and following the brand they "love" through these social media tools. The study only focused on clothing brands. Therefore, the results obtained from the research cannot be generalized for other product groups and Turkey.

3.2. Research Model

The model developed in line with the purpose of the research is shown in Figure 01.

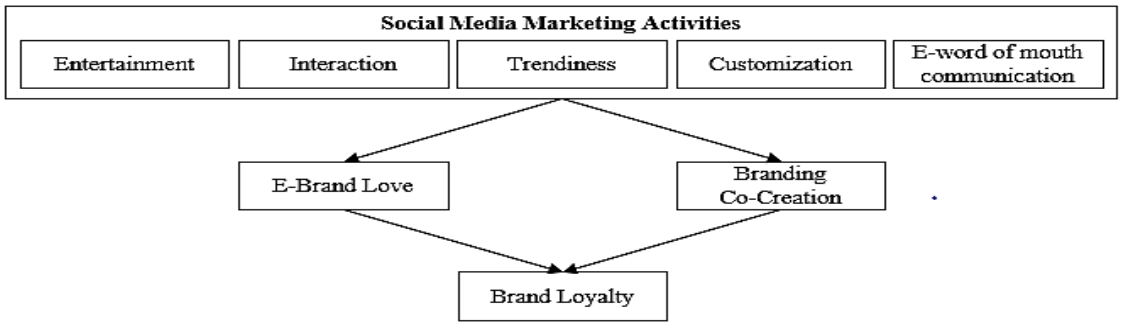


Figure 01. Research model

3.3. Sampling Process

The main population of the research consisted of the consumers living in Samsun, aged 18 and over, having various social media accounts and following the brand they "love" through these social media tools. Convenience sampling method was used as the sampling method. A questionnaire was conducted on 425 individuals and 417 of them were assessed after the incomplete forms were eliminated.

3.4. Data Collection Method and Tool

The questionnaire form was applied only to the participants who were following the brand via social media accounts and consisted of three different question groups. The preliminary questions included in the first group were adapted from the questions obtained from the study conducted by Tekbıyık (2017). The respondents were then asked to specify their favourite clothing brands and to answer the next questions by considering this brand. The last question of the first group was to determine on which social media account/accounts the brand was followed. The questions in the second group were asked to determine the evaluations of consumers regarding the study variables. In this group, the four dimensions of SMM activities were obtained from the scale developed by Kim and Ko (2012). In the questions of e-word of mouth, the fifth dimension, the study conducted by Karjaluoto, Munnukka, and Kiuru (2016) was utilized. The questions regarding brand love were obtained from

the study of Carroll and Ahuvia (2006), questions regarding branding co-creation were obtained from the study of Wang and Hajli (2014) and questions regarding brand loyalty were obtained from the study of Godey et al. (2016). In the last part of the questionnaire, the questions regarding demographic characteristics were included. Prior to the final questionnaire, a preliminary study was applied to a sample consisting of 20 individuals and the questionnaire was finalized. The questions regarding the research variables were measured with the 5-point Likert scale (1= Strongly disagree, 5= Strongly agree). The data were analyzed with AMOS and SPSS 20.0 statistical programs. Descriptive statistics, exploratory factor analysis, confirmatory factor analysis and structural equation modelling were used in the analysis of the data.

4. Findings

4.1. Demographic Characteristics and Other Descriptive Statistics

Most of the respondents consisted of single people (60.0%), students (42.9%) and females (68.3%) who were in the 18-25 (51.6%) age range, received education at undergraduate level (70.5%), had an income level of 1000 TL and below (38.1%). The respondents were first asked which social media accounts they were following. According to the results, Instagram (91.1%), Facebook (73.9%), Twitter (50.6%) and Snapchat (40.0%) were found to be the most commonly used social media accounts. Secondly, the respondents' frequency of using social media accounts and whether they used social media actively were asked. The majority of the respondents use social media continuously (57.3%) and a few times in a day (34.1%). In addition, it was determined that the statement "I post on social media" came to the forefront with an average of 65.0% and the statement "I just follow what is written on social media" followed it with an average of 58.0%. The respondents were asked to specify their favorite brands as an open-ended question in the questionnaire form. As a result of the questionnaires evaluated, it was observed that the respondents specified 45 different clothing brands. The top 5 brands having the highest percentage distribution are Zara (14.9%), Koton (11.3%), H&M (8.4%), Mavi (6.7%) and Adidas (6.5%).

4.2. Exploratory Factor Analysis

Before carrying out confirmatory factor analysis, exploratory factor analysis was performed to clearly determine the dimensions of the scales used in the research. Factor loads of 0.30 and above were taken into account in the exploratory factor analysis. Firstly, exploratory factor analysis was performed on SMM activities and the variables were grouped under 3 factors. The obtained factors explained 61.643% of the total variance (KMO Measure of Sampling Adequacy: 83%; Barlett Sphericity Test: 1371.899; df: 55). During the analysis, 1 statement was excluded from the analysis. The results of the exploratory factor analysis are presented in Table 01.

Table 01. Results of exploratory factor analysis of SMM activities

Variables	Factor Loading	% of Variance	Eigenvalues
Factor 1: Entertainment and trendiness (α=0.742)		**23.925**	**2.632**
This brand's social media contents seem interesting.	0.713		
Following this brand's social media is fun.	0.684		
This brand's social media contents are the newest information.	0.658		
This brand's social media enables information sharing.	0.646		
This brand's social media offers customized information search.	0.624		
Following this brand's social media is very trendy.	0.518		
Factor 2: E-word of mouth (α=0.859)		**23.007**	**2.531**
I write positive word of mouth about this brand on the social media platforms.	0.869		

I "talk up" this brand in social media platforms.	0.839		
I try to spread the positive sharing about this brand in social media platforms.	0.812		
Factor 3: Interaction (α=0.680)		**14.711**	**1.618**
This brand's social media is possible to exchange conversation or opinion with others.	0.790		
It is easy to deliver my opinion through this brand's social media.	0.754		

In addition, the results of the exploratory factor analysis related to the other scales used in the research are as follows; E-brand love, branding co-creation and brand loyalty scales were included in the research model as one-dimensional scales which did not had sub-dimensions. As a result of the exploratory factor analysis, it was seen that they were gathered under one dimension. Two reverse-coded statements were excluded from the exploratory factor analysis related to the brand love scale. The single-factor structure explained 51.505% of the total variance (KMO Measure of Sampling Adequacy: 87.7%; Barlett Sphericity Test: 1197.854; df: 28). None of the statements belonging to the scale of branding co-creation were eliminated and the single-factor structure explained 64.474% of the total variance (KMO Measure of Sampling Adequacy: 67.5%; Barlett Sphericity Test: 220.881; df: 3). In the brand loyalty scale, the single-factor structure explained 60.765% of the total variance (KMO Measure of Sampling Adequacy: 78.4%; Barlett Sphericity Test: 744.460; df: 10). The variables and explanations after the analysis are shown in Table 02.

Table 02. Results of e-brand love, branding co-creation and brand loyalty exploratory factor analysis

Variables	Factor Loading	% of Variance	Eigenvalues
E-brand love (α=0.865)		**51.505**	**4.120**
I am passionate about this brand.	0.789		
This is a wonderful brand.	0.768		
Everything about this brand is a pure delight.	0.753		
I'm very attached to this brand.	0.733		
This brand is totally awesome.	0.718		
This brand makes me very happy.	0.701		
This brand makes me feel good.	0.661		
I love this brand!	0.598		
Branding co-creation (α=0.724)		**64.474**	**1.934**
I am willing to buy the products of a brand recommended by my friends on my favourite social media platforms.	0.827		
I will consider the shopping experiences of my friends on my favourite social media platform when I want to shop a brand.	0.809		
I am willing to provide my experiences and suggestions when my friends on my favourite social media platform want my advice on buying something from a brand.	0.772		
Brand loyalty (α=0.795)		**60.765**	**3.038**
I intend to visit this brand's social media account again.	0.818		

I regularly visit this brand's social media account.	0.805		
I would love to recommend this brand to my friends.	0.801		
I will suggest this brand to other consumers.	0.794		
This brand would be my first choice.	0.670		

4.3. Confirmatory Factor Analysis

Confirmatory factor analysis was used to test whether SMM activities, e-brand love, branding co-creation and brand loyalty scales were suitable for sampling. The results of the confirmatory factor analysis are given below.

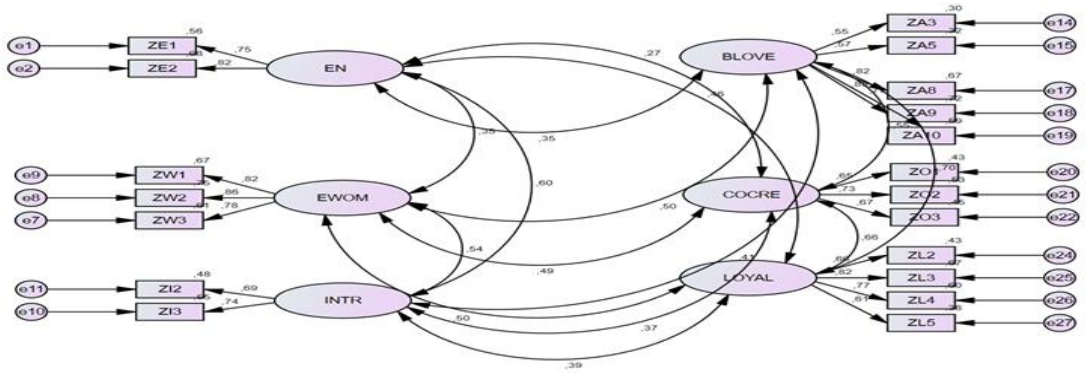


Figure 02. Results of confirmatory factor analysis

According to the results of the confirmatory factor analysis performed to determine whether the scales used in the research were in compliance with the sample, fit indexes are as follows: CMIN/df= 1.942; RMSEA= 0.051; RMR= 0.038; AGFI= 0.903; GFI= 0.930; NFI= 0.912; CFI= 0.955. The variables that exceeded the standard coefficients (very close to 1.0) or giving very large standard errors were checked and non-conforming variables were excluded following the analysis performed (Hair, Rolph, Ronald, and William, 1998). Accordingly, 4 statements regarding entertainment and trendiness dimensions were excluded from the analysis. The dimension was named as "entertainment" since only the statements of entertainment remained in the dimension. In addition, 3 statements regarding brand love and 1 statement regarding brand loyalty were eliminated. After the confirmatory factor analysis, the reliability, AVE and CR values of the scales are as follows.

Table 03. Cronbach's Alpha, CR and AVE values of the scales

Variables	Cronbach's Alpha	CR	AVE
Entertainment	0.763	0.766	0.621
E-word of mouth	0.857	0.861	0.674
Interaction	0.680	0.681	0.516
E-Brand Love	0,836	0,840	0,520
Branding co-creation	0,724	0,726	0,469
Brand loyalty	0,731	0,809	0,518

According to the results in the table, CR values are generally above 0.70 and AVE values are above 0.50. The values obtained regarding the variables after the confirmatory factor analysis are as follows:

Table 04. Values related to the scales used in the study

	Standardized Regression Weights	S.E.	C.R.	p	R^2
ZW3←EWOM	0.781				0.610
ZW2←EWOM	0.863	0.066	16.404	***	0.745

ZW1←EWOM	0.817	0.064	15.786	***	0.668
ZI3←INTR	0.744				0.553
ZI2←INTR	0.692	0.101	9.073	***	0.479
ZA3←BLOVE	0.547				0.299
ZA5←BLOVE	0.569	0.119	8.476	***	0.324
ZA8←BLOVE	0.818	0.150	10.501	***	0.669
ZA9←BLOVE	0.850	0.155	10.676	***	0.722
ZA10←BLOVE	0.766	0.146	10.163	***	0.587
ZO1←COCRE	0.652				0.426
ZO2←COCRE	0.729	0.113	10.048	***	0.532
ZO3←COCRE	0.672	0.107	9.656	***	0.452
ZL2←LOYAL	0.655				0.429
ZL3←LOYAL	0.817	0.105	12.521	***	0.667
ZL4←LOYAL	0.774	0.032	12.095	***	0.599
ZL5←LOYAL	0.613	0.100	10.048	***	0.376
ZE2←EN	0.825	0.114	9.798	***	0.680
ZE1←EN	0.749				0.561

4.4. Testing the Research Model

Structural equation modelling was used to test the research model. The results of the model which aimed to determine the effect of social media marketing activities on brand loyalty are as follows.

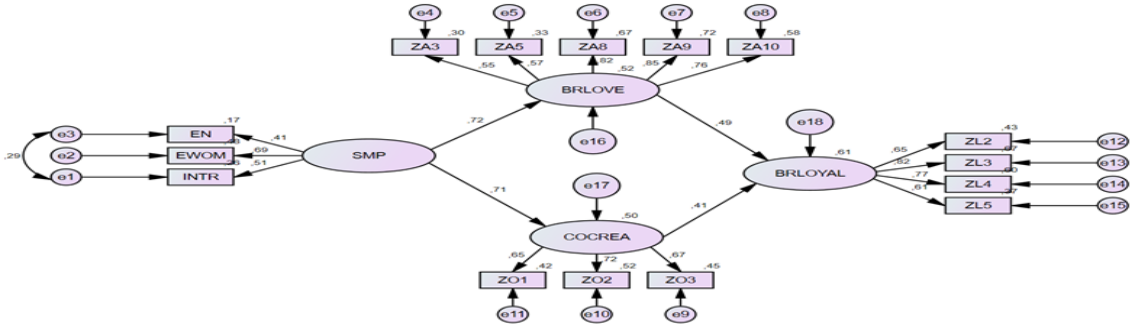


Figure 03. Model test results

The compliance indices regarding the research model are as follows: CMIN/df= 2.307; RMSEA= 0,06; RMR= 0.043; AGFI= 0.904; GFI= 0.932; NFI= 0.909; CFI= 0.946). The results of the structural equation analysis regarding the variables are presented in Table 05 below.

Table 05. Research model values

	Standardized Regression Weights	**S.E.**	**C.R.**	**p**
BRLOVE←SMP	0.721	0.132	6.358	***
COCREA←SMP	0.706	0.156	6.575	***

BRLOYAL←BRLOVE	0.485	0.085	6.287	***
BRLOYAL←COCREA	0.413	0.065	5.627	***
INTR←SMP	0.511			
EWOM←SMP	0.692	0.267	7.564	***
EN←SMP	0.407	0.110	6.744	***
ZA3←BRLOVE	0.550			
ZA5←BRLOVE	0.571	0.118	8.521	***
ZA8←BRLOVE	0.819	0.148	10.573	***
ZA9←BRLOVE	0.846	0.153	10.727	***
ZA10←BRLOVE	0.764	0.144	10.203	***
ZO3←COCREA	0.673			
ZO2←COCREA	0.724	0.106	10.240	***
ZO1←COCREA	0.646	0.100	9.604	***
ZL2←BRLOYAL	0.654			
ZL3←BRLOYAL	0.817	0.106	12.409	***
ZL4←BRLOYAL	0.773	0.033	11.987	***
ZL5←BRLOYAL	0.611	0.101	9.964	***

According to the findings obtained: It is possible to state that as the positive evaluations of the consumer towards SMM activities increase, e-brand love also increases. SMM activities make consumers more willing to engage in the process of branding co-creation. Consumers having e-brand love show commitment to their brands. The increase in the loyalties of consumers shows parallelism with the increase in the intentions of the consumers who want to be involved in the process of branding co-creation. ***In the light of the results obtained the hypotheses H1, H2, H3 and H5 were accepted.***

4.5. Investigation of Mediator Effects

Firstly, the direct relationship between SMM activities and brand loyalty was examined before analysing the mediator roles of e-brand love and co-creation variables in the relationship between SMM activities and brand loyalty. The results are presented below.

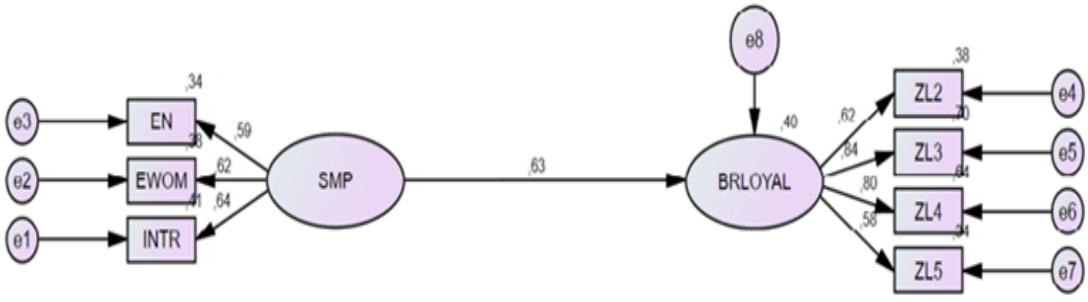


Figure 04. Direct effect model between SMM activities and brand loyalty

There is a statistically significant and positive relationship between SMM activities and brand loyalty. It is expected that this relationship will weaken or will be statistically insignificant if e-brand love and branding co-creation, which are the mediator variables, are added to the model (CMIN/df= 2.867; GFI= 0.973; AGFI= 0.942; RMR= 0.041; RMSEA= 0.072; CFI= 0.966; NFI= 0.950; Standardized Regression Weights = 0.635; S.E.= 0.091; C.R.= 6.707; P=0.000; R^2=0.403). The results are presented below.

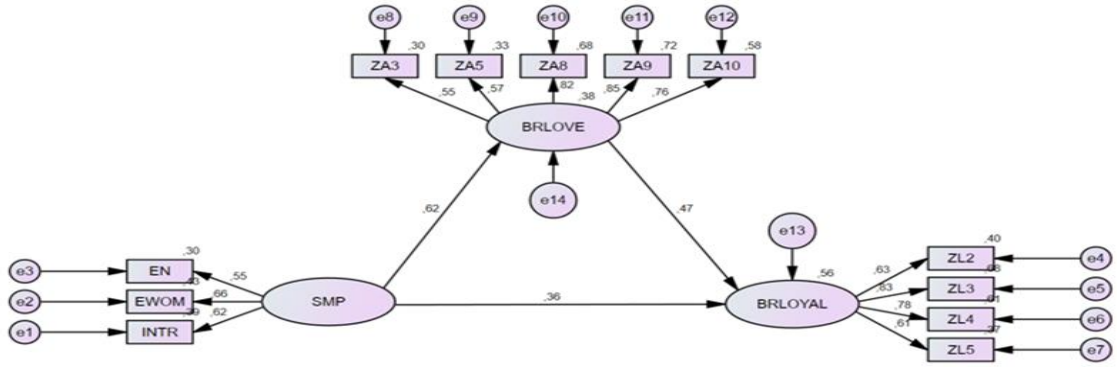


Figure 05. Mediator role of e-brand love

As seen in the Figure 05, when the e-brand love variable is added to the relationship between SMM activities and brand loyalty with the mediator role, the relationship between SMM activities and brand loyalty weakens. Therefore, the partial mediator role of e-brand love can be mentioned (CMIN/df= 2.814; GFI= 0.939; AGFI= 0.906; RMR= 0.046; RMSEA= 0.071; CFI= 0.944; NFI= 0.917). The results related to the model where the e-brand love variable is added with the mediator role are presented below.

Table 06. Mediator role of the e-brand love variable values

	Standardized Regression Weights	**S.E.**	**C.R.**	**p**
BRLOVE←SMP	0.616	0.091	6.383	***
BRLOYAL←BRLOVE	0.471	0.095	5.331	***
BRLOYAL←SMP	0.360	0.092	3.983	***
INTR←SMP	0.623			
EWOM←SMP	0.657	0.190	8.270	***
EN←SMP	0.550	0.109	7.533	***
ZA3←BRLOVE	0.546			
ZA5←BRLOVE	0.570	0.119	8.475	***
ZA8←BRLOVE	0.823	0.151	10.516	***
ZA9←BRLOVE	0.849	0.156	10.653	***
ZA10←BRLOVE	0.760	0.146	10.108	***
ZL2←BRLOYAL	0.634			
ZL3←BRLOYAL	0.826	0.114	12.030	***
ZL4←BRLOYAL	0.782	0.035	11.684	***
ZL5←BRLOYAL	0.612	0.107	9.750	***

According to the Sobel Test results; test statistics was calculated as 4.091 while p value was calculated as 0.000 (http: //quantpsy.org/sobel).

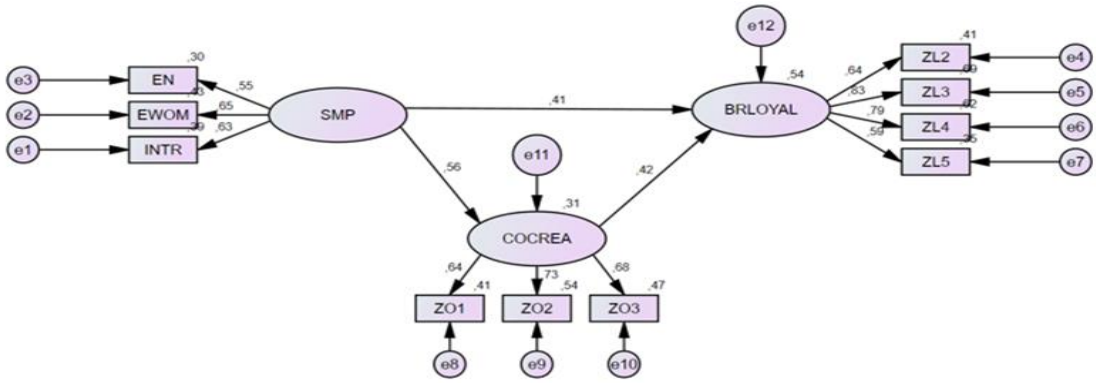


Figure 06. Mediator role of branding co-creation

Similarly, when the branding co-creation variable is added to the relationship between SMM activities and brand loyalty with the mediator role, the relationship between SMM activities and brand loyalty weakens (CMIN/df=2.459; GFI= 0.959; AGFI= 0.929; RMR= 0.041; RMSEA= 0.063; CFI= 0.957; NFI= 0.930). The results related to the model where the branding co-creation variable is added with the mediator role are shared below.

Table 07. Mediator role of branding co-creation values

	Standardized Regression Weights	**S.E.**	**C.R.**	**p**
COCREA←SMP	0.557	0.110	6.069	***
BRLOYAL←COCREA	0.419	0.074	4.878	***
BRLOYAL←SMP	0.413	0.094	4.495	***
INTR←SMP	0.626			
EWOM←SMP	0.655	0.193	8.092	***
EN←SMP	0.551	0.110	7.441	***
ZO3←COCREA	0.683			
ZO2←COCREA	0.733	0.106	10.177	***
ZO1←COCREA	0.639	0.098	9.503	***
ZL2←BRLOYAL	0.643			
ZL3←BRLOYAL	0.832	0.112	12.185	***
ZL4←BRLOYAL	0.786	0.034	11.848	***
ZL5←BRLOYAL	0.588	0.104	9.497	***

Sobel Test results, test statistics was calculated as 3.802 while p value was calculated as 0.000 (http: //quantpsy.org/sobel). According to the mediation test results, it was determined that e-brand love and branding co-creation variables had a partial mediator role in the relationship between SMM activities and brand loyalty. ***The hypotheses H4 and H6 were accepted.***

5. Conclusion and Discussions

In this study where it was aimed to examine the mediator role of e-brand love and brand co-creation in the effect of SMM activities on brand loyalty; the majority of the respondents consisted of single, students and females who were in the 18-25 age range, received education at the undergraduate level and had an income level of 1000 TL and below. However, the majority of respondents consisted of the individuals who used social media continuously and shared on social media actively. Instagram was the mostly used social media platform in terms

of the followed brands. In the study, Zara was the most popular brand. The research model was analysed through the structural equation modelling. Following the analysis, all hypotheses established within the scope of the study were accepted. In line with this result. Firstly, the three main dimensions of SMM activities were found to have a significant effect on e-brand love. These dimensions are entertainment, e-word of mouth and interaction. Secondly, SMM activities have an effect on branding co-creation similarly. Thirdly, e-brand love and branding co-creation have an effect on brand loyalty. Finally, according to the mediator variable test results, it was determined that e-brand love and branding co-creation variables have a partial mediator role in the relationship between SMM activities and brand loyalty.

In this respect, the following suggestions have been developed. For the first research result; in line with the answers given by the respondents, it can be stated that they find the activities conducted by their “the most loved” brands through various social media tools enjoyable, are open to exchange of views and information sharing, and accordingly, think positively of the e-word of mouth. Due to effective information sharing and e-word of mouth, brands can become a "trend" in a short time and create a positive advertising process. At this point, we see that most of enterprises have made product launches specific to social media prior to general product launches in recent years and provided the opportunity of purchasing to social media users first. This situation can be used as a strategy that will establish a bond between the brand and consumers who have e-brand love. What is important at this point is to ensure that the e-consumer feels special. At this point, it is important to support the emotional intensity of consumers who have already begun to feel strong emotions towards the brand as a result of the activities that the brand conducted through social media. Furthermore, the consumer will be able to do more shares regarding the brand, contribute to the content formation and make the brand one of the “trends” and “mentioned” brands. While it is possible to mention this situation for both small and large enterprises, the use of the right social media tool is also important. Within the scope of the study, it was revealed that Instagram was an effective tool for love brands. The market segment to which enterprises address, the sharing of contents in line with their target audiences and the selection of the right social media tool will increase the effectiveness in this sense. On the other hand, selecting a single social media tool can be a wrong strategy. For this reason, by considering many factors such as consumer preferences, demographic characteristics, product category, brand characteristics, all social media tools can be utilized. This strategy can also be interpreted as the social media positioning strategy. The effect of social media continues to increase rapidly and new practices are emerging every day. It is important for enterprises to engage in these practices to stay updated and to carry out integrated marketing communication no matter which tool is preferred. At this point, conducting social media marketing according to generations may be another suggestion. With social media marketing practices conducted according to the generations, "privileged, differentiated and individual message presentation" can be realized according to target groups. Official accounts of brands can be effectively used in this sense and the support to be obtained from the "influencers" in the relevant field can be useful.

For the second research result, SMM activities have an effect on branding co-creation. In other words, consumers are more willing to contribute to the contents that they find entertaining, highly interactive and worth sharing. With the change of consumer habits, consumers expect brands to contact them. In other words, consumers want to have their own shares in a change to be made and an innovation to be realized. The point to take into consideration at this point is the emotional bond that consumers have established with brands. By participating in this process, consumers demonstrate that they emotionally look after their brands. Taking consumers into consideration in the process and receiving positive feedback in terms of their contributions to the brand will strengthen the existing emotional bond. It is important for enterprises not to lose this existing consumer group. Quick feedback, "if it weren't for you" messages and rewarding consumers both materially and spiritually will act as motivational factors in this sense. For this reason, suggestions regarding the planned changes such as "which one would you choose?" and "short questionnaire studies" may actually be the steps taken for including consumers in the process of branding co-creation, because consumers now demand a personalized experience. Otherwise, they can prefer another brand by abandoning the brands they use.

For the third research result; consumers target the "different" content where they have their "own contributions". The enterprises that are able to provide this to their consumers are the winning enterprises of today. Such activities make individuals "tag" other individuals in comment network and provide the opportunity to reach potential customers without any effort. These activities, which allow closer and emotional contact between the consumer-consumer and brand-consumer, can be used as an important step in gaining loyal customers. The value of the contents to which consumers have also contributions is very high, because now every consumer can have a

channel, promote and interpret different areas and products. Accordingly, enterprises actually feel under pressure compared to the old market conditions, because the form of communication is shaped by consumers not by enterprises. Therefore, it is thought that the brands that can respond correctly to the demands of consumers under the market conditions where the rules are determined by consumers will be the love brands. The e-consumers who have brand love will be committed to their brands in social media.

For the final research result, according to the mediation test results, it was determined that e-brand love and branding co-creation variables had a partial mediator role in the relationship between SMM activities and brand loyalty. In this context, while SMM activities affect e-brand love, it can be stated that e-brand love makes this relationship stronger on the path going to brand loyalty. Therefore, it will depend on social media strategies that love brands give more importance to SMM activities and make their consumers more loyal to their brands. Similarly, consumers, who are involved in the process of branding co-creation with SMM activities, strengthen brand loyalty as their effectiveness in this process increases. Accordingly, informing and including consumers in the process of branding co-creation through social media tools will increase the number of loyal consumers.

In the future studies to be conducted on the subject, the concept of e-brand love can be handled with different variables such as e-trust and e-commitment in the studies conducted regarding internet-mediated environments. Moreover, SMM activities can be evaluated comparatively in terms of various social media tools such as Instagram, YouTube and Facebook. Future studies can conduct researches on different brands and product groups. In addition, two or more sectors can be addressed and analysed. It can be examined influencers and bloggers, who have social media popularity and the power to influence a large group, have an effect on e-brand love and/or co-creation. A study regarding the development of a scale for e-brand love can be conducted in order to measure e-brand love more healthily through social media.

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CAN WE REALLY DIFFERENTIATE BETWEEN GENERATIONS? A DATA MINING APPROACH

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Abstract

Both academicians and practitioners frequently discuss generational differences in the work force. Yet the findings of the research are contradictory, some supporting and some refuting the arguments. The aim of this study is to test if we can differentiate the Gen X and Gen Y employees based on their attitudes toward work and work environment expectations. The study was conducted on 1633 employees (45% Gen X, and 55% Gen Y employees) using a multi-item questionnaire. A data mining approach was used to analyze the data and five classification techniques, artificial neural networks (ANN), support vector machines (SVM), and decision tree algorithms (C5.0, CART and CHAID) were applied. The C5.0 algorithm outperformed other classifiers in terms of accuracy, precision and specificity. Only in recall measure, ANN performed better than the other techniques. The results revealed the most important variables differentiating between Gen X and Gen Y were "using technology for all daily chores", "ease of technology use", "entrepreneurial intention", "changing jobs frequently", and "having friends who are from different cultures and religions". The accuracy rate was just above 70%, which is a relatively good measure considering this was a social science research where survey data was used. Still it is not well enough to distinguish generations from data mining perspective.

Keywords: Attitudes toward work, classification, data mining, generations, performance measure, work life expectations.

1.Introduction

While work life is still struggling to adapt Gen Y and yet to embrace Gen Z employees, there remains a question to be answered. Can we really differentiate between generations?

Since the famous baby boomers, business literature has been interested in generations and this interest has been hyped by the technology driven Gen Ys. There are many studies investigating the differences between generations in terms of various organizational issues. As there are seven different generations living and four - even in some cases five - of them working together, this interest is quite understandable. However not all studies indicate significant difference between generations.

This study aims to investigate and try to differentiate between Gen X and Gen Y employees, the largest generations at work life, based on their attitudes toward work life and expectations about work environment using data mining techniques.

2. Literature Review and Theoretical Framework

2.1. Generations

As early as 18th century, philosophers and scientists, e.g. Comte and Quetelet, have started to discuss the linkage between the date of birth and development in the society. In the 1920s, the sociologist Karl Mannheim claimed that sharing same experiences contributes a frame of reference, a distinct consciousness that can be influential in people's lives (Alwin & Mc Cammon, 2003; Joshi, Dencker, & Franz, 2011).

Based on this theory, generations are cohort-groups who have similar values, ideas and attitudes with common experiences of living in the same timeframe. The idea of distinctive generations is, however, quite complex and even though there is generally a consensus on approximate time lines and generation names, their existence and effects are not easily documented. Although sources disagree on the specific dates separating the generations from each other, the most frequently used time lines and generation names are as the Greatest Generation (born between 1901-1924), who experienced profound economic and social turmoil, World War I and eventually fought in World War II; the Silent Generation (born between 1925-1945) who experienced the Great Depression and lived through the world wars; the Baby Boomers (born between 1946-1964) who lived the cold war and the human rights movement; the Generation X or Gen X (born between 1965-1979) who lived oil crisis in the world,

the continuation of the Cold War; the Generation Y, Gen Y or sometimes called the millennials (born between 1980-2000) who lived during the Gulf War in Iraq, September 11, and globalization; Generation Z, or Gen Z (born between 2001-2010) who lived after terrorism, global recession, climate change; Generation alpha born after 2010 and expected to born until 2025 (Kelan, 2014; Lyons & Kuron, 2014).

Apart from intercultural differences, countries have roughly similar generations since majority have experienced the same historical events and still experiencing with the world as the World Wars, oil crises, global recessions, climate change and likewise. In Turkey, we can also include the country specific events and separate generations as generations who lived through last days of Ottoman Empire and World War II; generations who lived through the foundation and early days of The Turkish Republic; generation who lived through the multiparty system and later the military takeover; the generation who lived through the left-right conflict; the generation who lived during terrorism, and military coup period, lived both welfare and crisis; and last the generation who experienced better economic conditions and increase in conservatism and all these fall approximately the same time line as the above named generations (Adıgüzel, Batur & Ekşili, 2014; Yüksekbilgili, 2013). In today's technology driven life, technological developments also started to separate cohorts from each other and we can easily name the baby boomers as radio, Gen X as television, Gen Y as computer and Internet, and Gen Z as smartphone generations. This categorization is also in line with the technological development in Turkey, hence these generation cohorts are relevant for Turkey as well.

2.2. Generations in the organizational context

When the generations are considered from organizational context we consider generations as cohorts who share similar life styles, work values, and work life expectations. For example, the baby boomers are designated by their high sense of loyalty and commitment to their workplace for long years. The Gen Xs are labelled with high level of motivation and respect for authority. There was also a speedy increase in women's labor force rates among Gen Xs (Dixon, Mercado & Knowles, 2013; Sparks, 2012). The Gen Ys have quite different values and expectations compared to generations preceding them. They are said to be more confident and autonomous, have greater mobility and less commitment, prone to technology and social networks (Alexander & Sysko, 2013; Dixon, Mercado & Knowles, 2013; Holt, Marques & Way, 2012). They want to shape their lives; work-life balance is more important than ever and they desire flexibility (Yüksekbilgili, 2013). Compared to Baby boomers, and Gen Xs, Gen Ys are more inclined towards entrepreneurship (Holt, Marques & Way, 2012 Keleş, 2013; Yurtkoru & Elber Börü, 2019). It is known that since GenYs did not witness the times of economic crisis, because they have grown up with TV games shows, interactive video games and the Internet as entertainment, they like to enjoy fun and win, they consume fast, they have high expectations (but they do not want to pay the price) this generation does not like to work (Alexander & Sysko, 2013; Kuyucu, 2014; Yüksekbilgili, 2013). The Gen Z's are very new to the work life and there is not enough evidence to profile, however the early signs indicate some characteristics that are emerging as tech savvy, pampered, protected, risk averse and empowered (Queen, 2015).

Based on these understanding, differences between generations can be used to help recognize how members of a generation act and interact in workplace (Vincent, 2005). As organizations' success are determined by the behavior of these generations in the long-run, knowing how to motivate or influence different generation employees will assist managers to control a wide range of organizational outcomes such as conflict, turnover, and socialization, which has been a great challenge since the appearance of Gen Y employees (Luttrell, & McLean, 2013).

Consequently studying generations will help to plan and design work environment that fits employee needs and to motivate and manage different generations to work coherently and efficiently and also to increase their well-being. Naturally traditionalist are very rare and baby boomers, if still working, are retiring from work force, Gen Z are newly entering and therefore it is early to profile them, which leaves us with the Gen Xs and Gen Ys. If we can understand and name the differences between these two generations, we can also use this knowledge to project and describe the Gen Zs in the coming years. Therefore, this study is focused on describing the similarities and differences between two generations namely Gen X and Gen Y.

The aim of this study is to test if we can differentiate the Gen X and Gen Y employees based on their attitudes toward work and work environment expectations. If the cohorts are distinct as proposed by the literature, we should be able to classify Gen X and Gen Y employees correctly looking at their preferences in work life. Classification models will be used to test this proposition and a high predictive accuracy obtained would denote

the distinctiveness of the generations. Classification models will also indicate the most discriminating criteria for distinguishing generations' work styles.

In this study, five classification techniques, artificial neural networks (ANN), support vector machines (SVM), decision tree algorithms (C5.0, CART and CHAID) are chosen to build classification models on a dataset composed of the responses given by Gen X and Gen Y employees to WLEA (Work Life Expectations & Attitudes) scale (Elber Börü & Yurtkoru, 2016; Yurtkoru & Elber Börü, 2015), and the performances of these models are compared. Before discussing the findings of the study, a short summary of the data mining techniques performed will be given.

2.3. Data mining classification models

Data mining applications are popular tools in understanding and solving business problems. However, they are not frequently used to analyze survey data in business research although they can be very helpful in revealing useful hidden information. Data mining can be best described as a process for exploring large amounts of data to discover meaningful patterns and rules and making predictions for outcomes or behaviors (Linoff & Berry, 2011; Luan, 2002). It is the automated process of extracting useful knowledge and information including, associations, changes, trends, anomalies and significant structures that are unknown from large or complex datasets (Han, Kamber & Pei, 2012). Classification models are one of the most common used techniques of data mining.

Assigning a class label among a set of possible class values to a set of variables using a classifier model is the purpose of classification. A learning algorithm is applied on a training dataset in order to build the classifier model. Before training phase, the class label of each record/instance in the training dataset is known clearly. The classifier model built based on the training set is evaluated on an independent test dataset after this learning phase. If the performance of the classifier is high enough, it will be used for prediction purposes.

There exists numerous algorithms that can be used to build classifier models such as artificial neural networks (ANN), support vector machines (SVM), decision tree algorithms, logistic regression, and discriminant analysis (DA). As mentioned above ANN, SVM, and three different decision tree algorithms are used in this study.

ANN is a system of interconnected neurons that exchange information between each other, which is inspired from human brain. The connections between the neurons have varying weights, which can be tuned based on the given information, thus makes ANN capable of learning. Since ANN can be used even if when there is no relationship between variables and classes, it can be used in any complex pattern modelling. ANN strongly fits to any classification problem and can tolerate noisy data. However, it requires a long time to construct a well-suited model with training and because of this it is often hard to interpret due to its hidden layer structures and nodes (Agaoglu, 2014; Han, Kamber & Pei, 2012).

SVM is a classification and regression technique which tries to find a hyperplane to separate the classes while minimizing the classification error and maximizing the margins (Cortes & Vapnik, 1995).

Decision tree algorithms recursively split the instances into mutually exclusive subgroups. This process continues until there is no further split that makes a difference in terms of statistical or impurity measures. The most well-known impurity measures in decision trees are Information Gain, Gain Ratio, and Gini Index (used in ID3, C5.0, CART respectively) (Breiman et al, 1984; Quinlan, 2004). In addition; boosting, an ensemble learning method, is used with C5.0 classifiers as base classifiers to further increase the performance (Breiman, 1998; Schapire, 1990). Boosting builds a strong classifier using a set of iteratively learning weak classifiers. On the other hand, the CHAID algorithm uses chi-square test for multiway splitting.

In order to evaluate classification models or classifiers, performance measures in terms of the correctness of the classification decisions of the models are used. These performance measures are accuracy (recognition rate), precision, recall (sensitivity or true positive rate), and specificity (true negative rate), and so forth. If a binary classification task is assumed, the class variables values can be assumed as Positive (P) and Negative (N). There are four terms to be mentioned to understand these performance measures and confusion matrix. True Positive (TP) values are the actual positive (P) ones that are correctly labeled as positives by the classifier, whereas False Positive (FP) values are the actual negative (N) ones that are incorrectly labeled as positives by the classifier. In a similar fashion; True Negative (TN) values are the actual negative (N) ones that are correctly labeled as negatives by the classifier, whereas False Negative (FN) values are the actual positive (P) ones that are

incorrectly labeled as negatives by the classifier (Agaoglu, 2014). These terms are also given in the confusion matrix of Table 01.

Table 01. The confusion matrix

		Predicted Class		
		Positive	**Negative**	**Total**
Actual Class	Positive	TP	FN	P
	Negative	FP	TN	N
	Total	P'	N'	P +N

The calculations of performance measures are given in Equation (1), (2), (3), and (4). Accuracy measures the rate of total correct predictions to all predictions. Precision measures the correctness rate of the class predictions done as positive by the classifier whereas recall measures the rate of positives correctly predicted as positive by the classifier. Similarly, specificity measures the rate of negatives correctly predicted as negative by the classifier (Agaoglu, 2014).

$$Accuracy = \frac{TP+TN}{P+N} \quad (1)$$

$$Precision = \frac{TP}{TP+FP} \quad (2)$$

$$Recall = \frac{TP}{P} \quad (3)$$

$$Specificity = \frac{TN}{N} \quad (4)$$

3. Research Method

3.1. Instrument

As briefly discussed above, literature on generations imply that attitudes toward work and work environment expectations differ among different generation employees. Yet, especially when we consider Gen Y employees their technology proneness and entrepreneurial intention should be taken into consideration. The attitudes toward work and work environment expectations are measured by Yurtkoru & Elber Börü's Work Life Expectations & Attitudes scale (WLEA) (Elber Börü & Yurtkoru, 2016; Yurtkoru & Elber Börü, 2015). Since WLEA has considerable number of items measuring technology proneness, no additional scale is used to measure technology. But, to measure entrepreneurial intention Liñán and Chen's (2009) 10 items scale is also included in the questionnaire. The items are measured on a five-point interval scale where "totally disagree" equals 1 and "totally agree" equals 5. All together the instrument consists of 110 items including entrepreneurial intention, which is used as the average of ten items.

3.2. Sample

Data for this study are collected from 1633 employees from Istanbul, Turkey. The sample consists of 737 (45.1%) employees born between 1965 to 1980, and belong to Gen X; and 896 (54.9%) employees born between 1980 to 1995 and belong to Gen Y. The demographics of the sample are given in Table 02.

Table 02. The demographics of the sample

Generation X Sample (N=737)							
Gender	**Frequency**	**Education**	**Frequency**	**Marital Status**	**Frequency**	**Having children**	**Frequency**
Female	**370 (50.2)**	Middle	**161 (21.8)**	**Married**	**609 (82.6)**	**Yes**	**587 (79.6)**
		High	**262 (35.5)**				
Male	**367 (49.8)**	University	**242 (32.8)**	**Single**	**128 (17.4)**	**No**	**150 (20.4)**
		Graduate	**72 (9.8)**				
Generation Y Sample (N=896)							
Gender	**Frequency**	**Education**	**Frequency**	**Marital Status**	**Frequency**	**Having children**	**Frequency**
Female	**439 (49.0)**	Middle	**52 (5.8)**	**Married**	**361 (40.3)**	**Yes**	**255 (28.5)**

		High	**245 (27.3)**				
Male	**457 (51.0)**	University	**500 (55.8)**	**Single**	**535 (59.7)**	**No**	**641 (71.5)**
		Graduate	**99 (11.0)**				
Note. Values in parenthesis are percentages							

Prior to the data mining process, the dataset is randomly divided into train and test data. 80% (1297) of the dataset is used for the training and the rest 20% (336) is used to test the classifiers developed. Generations of the respondents are taken as the class variable (target value). Class variables are like the dependent variables in the classical statistical methods. All the other variables are input variables, which will be used to predict the class variable.

4. Findings

The performances of the five classification techniques applied are evaluated on the test data in terms of accuracy, precision, recall, and specificity.

A feed-forward backpropagation ANN method was implemented in the build settings of ANN classifier. Two hidden layers, the first with 30 and the second with 10 nodes, were used in the classifier topology. When the stopping criterion was met for all neural networks, the network with the highest accuracy was returned as the final model. In the result of ANN classifier; there are 103 True Positive (TP) and 127 True Negative (TN) instances, which indicates that 230 records of all test dataset are correctly labeled. On the other hand; there are 50 False Negative (FN) and 56 False Positive (FP) instances, totally 106 records are incorrectly labeled (See Table 03).

Table 03. The confusion matrix of ANN

	Gen X	**Gen Y**	**Total**
Gen X	103	50	153
Gen Y	56	127	183
Total	159	177	336
Note. Rows represent actual, columns represent predicted group memberships			

We used an RBF function as the kernel function in SVM classifier build settings. The confusion matrix, given in Table 04, shows the distribution of predictions of SVM classifier. In the result of SVM classifier, there are 93 TP and 128 TN instances, which indicates that 221 records of all test dataset are correctly classified. On the other hand; there are 60 FN and 55 FP instances, totally 115 records are misclassified.

Table 04. The confusion matrix of SVM

	Gen X	**Gen Y**	**Total**
Gen X	93	60	153
Gen Y	55	128	183
Total	148	188	336
Note. Rows represent actual, columns represent predicted group memberships			

In the build settings of C5.0 classifier, we implemented multiway splits using gain ratio as impurity measure. Minimum instances per child was taken as two for the stopping rule. In addition, boosting was applied with 50 trials on C5.0 algorithm. The confusion matrix, given in Table 05, shows the distribution of predictions of the classifier. As a result, there are 92 TP and 146 TN instances, totally 238 of all instances are correctly labeled. On the other hand, there are 61 FN and 37 FP instances, totally 98 records are incorrectly labeled.

Table 05. The confusion matrix of C5.0

	Gen X	**Gen Y**	**Total**
Gen X	92	61	153
Gen Y	37	146	183
Total	129	207	336
Note. Rows represent actual, columns represent predicted group memberships			

Gini index was used as impurity measure in the build settings of CART classifier and splitting was done with binary splits. Minimum change in impurity was set as 0.0001 for the stopping rule. The confusion matrix, given in Table 06, shows the distribution of predictions of the classifier. In the result of CART classifier, there are 78

TP and 134 TN instances, totally 212 of all records are correctly classified. On the other hand, there are 75 FN and 49 FP instances, totally 124 records are misclassified.

Table 06. The confusion matrix of CART

	Gen X	Gen Y	Total
Gen X	78	75	153
Gen Y	49	134	183
Total	127	209	336
Note. Rows represent actual, columns represent predicted group memberships			

The CHAID classifier uses chi square test for multiway splitting. Epsilon for convergence was set as 0.0001 for the stopping rule. As shown in Table 07, there are 81 TP and 126 TN, totally 207 instances are correctly labeled whereas 72 FN and 57 FP, totally 129 instances are incorrectly labeled in the classification result of CHAID classifier.

Table 07. The confusion matrix of CHAID

	Gen X	Gen Y	Total
Gen X	81	72	153
Gen Y	57	126	183
Total	138	198	336
Note. Rows represent actual, columns represent predicted group memberships			

Confusion matrices of all five classifiers are combined in Table 08, which shows the differences between classifiers in terms TP, TN, FN, and FP. According to TP values, ANN is the best and CART is the worst; whereas C5.0 is the best and CHAID is the worst in terms of TN values. In a similar fashion, ANN is the best and CART is the worst in terms of FN values; whereas C5.0 is the best and CHAID is the worst in terms of FP values.

Table 08. The confusion matrix of all classifiers

	Gen X					Gen Y					
Model	**ANN**	**SVM**	**C5.0**	**CART**	**CHAID**	**ANN**	**SVM**	**C5.0**	**CART**	**CHAID**	**Total**
Gen X	**103**	**93**	**92**	**78**	**81**	50	60	61	75	72	153
Gen Y	56	55	37	49	57	**127**	**128**	**146**	**134**	**126**	183
Total	159	148	129	127	138	177	188	207	209	198	336
Note. Rows represent actual, columns represent predicted group memberships											

In summary, when we compare the performance of the different classifiers we see that C5.0 outperformed other classifiers in terms of accuracy, precision and specificity. Only in recall measure, ANN performed better than the other techniques (See Table 09).

Table 09. The performance of the classifiers

Model	Accuracy	Precision	Recall	Specificity
ANN	68.45	64.78	**67.32**	69.40
SVM	65.77	62.84	60.78	69.95
C5.0	**70.83**	**71.32**	60.13	**79.78**
CART	63.10	61.42	50.98	73.22
CHAID	61.61	58.70	52.94	68.85
Note. All values are in percentages.				

5. Conclusion and Discussions

In this study, we conducted data mining applications to test if we can differentiate the Gen X and Gen Y employees based on their attitudes toward work and work environment expectations and entrepreneurial intentions.

Findings revealed that the most important five variables differentiating between Gen X and Gen Y are “using technology for all daily chores”, “ease of technology use”, “entrepreneurial intention”, “changing jobs frequently”, and “having friends who are from different cultures and religions”. These variables are found

important in at least three classifiers. Other outstanding variables were “when a task is wanted from me I should be informed why I should do that task”, “when I get a new task, I ask what benefit I will get from it”, “I like competition”, “no restrictions to be at the office as long as you do the job”, “flexible working conditions”. These indicate, in line with the literature, employees who use technology more at ease and for all their chores, who have high turnover rate and desire to found their own companies and who do not want to be bound to offices and need flexible conditions are the Gen Y employees (Adıgüzel, Batur & Ekşili, 2014; Keleş, 2013; Yüksekbilgili, 2013; Yurtkoru & Börü, 2019). In addition, they want to know why a task is asked from them and they want to know the benefit they would get from doing it. Based on this information, we can conclude that there is a difference between Gen X and Gen Y employees based on their attitudes toward work and work environment expectations and entrepreneurial intentions.

On the other hand, the results indicated that even the best performing classifier has an accuracy rate just above 70%. Even though this is a relatively good measure considering the nature of social science research, it is not well enough to distinguish generations from data mining perspective. Naturally, this study is limited with its sample, and the results should be further tested. Consequently, the question of generational differences seems to be open to further study.

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LEADERSHIP, KNOWLEDGE MANAGEMENT AND COMMUNICATION

RELATIONSHIP BETWEEN EMOTIONAL COMMITMENT TASK PERFORMANCE AND ORGANIZATIONAL SILENCE: AN APPLICATION IN HEALTH SECTOR

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Abstract

The concept of Organizational Silence is a condition that can prevent negative feedback, changes and development that should prevent organizational communication. As a result of this situation, decrease in employee loyalty, inability to cope with the problems encountered in the process and failure of the employee to protect the organizational values, leads to a decrease in performance and deviation in goals. The data were collected through a questionnaire distributed to healthcare workers randomly from nine hospitals in Turkey between the years of 2018-2019. In this context, the relationship between Emotional Commitment Task Performance of Organizational Silence was tested. Data were analyzed through the SPSS statistical packet program and four proposed relations were tested through Squared Multiple Correlations analyses. The scales used were Organizational Silence, Emotional Commitment and Task Performance. For this purpose, 507 questionnaires were analyzed by face to face interviews with employees from nine hospitals in Istanbul. Interestingly at the end of the study, Organizational Silence increases the Task Performance in the health sector. On the other hand, Emotional Commitment improves Task Performance.

Keywords Emotinonal Commitment, Emotinonal Commitment, Task Performance

1. Introduction

In order for organizations to cope with today's tough competition conditions and survive and maintain their continuity, employees need to be involved in an enthusiastic, willing, highly motivated fashion production process. It is closely related to the ability of different creative skills to approach events and phenomena with critical thinking style in each individual creating competitive advantage in organizations. The concept of organizational silence emerges when organizations perceive such environments as objectionable and activate the organizational silence mechanism by activating fear among employees(Milliken & Morrison 2003, 1473). When the employees express their discomfort, the problems they face, they show that they are treated with a reactive approach, that they are not taken very seriously or even treated as the source of the problem (Detert & Edmondson 2005, 23). The constantly uneasy, restless and suspicious climate of the environment reduces the desire to work, motivation and organizational commitment.It is inevitable to take the spiral of silence when it is experienced that speaking during the process does not solve the problems, it is an indication of incompatibility, it is stigmatized as the individual who opposes the managers and who misses the peace of the environment (Çavuşoğlu & Köse 2016, 118).Thus, silence becomes normalized and accepted for the employee. This situation jeopardizes the employee's adoption and internalization of the values of the organization and the continuation of the organization under all circumstances. The increase in the employee turnover rate of the organization, job satisfaction creates significant reductions in the organizational commitment rate, creates significant reductions in job satisfaction and organizational commitment. Organizational performance decreases as it poses a big threat to the efficient and efficient use of organizational resources. Therefore, the aim of the study was to investigate the relationship between organizational silence, emotional commitment and task performance.

2. Literature Review and Theoretical Framework

2.1. Organizational Silence

In today's organizations, sharing and harmony gain importance every day. Organizational competitiveness is ensured through harmonious and healthy relationships between employees. For this reason, it is very important for the organizational development that the employees have the opportunity and possibility to deal with a problem and gain a new perspective or to propose a completely different proposal (Yürür & Nart 2016, 118). In terms of organizational benefit, it is the creation of environments that will improve the employees' ability to express in order to achieve their goals and objectives.(Eisenberger et al.. 2016, 3). The solution of the problems

encountered in the organizational production process brings a successful and efficient result by reaching the source of the correct information filtered through the multiplicity of more perspectives.

Silence is also evaluated in different ways for organizations. Silence is also different according to cultures, while some traditions treat silence on the basis of respect, while others comment that everything is normal in the normal process. On the other hand, silence in organizations is closely related to organizational culture. In some cultures, silence is the belief that everything is fine, that organizational values are possessed when no one is heard, and that organizational commitment is strong (Cohen 1990, 1305). Organizational silence, which includes punishment imposed by the organization for failing to express them in the face of unfair treatment suffered by the employee (Dyne et al. 2003, 1373). İt is the forcing of the employee to silence as a result of organizational practices and behaviors that offend the employee and reduce the motivation for the work request (Noelle-Neumann 1974, 43; Milliken & Morrison 2003, 1473; Kish-Gephart et al.2009, 163). To the extent the environment allows, employees can reveal and express their discomfort. Based on employee experience, it constitutes the next form of behavior by evaluating the treatment it has received before. If he receives positive feedback from the cat when he informs the higher authorities of the negativity he feels uncomfortable in the organization, he can repeat this behavior. When faced with the opposite treatment, humiliated, battered, subjected to severe punishment, he chooses to remain silent in the name of not making a sound and not being contrary (Çakıcı 2007, 147; Alparslan & Kayalar 2012,136). This situation works in parallel with organizational trust, freedom of expression and the support it will receive (Rhoades & Eisenberger 2002, 698). Organizational silence is the form of behavior that every effort of the employees for the benefit and development of the organization develops as a result of being exposed to unequal behaviors, unfair practices and heavy penalties. (Pinder & Harlos 2001, 332; Çavuşoğlu & Köse 2016, 116).

Silence in organizations, value given to employees, democratic internal functioning, participation, fair salary increase, promotion policies can be indicative (Şehitoğlu & Zehir 2010, 90). Organizational silence is divided into three categories: accepted silence, silence for the benefit of the organization, and silence for defensive purposes. A new sub dimension called Opportunistic silence has been added to these types of silence (Göksel & Güneş 2017, 809; Bayram et al. 2017, 425).Organizational silence degrades organizational commitment and employee performance. It has been determined by the studies that it prevents the achievement of organizational goals and objectives and the effective and efficient use of resource.

2.2. Emotional Commitment

Emotional attachment is a state of emotional attachment to the other party through an individual's inner impulses. This can be an individual, an item, a phenomenon. Organizational commitment is a form of willing, enthusiastic and highly motivated behavior that employees develop with their organizations in an internal way to achieve goals and goals based on organizational values (Allen & Meyer 1990, 2; Vandenberghe, Bentein & Stinglhamber 2004, 47-71). Individuals voluntarily want to stay in the workplace and make willing efforts to maximize organizational values (Becker 1960, 33; Grusky 1966, 489; Hall, Schneider & Nygren 1970, 176). Good functioning of the justice mechanism, balanced wages and salary increases, inclusion of employees in the decision process and feeling supported constitute conditions that increase emotional commitment (İnce & Gül 2005, 32). Emotional commitment is also closely related to open and functional communication channels of the organization ((Poyraz & Kama 2008, 145; Akca & Yurtçu 2017, 199). When the employee's knowledge, opinion and thoughts are applied and valued, he approaches his organization faithfully and strives to work harder. Balay'(2000, 58) organizational commitment; to come to work on time, to fulfill the tasks and esponsibilities given, to maintain organizational values, to convert organizational resources into effective and efficient output, to be willing to work more, etc. results for the benefit of the organization.

The strong employee, emotionally connected with the organization, takes and accepts the rules to be followed in the organization and is determined to continue with the organization no matter what (Loi, Hang-Yue & Foley 2006, 103). It is able to produce more creative and easy solutions to the problems that arise in this process. They integrate with organizational values, focus on expected and desired outcomes, and have strong confidence in the organization. The fact that organizational commitment is permanent, continuous and widespread among employees is closely related to strategic organizational policies. Organizational commitment has been treated as three subspecies by researchers (Stebbins 1970, 527; Rusbult & Farell 1983, 430; Allen & Meyer 1990, 4). They are emotional, normative, and commitment to carry on.

Emotional commitment; the employee's ownership and internalization of the organization with all its values, wants to stay in the organization in this context ((Clugston 2000, 478; Riketta 2002, 259).

Normative commitment is a form of moral behavior and attitude that it develops as a result of outweighing its organizational duties and responsibilities. In short, it is a strong sense of responsibility that keeps him in the organization.

Commitment to Continued; When the individual leaves the organization or left to make a measurement between the loss and gain for the future whichever is more advantageous makes the choice in that direction. As a result, organizational commitment is a powerful emotional resource for motivating employees to goals and objectives. For this purpose, organizations can reduce the rate of qualified labor turnover by increasing job satisfaction and satisfaction.

2.3. Task Performance

Performance is the realization of goals and objectives in the expected and desired direction. Task performance is that every contribution that the employee adds to the organization's output as a result of duties and responsibilities to the production process leads to a numerical increase (Befort & Hattrup 2003,18). Performance is also the effectiveness of transforming organizational resources into products and services on the basis of quality standards at the appropriate place at the appropriate time (İraz & Akgün 2011, 202; Inuwa 2016, 93). When the values of the organization are internalized by the employee, the skills and abilities that provide competitive advantage are revealed. Strategic organizational policies direct employees to stay in the organization, work with desire and enthusiasm (Şehitoğlu & Zehir 2010, 144). The positive impact of organizational attitudes and behaviors on employees increases task performance.As a result, an increase in organizational values in a positive sense constitutes a prerequisite for the future existence of organizations.In the light of all these studies, we believe that when Organizational Silence increase, emotional commitment decrease and consequently the task performance also decrease.The hypotheses we have developed in line with this assumption;

H1: There is a significant negative relationship between Organizational Silence and Emotional Commitment.

H2: There is a negative relationship between Organizational Silence and Task Performance

H3: There is a positive relationship between Emotional Commitment and Task Performance

H4: Emotional Commitment has an indirect effect on the relationship between Organizational Silence and Task Performance.

As a result of the literature survey, hypotheses and research model are formed as follows;

3. Research Methodology

3.1. Sample and Data Collection

The data were collected through a questionnaire distributed to healthcare workers randomly from nine hospitalsin Turkey between the years of 2018-2019.In this study, face to face interviews were conducted with a total of 507 hospital employees and questionnaire data were used.This study also was conducted on 507 valid questionnaires. Data were analyzed through the SPSS statistical packet program and four proposed relations were tested through Squared Multiple Correlations analyses. The scales used were Organizational Silence, Emotional Commitment and Task Performance.

3.2. Analyses

To measure organizational silence, 27 item-scale was developed in 2003 by Van Dyne, Soonve Botero (2003, 1359-1392). The scale was adopted from Erdoğan's (2011, 159) master's thesis titled Lider The Relationship Between Effective Leadership, Organizational Silence and Performance. Each of the questions in the organization is a 5 Likert-type scale are used to measure organizational silence and contains 27 statements in three dimensions.

Emotional commitment scale developed by Meyer and Allen in 1991 was used in the study. Validity study of the scale Wasti (2007), As a result of the confirmatory factor analysis of the author, each item was found to be a

single factor. The Cronbach's Alpha values for each factors exceeds 0.70 (Akt. Gürbüz & Bekmezci 2012, 189-213). Which indicates the reliability of scales in that survey.

The Business Performance Scale was developed by Goodman and Svyantek (1999). The first 16 expressions of the scale, which includes 25 expressions of 5 Likert type, are for contextual performance and the last 9 are for task performance (Akt. Turunç & Çelik 2010, 183-206). Eight expressions of the scale of the authors were used in the study.

4. Findings

The purpose of this study is to reveal relatıonshıp between emotıonal commıtment task performance and organızatıonal sılence

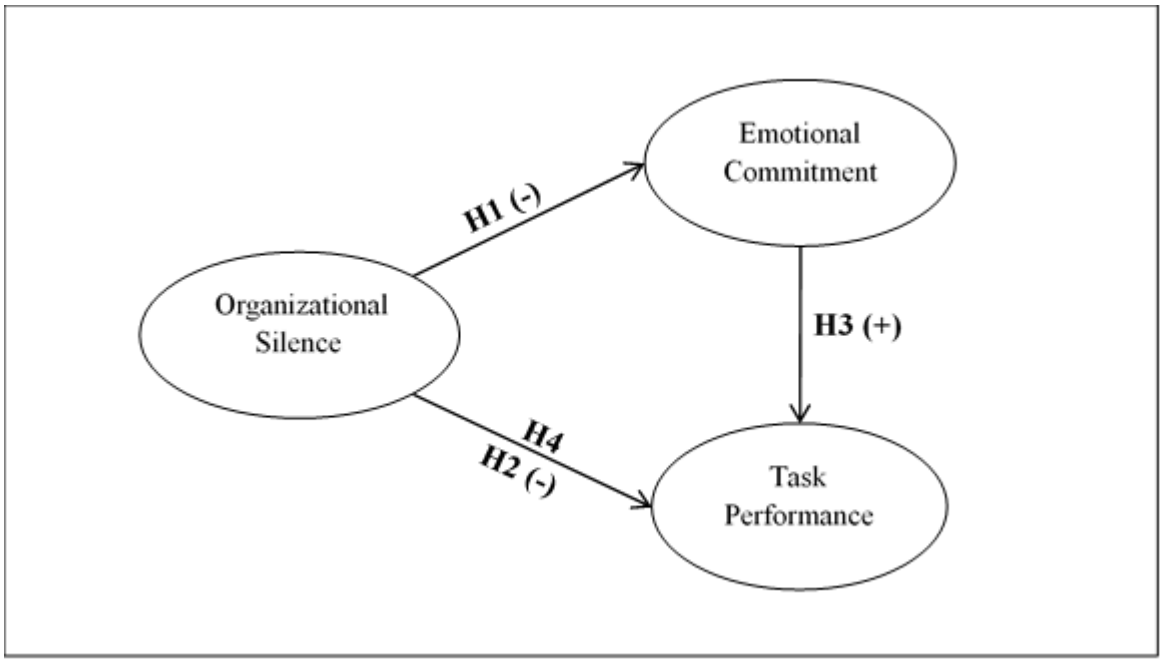


Figure 1. The model of the research

3.2. Research Hypotheses

H1: There is a significant negative relationship between Organizational Silence and Emotional Commitment.

H2: There is a negative relationship between Organizational Silence and Task Performance

H3: There is a positive relationship between Emotional Commitment and Task Performance

H4: Emotional Commitment has an indirect effect on the relationship between Organizational Silence and Task Performance.

Accordingly, the demographic data of the interviewees are given in Table 1.

Table 1. Frequencies of the Respondents

		Frequency		Valid Percent	Cumulative Percent
Educatio n status	Secondary	37	7.3		7.3
	Associate degree	205	40.4		47.7

	License	171	33.7	81.5
	Master's Degree	91	17.9	99.4
	Doctorate	3	.6	100.0
Age	20-30	177	34.9	34.9
	30-40	213	42.0	76.9
	40-50	99	19.5	96.4
	50+	18	3.6	100.0
Gender	Mr	141	27.8	27.8
	Lady	366	72.2	100.0
Year of Service	0-10 Year	254	50.1	50.1
	10-20 Year	173	34.1	84.2
	20 and more	80	15.8	100.0
Working Time in this Institution	0-10 Year	315	62.1	62.1
	10-20 Year	130	25.6	87.8
	20 and more	62	12.2	100.0
Marital status	The married	302	59.6	59.6
	Single	205	40.4	100.0
	Total	507	100.0	100.0

In Table 2, mean, standard deviation and correlation values of the variables included in the analysis are given.The reliability values of the sub-factors are given as the diagonal values of the correlations.When the reliability coefficient values given are examined, Cronbach Alpha, which is the most used value in the reliability measurement of the questions, is examined (Pallant, 2013; Hair vd., 2014) value is greater than 0.70 and the internal consistency of the variables used in the analysis is high.

Table 2. Descriptive statistics of the Variables

Factors	***Mean***	***Std. Deviation***	***1***	***2***	***3***	***4***	***5***
EC	2.944	0.981	(0.897)				
TP	4.117	0.625	.289***	(0.864)			
SDP	3.917	0.832	-.524***	-0.08	(0.900)		
SBO	2.419	1.006	-.121**	.239***	.269***	(0.842)	
AS	3.917	0.832	-.321***	-.106*	.417***	.138**	(0.777)

* p<0.05 **; p<0.01 ***; p<0.001 (2-tailed)

Cronbach's Alpha ( ) is represented in diagonals

Cronbach's Alpha for all items= 0.730

Factor analysis results for the variables given in the analysis are given in Table 3. According to these results, 5 factors such as Emotional Commitment (EC), Task Performance (TP), silence for defensive purposes (SDP), silence for the benefit of the organization (SBO) and accepted silence (AS) were obtained. Some variables were excluded from the analysis due to low factor loads and communalities.

According to the results, the explanatory value of the factors obtained was 69.708%.KMO value of the factor model is over 0.80, The Bartlett Sphericity test is also meaningful, and it appears that the data are appropriate for factor analysis (Tabachnick & Fidell, 2001).

Table 3. Factor Analysis Results	EC	TP	SDP	SBO	AS
D8	0.853				
D5	0.850				
D7	0.848				
D4	0.807				
D3	0.662				
G8		0.819			
G7		0.819			
G4		0.794			
G5		0.769			
G3		0.755			
O13			0.862		
O14			0.837		
O12			0.832		
O15			0.778		
O11			0.677		
O21				0.825	
O22				0.800	
O24				0.799	
O25				0.799	
O2					0.881
O3					0.793
O1					0.762
Eigenvalues	3.655	3.269	3.533	2.759	2.119
% of Variance	16.613	14.860	16.060	12.543	9.632
Notes					
(i) Principal Component Analysis with Varimax Rotation					
(ii) KMO =0,836, Bartlett Test; ***					
(iii) Total Variance Explained (%); 69.708					
* p<0.05 **; p<0.01 ***; p<0.001					

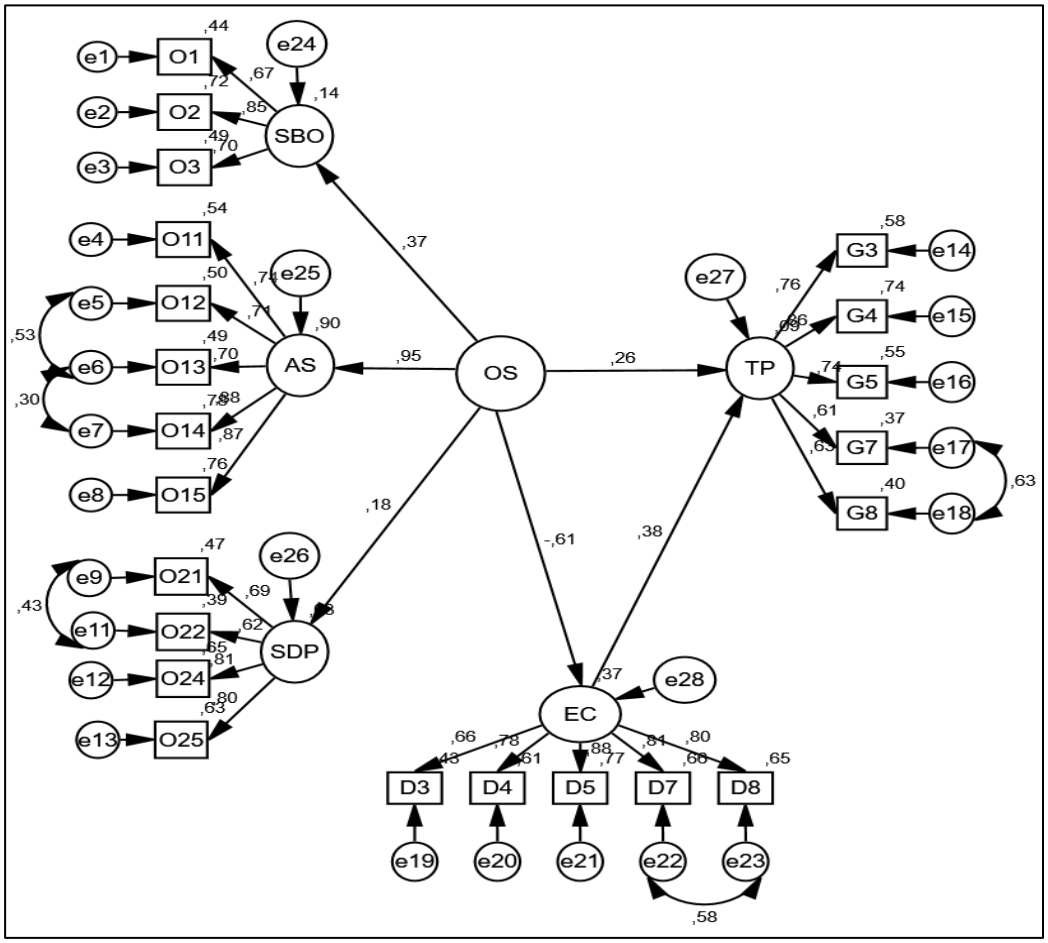
Table 4. Direct and Indirect Effects of Variables

Dependent Variable		**Independent Variable**	**Direct Effect**	**Indirect Effect**
EC	<---	OS	-0,610***	
TP	<---	EC	0,381***	
OYS	<---	OS	0,371***	
KES	<---	OS	0,949***	

SAS	<---	OS	0,183**	
TP	<---	OS	0,260**	-0,233***
$\chi 2/df = 2.143$; GFI=0.931; CFI=0.964; TLI=0.958; RMSEA=0.048				
* p < 0.05, ** p < 0.01,*** p < 0.001				

When the results given in Table 4 are examined, it is seen that the goodness of fit values of the model give excellent fit results (Hayes, 2009; Schermelleh-Engel, Moosbrugger, & Müller, 2003). The direct and indirect relationships given in the model were found to be significant. Accordingly, the total effect of Emotional Commitment on Task Performance was measured as (β = 0.028 ***). Emotional Commitment also has a positive and significant effect on Task Performance (β = 0.381 ***).The effect of Organizational silence on Emotional Commitment was also found to be negative (β = -0.610 ***). The indirect effect size was β = -0.233 ***) and this effect was significant according to the Bootstrap method at 5000 sample level (Preacher & Hayes, 2008). Squared Multiple Correlations values obtained in the model were found to be 0.372 for EC and 0.092 for TP, respectively. According to these results, Organizational silence increases Task Performance and reduces Emotional Commitment.Emotional Commitment enhances Task Performance. In conclusion, H1, H3, H4 were accepted as the hypotheses of our research and our hypothesis H2 was found to be inverse and significant.

Figure 2. Squared Multiple Model for Organizational silence Emotional Commitment and Task Performance



5. Conclusion and Discussions

In this study conducted on the health sector, the relationship between Organizational Silence, Emotional Commitment and Task Performance was tested. The most striking result from the data is that as organizational silence increases, so does task performance. Therefore, H2 (There is a negative relationship between Organizational Silence and Task Performance) Hypothesis is not supported. On the other hand, as organizational silence increases, emotional commitment decreases, H1(There is a negative relationship between Organizational

Silence and Emotional Commitment.), H3(There is a positive relationship between Emotional Commitment and Task Performance.). H4(Emotional Commitment has an indirect effect on the relationship between Organizational Silence and Task Performance.) H4(Emotional Commitment has an indirect effect on the relationship between Organizational Silence and Task Performance.), H1, H3, and H4 are fully supported. These findings are consistent with the literature on organizational silence and emotional commitment. Many studies on organizational silence and emotional commitment have been studied in the literature (Noelle-Neumann 1974, 43; Pinder & Harlos 2001, 332; Milliken &Morrison 2003, 1473;Şehitoğlu & Zehir 2010, 90; Çavuşoğlu & Köse 2016, 116).Emotional commitment and performance studies ((Rusbult & Farell 1983, 430; Allen & Meyer 1990, 2; Vandenberghe, Bentein & Stinglhamber 2004, 47-71).Although H1, H3, H4 hypotheses are supported by literature studies, H2 hypothesis is not supported. However, these studies were performed only with the data obtained from nine hospitals serving the health sector in Turkey. Therefore, these findings may not be transmitted to any organization.Therefore, further studies in different sectors and more countries are recommended to generalize these findings.

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THE WAYS OF MEASURING CORPORATE COMMUNICATION PERFORMANCE IN MAJOR ENTERPRISES

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Abstract

Communication measurement is a useful way to exam where communication works or doesn't work within a company's strategic goals; it helps managers to make smart managerial decisions. A company with effective communication strategy has higher return to shareholders, more motivated and engaged employees, higher value of an intellectual capital created inside the corporation. The goal of the paper is to benchmark contemporary ways of measuring corporate communication management performance and to define what measurement methods are most appropriate for major enterprises. The research subject of this study is communication strategies (methods) for measurement of specific performance of relevant information through management reporting system passing from traditional information technologies approaches to digitalization. This has been done based on the research summary of earlier scientific publications in the field of Change Management and application of value-benefits analysis interviewing middle and top levels of management in major enterprises. As a result, it can be summarized, that (1) measurement strategy is a 'cornerstone' of successful corporate communication; (2) measurement efficiency is only possible, if it is supported by a digital system providing the key qualitative characteristics of information: relevance, reliability, comparability and understandability. Further research approaches could be focused on the measurement of inter-human communications.

Keywords: Corporate communications, measurement, major enterprises, performance

1.Introduction

Communications measurement is a very important tool to secure success and the right direction of corporate communication in organizations. It is a true key aspect to understand what is going on in the corporate organization and to raise the profile of corporate communications as well as the management credibility (Harrison and Wholey, 2011). Usually, managerial communications in major enterprises that have employees' number more than 250 people and hierarchic organizational structures are strongly addicted to the company's workplace and culture. Despite the existence of different studies and practical guidelines, the evidence indicates that many major companies and organizations do not evaluate communication activities. According to Macnamara (2015), research-based measurement and evaluation (M&E) of public relations and corporate communication are still not widely applied despite more than a century of discussion and intense focus since the 1970s (Macnamara, 2015).

There are different aspects of corporate communications research. Each aspect differs with regards to the central location where communication may take place. In other words, different components of the information processing model can be considered individually for measuring objective. At the same time, in the world of "big data" companies face a challenge that they might not have predicted just one year ago. So, regular communication measurement and reporting keep a company's management focused to improve its performance and to make effective managerial decisions.

The subject of this research is communication strategies for measurement of specific performance of relevant information through management reporting system passing from traditional information technologies approaches to digitalization that major companies use for performance management.

The research object are major companies with number of employees more than 250.

The goal of the study is to benchmark contemporary methods of measuring corporate communications and to define what measurement methods are most appropriate for major companies to evaluate corporate communication management performance. In this study the following questions will be examined:

1. How important is corporate communication measurement for organizations?

2. How can corporate communication be measured in organizations?
3. Which of the identified methods is the most appropriate for major enterprises and how important is the support of digital systems?

To receive the answers of these questions the combination of benchmarking and value-benefit-analysis research methods was used. This approach helps to find the most preferable way to measure corporate communication.

2.Literature Review and Theoretical Framework

In the scientific literature different strategies for supporting communication measurement are developed. Most of them are generally connected to digital systems or applications providing reporting functionalities. As this paper is focusing on the measurement of communication, it is necessary, firstly, to have a look on communication management definition.

Communication is a core function of every human organization; so, when you work with communication you are working with the very core of the organization (Botan, 2018). In general, communication is the exchange information between a sender and a receiver. Most important question here is the way of human communication. Technology has changed this completely. It's important for people to take into account every aspect of how they are relying information. This is where communication strategies come into play. Communication strategies are the blueprints for how this information will be delivered and exchanged (Buhmann et al., 2018). What can be measured in this process and how to do it? Why communication measurement and evaluation are important? According to Buhmann and Likey (2018), evaluation is "a cornerstone of successful strategic communication" in any organization. Strategic communication is a term used to denote the higher-level concerns behind communicative efforts by organizations to advance organizational mission (Thorson, 2018).

Communication success bases on the professional management of communication in an organization. Communication management can be described as a process. This process is displayed in the Figure 1.



Figure 01. Communication management process (Porak et al., 2007).

The Figure 01 shows the communication management process in an organization developed by Porak and other researchers (Porak et al., 2007). The process consists of four different steps, starting with the planning of communication aims to decide a fitting strategy. Second is the "organizing" step. Here, actions will be chosen to achieve the defined strategy. Third, "doing" is to implement the chosen actions. After that comes the evaluation/measurement sub-step. This is the point on which this study is concentrated on, combined with the fourth step "controlling". The feedback out of the controlling step is then reprocessed in the "planning" part, which is closing the feedback loop. Effective communications require applying of appropriate measurement strategies. There are several ways to measure or evaluate communication in major enterprises. But before going into them in detail it is important to show that there is a framework in literature and research, which separates evaluation and implementation of communication actions.

The Figure 02 shows that communication actions process developed by Naundorf (2001)] can be separated into two categories and four process units. described as transfer of communication with its two process units' "output" and "outgrowth". The first category can be Output describes the channel where the communication action is published, and outgrowth means the total figure of attainment of the right target group.

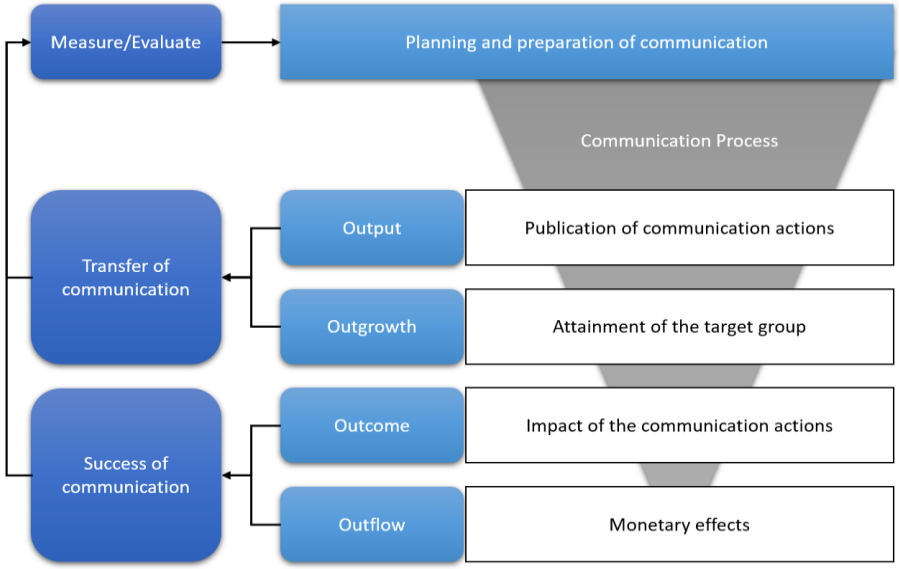


Figure 02. Process of communication actions (Naundorf, 2001).

The second category is displayed as the success of communication. It includes the two process parameters "outcome" and "outflow". Outcome describes the impact of the communication actions which have been chosen as the right strategy. Outflow, as the last process unit, means the total effects on the monetary aspects of an organization (Porak et al., 2007).

In the scientific literature different method of measuring communications in the organizations are described. Analysing different approaches of measurement and evaluation communicative activities, some common principles of building-up the practical tools of measurement were discovered by the researcher from London School of Economics Glen O'Neil (2015); for example: 1) focusing on effect of outcomes over outputs and process, 2) evaluating for continued improvement, 3) showing the link to overall organizational goals (O'Neil, 2015). Based on the literature review, the authors have summarised possible methods of measurement of communication in the Table 01.

Table 01. Practical methods to measure corporate communication (developed by the authors)

Method	Description	Main characteristics	The author(s)
Surveys in combination with a digital Dashboard	For this method, quarterly surveys are done to develop a data basis on the ongoing communication strategies	Digital aid Survey based Visualization	(Harrison & Wholey, 2011)
Big Data based evaluation	This method focuses on different approaches of understanding communication measurement in a new way. The difference in this method is that it is not focusing on 'how the data is analysed'; how the data are reported.	Digital aid Big Data All sources	(Macnamara, 2015)
Surveys with manually evaluation	These methods include all possible survey principles, which can be applied on a target group during communication measurement.	Manual Survey based Personal contact	(Porák et al., 2007)

Website evaluation	Web analytics can be used as communication measurement method as the website is also a very important communication channel, offering opportunities to reach a very high number of target persons.	Digital aid Data based Website	(Harrison & Wholey, 2011)
Social Media evaluation	A new way to evaluate communication, but it is a very effective way, as there are so many people that can be reached via those new channels.	Digital aid Data based Social Media	(Harrison & Wholey, 2011)
E-Mail Newsletter evaluation	Usually used to inform people (mainly customers) about new products and important changes considering a company's terms and conditions.	Digital aid Data based E-Mail	(Harrison & Wholey, 2011)

Based on the literature review the authors make the following conclusions:

1. communication measurement is an excellent way to exam where communication works or doesn't work within an organization's strategic goals and help managers in decision making process;
2. generally, effective management in an organization is only possible if there is a measurement process (analysis) in advance. That is the reason why every management method (here: communication management) will fail without having the right and relevant data (measurement), no matter how good the method is (Von Wecus et al., 2017).

This study is focusing on the measurement part by defining 'what' should be measured and 'how' to enable organizations managing their communication in an effective and efficient way.

3.Research Method

3.1.Research goal

The goal of this research is to benchmark contemporary ways of measuring and valuing corporate management communication and to define what measurement methods are most appropriate for major enterprises to evaluate their communication strategy. This has been done based on the research summary of earlier scientific publications in the field of Change Management. During the process of literature review six possible communication measurement methods were identified by the authors (see Table 1). Empirical research was conducted to find out which communication measuring method is the mostly used by major companies for performance management. This was done by interviewing middle and top levels management representatives in the major enterprises. This survey was conducted in accordance with ethical policies.

3.2.Research design

The data collection was focused on practical approaches of communication measurement methods in the enterprises with number of employees more than 250. Representatives of the following industries participated in this research: (1) manufacture, (2) software and consulting and (3) education. The questionnaire included nine questions considering the industry, work experience and the position of the participants in the company and provided an opportunity to evaluate the quality of information on the following characteristics: comparability, verifiability, timeliness, and understandability of using each from the six identified communication measurement methods. The on-line survey was organized in June 2019 using platform www.surveymonkey.com.

Data analysis was performed using the following analytical tools: benchmarking, value-benefits analysis approach, and criteria of qualitative characteristics of information disclosure according to international standards.

Benchmarking was used to compare different communication measurement methods with each other based on the results of on-line survey. The authors agree to Krishnamoorthy and Lima (2014) who described

benchmarking as an objective management tool to measure and compare qualities of specific aspects, products or services. During benchmarking process, the authors followed the concept developed by Meade (2011) (see Figure 03).

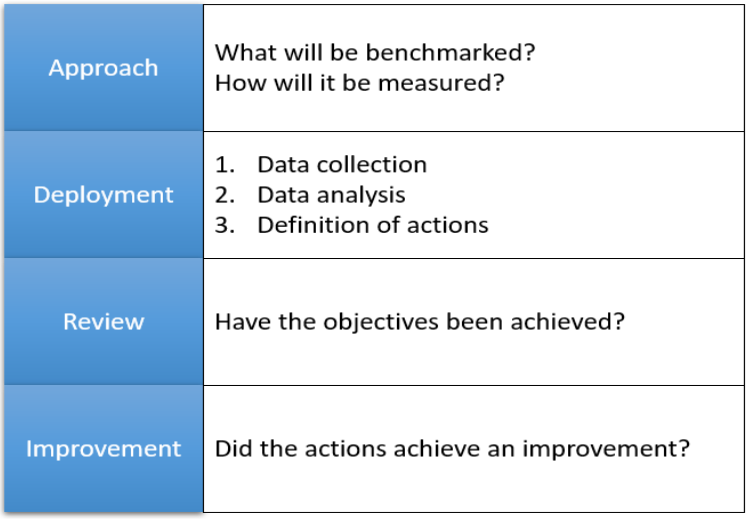


Figure 03: Benchmarking process (Meade, 2011).

Second step, the data collection will be done further via the value-benefit-analysis.

The third part, "Review" will be done during the analytical part of the study, and the last process unit, "Improvement" will be discussed at the end of this paper. The improvement will focus on how companies could use the outcome of this study to achieve more success during their communication measurement as well as to give an advice about which method could be best in any case.

The value-benefit-analysis is a possibility to analyse the value-benefit of a decision or proceeding, which cannot be described via a clear data basis yet. According to Nollke (2012), the usage of this procedure is useful and possible, if from a group of aspects, questions, methods, decisions or problems the best fitting solutions must be selected. Value-benefit-analysis works in five steps, which are described below connecting them directly to this study. They are:

1. Organization of the environment: Define the group of deciders participating at the value-benefit-analysis (Kuhnapfel, 2014). During this study the definition of deciders has been done based on the focus of 21 participants of the three different industries.
2. Definition of the decision problem: Selection of the question that must be answered (Nollke, 2012). The question that must be solved during this study is: How can corporate communication be measured?
3. Selection of the decision alternatives: To apply the value-benefit-analysis, it is important to have some different decision alternatives (Kuhnapfel, 2014). Here, the alternatives are based on the different methods of communication measurement, which were described during the "Literature Review".
4. Collection of decision criteria: During this research this has been done based on classical approach of the value-benefit-analysis, bringing up a score from one to ten for each parameter. The parameters will be set based on International Financial Reporting Standards, IFRS. The parameters or qualitative characteristics of information are: (1) Comparability – Comparability also represents the quality of information that enables organizations to identify similarities between sets of economic problems; (2) Verifiability – Also reliability that the data which is evaluated also represents truly the right economic problem; (3) Timeliness – Timeliness means that the information which will be provided to the decision makers must be as up to date as possible; and (4) Understandability – Data must be understandable for everyone (IFRS.org, 2018).
5. Calculation of weight average score for each parameter using Excel program.

4.Findings

The following research results have been observed in this part of the study. Research participants were 21 respondents representing the three leading industries in Germany: manufacture (3 persons), software &

consulting (7 persons), and education (11 persons). Distribution of respondents according to work experience and position in the company are shown in the Table 02 and Table 03.

Table 02. Data basis II. - Work experience

0-10 years	11-20 years	>20 years
13	4	4

Table 03. Data basis III. - Positions

Specialist	Leadership Position	C-Level/Top Management
14	5	2

Qualitative characteristics are those attributes that make the information provided in financial reporting useful for its users (Al-dmour et al., 2017). If comprehensive useful information is absent, even managers may not be aware of the true financial situation of the company. The application of the principal qualitative characteristics normally results in financial reporting that give a true and fair presentation.

The results of the survey of the respondents' opinion regarding evaluation of identified six methods of measuring corporate communications management performance are shown in the Table 4. It has been done using methodology described in the relevant part of this paper.

Table 04. The most appropriate methods of measuring corporate communications management performance: assessment of respondents' opinions.

Methods of measuring	Key qualitative characteristics of information				Weighted average score
	Compara-bility	Verifiability	Timeliness	Understan-dability	
1.Surveys in combination with a digital Dashboard	7.7	7.0	7.7	7.1	**7.4**
2. Big Data based evaluation	6.8	6.5	7.4	6.2	**6.4**
3. Surveys with manually evaluation	6.5	6.2	5.4	6.1	6.0
4. Website evaluation	4.6	4.2	5.3	4.6	4.6
5. Social Media evaluation	6.2	5.5	7.3	5.9	6.2
6. E-Mail Newsletter evaluation	4.5	4.0	5.5	4.7	4.7

The data in the Table 04 indicate that the highest rating was given to such measurement methods as surveys in combination with a digital Dashboard and Big Data based evaluation.

5.Conclusion and Discussions

Summing up the outcome of this study based on the research questions which have been developed in the Introduction part, the authors came to the following conclusions:

a) Communication measurement is a key aspect of corporate management system for major organizations.

b) There are several modern ways to measure corporate communication; among them: manual surveys, survey with digital dashboards, Big Data analysis, Social Media analysis, website analysis and e-mail newsletter analysis.

c) The most appropriate method for measuring communication is to use a survey based on a digital dashboard; at the same time, Big Data analysis as well as Social Media analysis could also be successful methods. Whereas the Big Data approach includes the challenge to find relevant data.

As a result, it can be summarized, that (1) communication measurement strategy is a 'cornerstone' of successful corporate communication; (2) measurement efficiency is only possible, if it is supported by a digital system providing the key qualitative characteristics of information: relevance, reliability, comparability and

understandability; (3) communication measurement today is generally connected to digital systems or applications providing preparation of reporting for decision making; (4) All controlling functionalities rely on relevant and reliable data, also the manual surveys. That is why corporate communication measurement performance is so important. Rational analytical approach using digital technologies provides improvement of problem-solving managerial skills of modern managers in order to influence changes inside a business.

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ORGANIZATIONAL DISSENT, ORGANIZATIONAL CULTURE AND COMMUNICATION: A CONCEPTUAL FRAMEWORK

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Abstract

Employee voice behavior has been the subject of many research due to its proactive solutions and contributions to processes and practices in the organization as well as its positive effects on employee behavior. As one of the forms of voice behavior, the concept of organizational dissent also has attracted the attention of scholars in recent years, especially due to providing the opportunities of sharing the employees' dissatisfaction and the problematic issues in the organization. With this regard, the aim of this study is to investigate the effect organizational culture and organizational communication on organizational dissent. In this context, it is argued that high-quality communication and organizational culture allowing employees to share their ideas leads them to freely express controversial issues through the dissent. Especially strong relationship between supervisors and subordinates facilitates the articulated dissent. Besides, in terms of organizational culture, adaptability based organizational culture will utilize from organizational dissent to keep up with rapid changes in the organizational environment. Involvement based culture also supports employees for dissent expression as a result of given importance to employee empowerment, interaction within the organization and increasing the efficiency of the decision-making process. Finally, this model proposal is expected to be beneficial for researchers and practitioners.

Keywords: Organizational dissent, organizational communication, organizational culture

1.Introduction

In recent years, today's organizations need to find creative and permanent solutions to their problems in order to survive in the rapidly changing business world. Particularly, the effectiveness of communication channels within the organization and offering a working environment in which employees can share their ideas, opinions and suggestions enable organizations to produce effective solutions to problems, to improve processes and activities within the organization. This participative work environment also provides "a win-win solution to a central organizational problem—how to satisfy workers' needs while simultaneously achieving organizational objectives" (Strauss, 2006: 778). On the other hand, Morrison and Milliken (2000) revealed that, in case of employees withhold their ideas and concerns about organizational processes, practices and problems, organizations will be less effective decision making, less effective organizational process and poor in error detection whereas employees feel less motivation, less satisfaction, higher stress, and higher turnover intention. With this regard, the open communication channels and paying attention to employee voice overemphasized the field in management literature.

In addition to the positive and contractive feedback, employees also share their ideas about dissatisfaction and the problematic issues are also factors improving the organizations. In this context, organizational dissent, which is one of the forms of employee voice, is an important concept because of its effect on the employee outcomes such as turnover intention (Kassing, Piemonte, Goman, & Mitchell, 2012) Dissent expression as an indicator of work engagement and intention to leave), organizational identification (Kassing, 2000b), employee satisfaction and commitment (Kassing, 1998).

However, it is not as easy for employees to share their opinions criticizing and dissenting their institutions as sharing constructive and developing ideas. Employees may not express their dissenting opinions because of that they will be punished or ignored when they share the problematic issues about the organization (Graham, 1986). In this context, the culture within the organization should be participatory and supportive enough to allow employees to share contradictory issues. In this vein, democratic and participative climate within the organizations also contributes to facilitate the employees' sharing of contradictory ideas about organizations, determine the problems that arise within the organization and to prevent the potential results of these problems (Kassing & Armstrong, 2002). In light of these arguments, the aim of this study is to investigate the effects of

organizational culture and organization communication on the organizational dissent through the proposed research model (See Figure 1).

2.Literature Review and Theoretical Framework

2.1. Organizational Dissent

Organizational dissent is "a particular form of employee voice that involves the expression of disagreement or contradictory opinions about organizational practices and policies" (Kassing 2002: 189) and one of the forms of employee voice including disagreement, dissatisfaction and contradictory views about organizational issues (Kassing, 1997). In the context of organizational dissent, employees share dissatisfaction with three different groups, including colleagues, managers, and people outside of the organization such as families and close friends (Kassing, 1997). In fact, sharing with each group forms the basis of three types of dissent.

Articulated dissent, as one of these forms of organizational dissent, refers to expressing opposing views to the members of the organization as supervisors and managers that may have a power within the organization. Articulated dissent is made directly to management and occurs when employees feel that they will be perceived not as retaliation but as a constructive (Kassing, 1997).

Latent dissent mainly occurs in the case of that employees feel the lack of channels and environment for sharing their opposing ideas and refers to sharing these ideas with colleagues (Kassing, 2000b). Generally, higher risk of retaliation and perceived as an adversarial within the organization lead employees to share contradictory and problematic issues with the ineffective member of organizations such as co-workers (Kassing, 1998).

Displaced dissent is sharing problematic and negative organizational issues with people outside of the organizations such as family members and close friends. Employees dissent these people because of decreasing the risk of adversarial and retaliation (Kassing, 1997). Displaced dissent also corresponds to the neglect and exit side of the Exit-Voice-Loyalty Model. Employees neglect because of sharing dissent with the external audiences instead of effective members of the organization and not having the idea of sharing controversial issues with them and this situation also shows the employees' think of psychological exit (Kassing, 1997).

Besides, there are some factors that determine the employees sharing their opposing views. For example, employees having an internal locus of control tend to express dissent to their managers whereas employees having an external locus of control share their opposing views with the colleagues (Kassing & Avtgis, 2001). Besides, employees having more freedom of speech choose the articulated dissent (Kassing, 2000b) and employees in non-management status share these ideas and issues with their co-workers (Kassing & Armstrong, 2001). Having a high-quality relationship with their managers leads employees to articulated dissent (Kassing, 2000a).

Kassing (1997: 322) proposed a model for explaining the process of organizational dissent including (a) triggering agents, (b) strategy selection influences, (c) strategy selection, and (d) expressing dissent. According to this model, triggering agents leads employees to share their contradictory opinions. Kassing and Armstrong (2002) revealed that fairness and rights of the employees, organizational changes within the organizational activities, decision making process, inefficiency in the work practices and processes, roles and responsibilities within the organization, use and distribution of the organizational resources, unethical decisions and activities, performance evaluation processes and critical things for employees' self or colleagues trigger the dissent (Kassing & Armstrong, 2002).

After the triggering events, employees select the strategies for expressing dissent and make this selection based on individual, relational, and organizational influences (Kassing, 1997). Individual influences include individual factors such as employees' values and behaviors that are decisive in their dissent strategies and refer to ''predispositions and expectations people import from outside their respective organizations, as well as how they behave within the organization'' (Kassing, 1997, p. 324). Relational influences involve ''the types and quality of relationships people maintain within the organization;'' and organizational influences refer to ''how people relate to and perceive organizations'' (Kassing, 1997, p. 324). These influences predictor of the communication way in sharing dissent messages (Goodboy, 2011). Besides, individual, relational, and organizational influences also affect the strategy selection of employees. Especially relational and organizational influences provide cues about how sharing dissent will be perceived within the organization. The possibility that employees' ideas shared in the context of dissent is perceived as constructive feedback or as adversarial by the organization affects

employees' choice of strategy. Finally, employees express dissent as articulated, latent and displaced dissent (Kassing, 1997).

2.2. Organizational Culture and Organizational Dissent

Extending formation of the organizational goals, strategies, and policies; integration of employees around the organizational goals and practicability of determined strategies with frame for the managers, organizational culture is the vital concept for the effectiveness of the organizations in a highly competitive business environment. Defined as "A pattern of shared basic assumptions that the group learned as it solved its problems that have worked well enough to be considered valid and is passed on to new members as the correct way to perceive, think, and feel in relation to those problems" (Schein, 1992, 18), organizational culture is composed of shared values, norms, artifacts and behaviors (Homburg, & Pflesser, 2000).

A variety of researches (e.g. Deal & Kennedy, 1982; Hofstede et al. 1990; Quinn & Cameron, 2011) underscored organizational culture and enlarged different classification model with aim of illuminating the organizational culture concept. In this study, Denison's organizational culture model has been predicated on the revision of organizational culture because of fast and easy implementation, designing within the business environment, practicability to all business level, using business professional languages, being a behavioral-based and linking culture with organizational outcomes (Denison and Neale, 1996). Denison's organizational culture model measures four traits and twelve sub-factor with a 60 item scale on the basis of two major dimensions which are flexibility- stability and external- internal focus. These two dimensions constitute four traits as involvement, consistency, adaptability, and mission.

Adaptability is the ability of firms to keep up with changes in the organizational environment thanks to the organizational activities and strengths. Organizations having a higher ability to adapt the environmental changes perceive and respond quickly to the environmental expectations. At the same time, these organizations have the ability to learn from their failures, anticipation of the changes being occurred in the future and realize the needs of customers in advance. In brief, adaptability consists of creating a chance, customer focus and organizational learning sub-factors.

Involvement emphasizes empowerment, team orientation, and capability development as a critical success factor for today's businesses. Organizational culture providing the ability to take responsibilities about their works, an opportunity of teamwork facilitating the interaction of workforce and increasing the efficiency of the decision-making process, improving the skills of employees through work-related training has accompanied competitive advantage for the organizations.

Consistency refers to the existence of values and systems adopting by the organizational members. Internalized values and successful organizational systems derive the coordination and integration and so overcome an unpredicted situation and changes or risks in the external environment without affecting the ordinary activities of the firms. To fulfil the conditions necessary for the consistency organizations should create values representing the all characteristics attached importance, have an agreement especially in the solution of contradictory and critical issues and have coordination and integration among different business units without considering organizational boundaries. In conclusion core values, agreement, coordination, and integration are sub-factors clarifying the consistency (Denison, Janovics, Young & Cho, 2006).

Mission refers to the development of vision, long term goals, and strategic plans and provides directions and bases to organizations and employees in their organizational activities. Having strong and internalized mission facilitate to reach long term goals with the role of guidelines for current activities. Mission traits embrace strategic direction, vision, goal, and objectives (Akdogan & Mirap, 2008).

Besides organizational structure and climate, organizational culture is the determinant of dissent behavior. Having an organizational culture encouraging the dialogue, dissent and open communication about contradictory or unethical activities, norms and policies have been considered as a significant point for the success of the organizational decision-making process (Gottlieb & Sanzgiri, 1996). Culture provides basis for employees about the degree of tolerance their organizations for dissent behavior. As long as the tolerance level of the organizations is high to dissent, employees tend to share their dissent messages with managers referring to articulated dissent (Kassing, 1998; Kassing, 2000). Latent dissent behavior has been occurred nominately in organizational culture ruling out the employees' input (Kassing, 2008).

Factors related to organizational culture are the predictor of the dissent. Empowered employees especially in expressing their opinions incline to show more articulated dissent while empowered employees through enlarging the scope of their jobs and tasks show a tendency of more displaced dissent (Kassing, 1997). On the other hand, organizational dissent may occur with a higher level of involvement due to confronted with too much organizational subjects and circumstances (Kassing, 1997). Fairness in the organizational activities also has an impact on the way of the dissent behavior (Goodboy, Chory & Dunleavy, 2008). Thus consistent with previous findings, we suppose that:

P1: There is a significant relationship between organizational culture and organizational dissent

2.3. Organizational Communication and Organizational Dissent

Organizational communication is defined as "the degree to which information is transmitted among the members of an organization" (Price, 1997; p.349). In this regard, communication types encountered within the organization can be categorized as formal (vertical, horizontal and crosswise/diagonal communication) and informal communication (Dubrin, 1997). Of all these communication types, formal communication indicates official interaction in internal and external business environments on the basis of rules and procedures while informal communication is information sharing among informal groups inside of the organization without organizational regulation. This type of communication has been classified into vertical, horizontal and crosswise communication. Briefly, vertical communication is the information flow between superiors and subordinates while horizontal communication refers to the transmission of information among people in the same managerial level of the organizations and crosswise communication refers to interaction among persons in different levels of the organization who has no responsibility of reporting directly (Price, 1997).

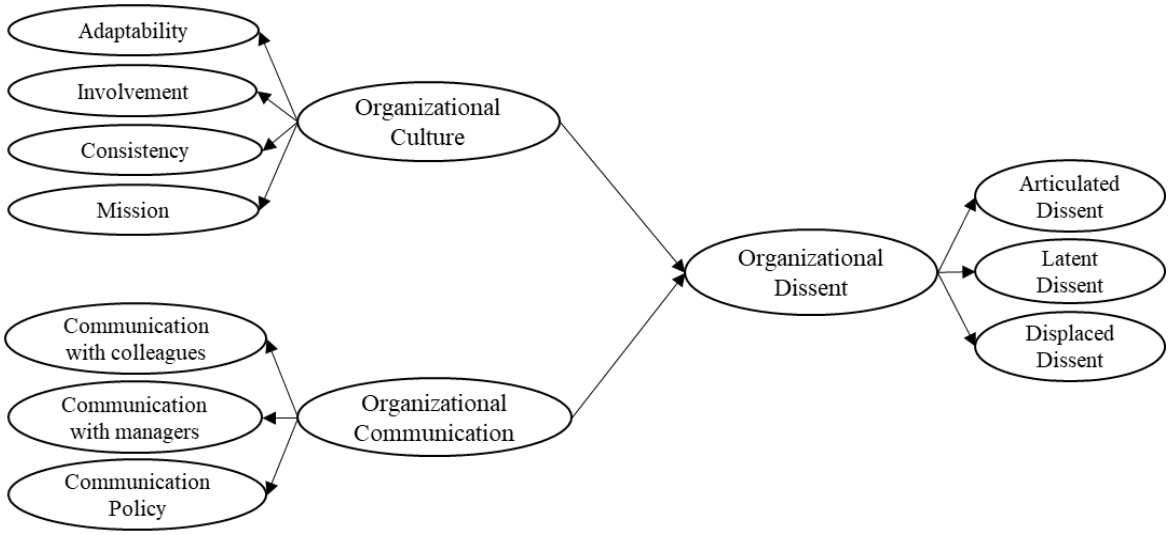
By virtues of, effective coordination among departments, providing information necessary for the decision-making process and facilitating the emanation of these decisions with employees; organizational communication puts forward a critical way of achieving organizational goals. Therefore, organizations should consider cultural differences and feedbacks of the employees, develop mutual communication flow, coincide in terms of activities and the communication messages, use direct and positive wording and constructive communication climate for effective communication (Bolarinwa & Olorunfemi, 2009; Dubrin, 1997). In brief, organizational communication has accentuated the transmission of information among different departments and members of the organizations for organizational success through participative decision-making process and transparency accompanied by interaction and coordination in the organizations.

On the other hand, organizational dissent is to expressing disagreement, problems about activities, technics or policies easily and provide feedback and basis to improve the perspective of the managers rather than antagonizing to all processes and decisions. At this point, effective communication between employees and managers may diminish the destructive side of dissent behavior.

Attaching particular importance to open communication strategy and opinion of the employees have extricated the articulated dissent behavior especially through strong supervisor-subordinate relationship while displaced dissent behavior has occurred because of avoiding the communication to prevent perception of being opponent and in the event of lower quality relationship (Kassing, 1997; Kassing & Avtgis, 1999; Kassing, 2000). Findings of the study revealed that out-group members generally use email in comparison with the middle-group for transmitting their articulated dissent messages whereas in-group use face-to-face articulated dissent (Turnage & Goodboy, 2016).

By means of communication climate predicating on freedom of speech in workplace employees have enhanced the organizational identification and articulated dissent strategies in terms of being an indicator of the participative decision making and regarding the employees' feedbacks (Kassing, 2000b; Kassing 2006). On the other hand, of all dimensions of aggressive communication, higher argumentativeness and lower verbal aggressiveness have canalized employees to articulated dissent. In line with the proposed relationships mentioned above, the following proposal are developed:

P2: There is a significant relationship between organizational communication and organizational dissent.



[Fig 01. Proposed Research Model]

3. Conclusion and Discussions

The traditional organizations, where bottom-up communication is generally closed and contain some obstacles for subordinates to communicate with their managers, have left it to modern institutions that support employees' participation to corporate processes and decisions as well as open communication policy in line with the changes and developments in the business world. Particularly, employees' ideas about problems and mistakes in organizational processes and their dissatisfaction have made it possible for organizations to avoid many problems and act proactively. Most of these organizations are aware of the fact that they need to benefit not only from the performance and productivity of their human capital but also from their ideas and opinions. For this purpose, organizations arrange both their communication policies and organizational culture within the organization in a way that employees can share their ideas freely.

Organizational culture enlightens employees about whether their organizations' tolerance for the employee dissent (Kassing, 2000b). Concordantly, employees who perceive their organization as more tolerant of dissent tend to share their articulated dissent (Kassing, 1998). Additionally, bureaucracy based organizational culture also affects the employees' expression of dissent (King, 1999). With this regard, creating democratic and participative organizational culture creates the perception that organizations give importance to both positive and negative employees' ideas.

Besides, the quality of employees' communication with their managers and colleagues, communication policy allowing employees to share their dissent. Especially, employees who perceive that they have comparatively higher-quality relationships with their supervisors are likely to direct dissent to their supervisors, whereas those who perceive that they have comparatively low-quality relationships with their supervisors' report dissenting more readily to co-workers (Kassing, 2000a). In this vein, sharing the issues that are the subject of dissent with individuals such as managers who can be effective in solving problems and informing the organizations about the situation will facilitate taking corrective and proactive action.

In light of these evaluations, the effect of organizational culture and organizational communication on the organizational dissent has been discussed within the scope of the current study and a conceptual research model has been proposed. Statistical testing of the proposed model is expected to contribute to the literature. Additionally, because of reducing the potential risk of expressing their contradictory ideas, employees working within the organization which has a low tolerance to dissent messages may choose an external communication channel. In this regard, future studies should explore the dissent messages in the social networking site and online communication channel. In addition, it will be useful to examine the effect of employee dissent behavior on employee behaviors such as burnout, deviant behaviors and work alienation especially in case of displaced and latent dissent behavior.

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LITERATURE REVIEW AND MODEL PROPOSITION: THE RELATIONSHIP BETWEEN INTER-ORGANISATIONAL LEARNING AND INNOVATION

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Abstract

Despite the growth of the literature on organisational learning and innovation especially in the last 30 years, theorising and further empirical studies are still needed to better understand the mechanisms of the inter-organisational learning, as well as its connection to innovation. Inter-organisational learning leads to performance and innovation primacy for the organisations by providing knowledge advantage to the recipient firms in the inter-firm collaborations, which can take numerous forms. This study contains a systematic literature review and synthesis on the various perspectives, and provides the connection and mechanisms of inter-organisational learning and innovation with a theoretical model, and presents suggestions for further research.

Keywords: Inter-organisational learning, inter-organisational knowledge transfer, exploitation, exploration, innovation, innovation types

1.Introduction

Organisational learning (OL) was first coined by Cyert and March (1963) according to the research undertaken by Easterby-Smith and Lyles (2011). Despite the vast literature on OL, OL and knowledge transfer are still described as fields in progress – theory development remaining as a challenge (Easterby-Smith, Lyles and Tsang, 2008; Crossan, Mauer, & White, 2011). The reason is the diversity of perspectives, dispersed focus in theory development and empirical studies, and the need for further research as to the actual learning taking place in organisations. Inter-organisational learning (IOL) involving at least two organisations is a concept that followed the OL literature, with the alliances and network relations gaining momentum. IOL having slightly different network related antecedents, is related to firm performance and innovation, hence is an important topic which has gained research attention especially in the last 30 years.

This study provides a systematic literature review in order to highlight the previous theoretical and empirical studies concerning IOL and innovation, to determine the mostly studied themes, and industries, to highlight the areas of convergence and divergence between the view points, and to provide the reader with ideas related to further research as well as practical implications. The contribution of the study will be in providing a summary and synthesis on the very diverse studies on IOL and Innovation. In addition, this paper also provides the main theoretical approaches on OL, IOL, and Innovation concepts.

The paper is organised into 5 sections. Conceptual Background follows the Introduction section, and provides a solid theoretical background for Organisational Learning, Inter-organisational Learning and Innovation based on the main selected articles in the related subjects. The third section provides a big picture in the form of a combined model of relations between IOL and innovation with antecedents, moderators and mediators. The fourth section includes findings and the last one conclusions and suggestions for future research.

2.Literature Review and Theoretical Framework

2.1. Inter-organisational Learning

Levitt and March (1988) define OL as "encoding inferences from history into routines that guide behavior". Learning at the organisational level is a joint process leading to a change in behaviour and (in some cases) cognition of the organisation (March, 1981). OL refers to the studies aimed at understanding and criticising the processes concerning how organisations learn (Easterby-Smith and Lyles, 2011) and therefore has a descriptive nature (Vera, Crossan and Apaydin, 2011). On the other hand, learning organisations, popularised by Senge

(1990) refers to the characteristics of the entity, specifically, "a place where people continually expand their capacity of creating results they really want, where patterns of thinking are broadened and nurtured, where collective aspiration is free and where people are continually learning to learn". Learning organisation studies are of a prescriptive nature as they emphasize how an organisation should learn (Vera et al., 2011).

OL is studied with two separate lenses of intra-organisational learning and IOL. Intra-organisational learning processes are based on the exploitation (making incremental improvements by using the present knowledge, by building on and improving the benefits from the current knowledge) while IOL processes use exploration (creating a range of experiments, and new experiences – what Mintzberg et al. (1998) refer to as "play"). An organisation cannot sustain its competitive advantage by only fine-tuning and exploiting what is already present and embedded in routines, it needs to inject newness to be able to recharge itself, and adapt to the changing environmental conditions. In order to derive a complete picture of the organisational learning, a dynamic synthesis of intra- and inter-organisational learning is needed as they are, in fact, inter-tangled (Holmqvist, 2003). According to Larsson et al (1998), learning synergy or interaction effect are the factors that distinguish IOL from OL.

Bapuji and Crossan (2004) define IOL as a more relevant learning due to the interaction in inter-firm relationships (such as strategic alliances and joint ventures) compared to other forms of organisational learning. IOL is referred with various terminologies, such as dyadic learning (Jia and Lamming, 2013), inter-firm learning (Mohr & Sengupta, 2002), inter-partner learning (Hamel, 1991), alliance learning (Kale & Singh, 2007), network of learning (Powell, Koput and Smith-Doerr, 1996) and relationship learning especially in marketing literature (Jean, Sinkovics, and Kim, 2010).

2.2. Innovation

The traditional school approaches to innovation from two different perspectives. The deterministic point of view defines innovation exogenously as an inevitable result of a special combination of demographic, economic, and cultural changes. According to the contrasting view by the individualistic school, innovations are made by gifted people and in most of the cases when the serendipity helps them. This is partly endogenous due to the interference of serendipity. Schumpeter focused initially on the concept of innovation from the individualistic perspective and defined an entrepreneur as the person who brings new solutions to the current problems. Later, he enlarged the innovation capability from being an individual task to be a cooperative task recognising the fertile influence of interaction between people (Trott, 2017).

Innovation theory followed the road indicated in Christensen (2006) and transformed itself from being descriptive to the normative. The normative approaches started with two complementary perspectives as Resource Based View (RBV) and market-based view. The market-based view concentrates on market conditions and locates innovative characteristics of the company as its understanding of those market environment, identification of market forces (Porter, 1985), opportunities, and threats. RBV, on the other hand, concentrates on the organisation`s own tangible and intangible resources and specifically indicates that the innovation is the result of deliberate use of valuable, rare and non-imitable resources (Barney, 1991) such as knowledge, skills, and core capabilities (Prahalad & Hamel, 1990). Hence, innovation began to its journey as attributed to serendipity (Trott, 2017), continued as the creativity of a single person, then was considered as a capability of an organisation, and finally became an artifact of a group of organisations or a network. The complexity of the innovation grows as its context and content extends, the number of acting elements increases, and the interacting environment changes faster.

Beyond the nature types and dosage also matter. As for the types, Kilic et al. (2015) claim that product and process innovations are most frequently encountered innovation types, furthermore marketing and organisational innovations are appended to this category in the OECD Oslo Manual (2005). The product innovation is further differentiated into two types as radical product innovation and incremental one. Gunday et al. (2011) underlines that firms concentrating on product innovations strive for quality and flexibility; whereas those concentrated on process innovations targets cost decrease. A marketing innovation on the other hand, is set by the application of new marketing methods to create a significantly different product mix and an organizational innovation is identified by the application of new business models, practices and organisational designs. As for the dosage, Clayton, Christensen and Raynor (2003) stress the difference between 'disruptive innovations' and 'sustaining innovations' (Clayton et al., 2003). Incremental innovation is a result of a deliberate "design research strategy" or it is achieved through a "series of mutual adaptations" by the parties involved. In contrast, radical innovation

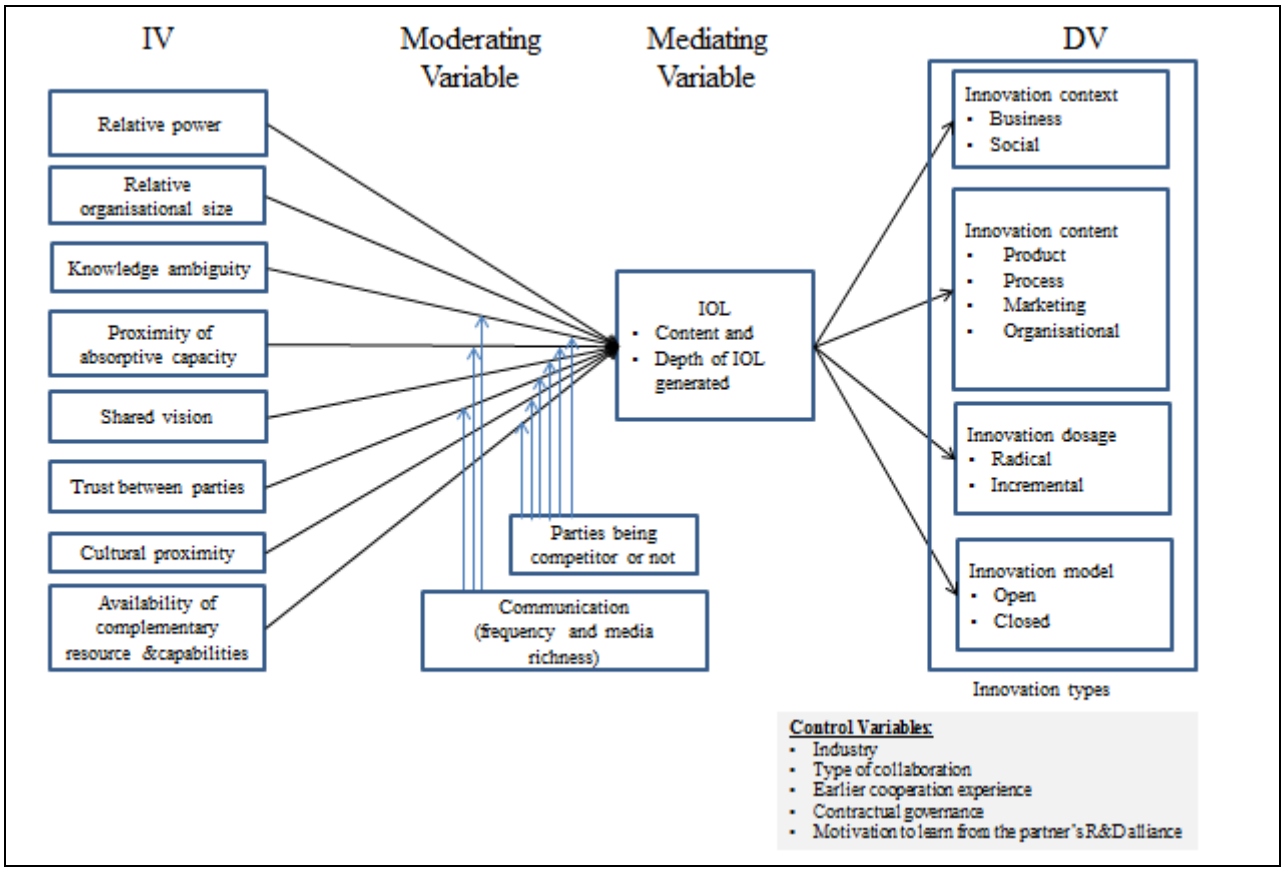
always needs a new technology or a different interpretation of the old technology. Incremental innovation is interpreted as climbing a hill by Norman and Verganti (2014). This is a well-known innovation dilemma; the continuous innovation may deteriorate the chance of bigger innovations. Dynamic capabilities on the other hand are abilities ensuring three requirements simultaneously: identification and assessment of an opportunity, mobilization of resources to address an opportunity and continuous renewal, and reconfiguration to keep track with the change in the environment (Cohen & Levinthal, 1990).

3. Research Method

Innovation is at the same time an organizational capacity and a market performance for organizations to sustain competitive superiority. In order to make continuous innovations, the firms are forced to dynamically monitor all changes in the marketplace and in relevant technologies and provide immediate responses to the market needs (Bekiroğlu, Erdil, Alpkan, 2011). Similarly as competitive power necessitates innovativeness, innovativeness necessitates in turn cooperation (Erdil, Alpkan, Biber, 2004). In this concern, cooperation among organizations in monitoring, learning and developing joint and appropriate responses to the changes may strengthen and sustain their competitive power.

Recent studies on learning uncover different parts and mechanisms of the effects of IOL on innovation. For instance, Manuj, Omar and Yazdanparast (2013) suggest that IOL can be used to develop capabilities such as innovation and flexibility contributing to a firm's competitive advantage. Liu (2015) proposes a conceptual model in which learning proceeds through knowledge transfer consisting of dialogue, articulation and experience mechanisms and knowledge cross-transformation consisting of articulation and pollination mechanisms. The second layer of the model introduces relation of knowledge transfer and knowledge cross-transformation to the product development speed. His empirical tests in R&D alliances supports the relation between cross transformation of the knowledge and product development speed but the relation between knowledge transfer and product development speed can only be supported within the mediation of cross transformation of the knowledge. A longitudinal study, again, on the alliances is undertaken by Bouncken et al (2015), who investigate if the pioneer or follower strategy improves the innovation performance of an SME. The researchers conduct a longitudinal study on a sample of 169 established SMEs from the packaging technology industry in Germany, and find strong support that the pioneer strategy improves SMEs' innovation performance.

Based on the review of theoretical models and empirical studies, a comprehensive model is formed to combine, and demonstrate the relationships between IOL and innovation. The context of the model is a dyadic relationship between two organisations, where they jointly create IOL leading to innovation.



[Fig 01. Model of joint innovation through IOL in a dyadic relationship]

3.1. Antecedents of IOL

IOL is at the centre of our proposed model as the mediator between its antecedents and innovation related consequences. One of the antecedents of IOL is the type of knowledge ambiguity accommodating knowledge characteristics such as knowledge specificity, tacitness, and complexity. Knowledge ambiguity has a negative impact on OL, as the parties may not be willing to exchange tacit, specific and complex information with others due to the underlying competitive power of this knowledge (Van Wijk et al., 2008). As another one, power asymmetry is studied by Hao and Feng (2018) on 205 high-technology firms in China to investigate how the large alliance partner makes an impact on the exploration and exploitation of small one through power, and confirm that perceived power imbalance can positively influence OL if and when exercised in the right manner. Therefore, we propose to include the relative power of parties in a dyadic relationship. The operationalisation can be through the use of "position-driven power" and "capability-driven power" of two parties by proportioning them against one another. We suggest also that relative organisational size as another independent variable impacting IOL. While organisational size is a mostly studied variable in absorptive capacity studies, producing mix results, the study by Van Wijk et al. (2008) confirms the positive influence of organisational size on knowledge transfer.

Proposition 1: The relative power of parties in a dyadic relationship influences IOL (content and depth), which then influences the type of innovation (innovation context, innovation content, innovation dosage, and innovation model). Close relative power has a positive relationship on IOL.

Proposition 2: The relative organisational size of the parties in a dyadic relationship influences IOL (content and depth), which then influences the type of innovation (innovation context, innovation content, innovation dosage, and innovation model). Close relative size has a positive relationship on IOL.

Proposition 3: The knowledge ambiguity negatively influences IOL (content and depth), which then influences the type of innovation (innovation context, innovation content, innovation dosage, and innovation model).

Based on Easterby-Smith et al. (2008) and Lane and Lubatkin (1998), absorptive capacity of the donor and recipient is influential on the knowledge transfer. In that regard, and also in parallel to the findings by Van Wijk et al. (2008), we include the absorptive capacity as an antecedent for IOL. We also suggest to operationalise it a bit differently than the previous studies, by taking into account the proximity of the absorptive capacities of the two organisations, rather than separate absolute absorptive capacities.

Proposition 4: The proximity of absorptive capacity of the parties in a dyadic relationship positively influences IOL (content and depth), which then influences the type of innovation (innovation context, innovation content, innovation dosage, and innovation model).

RBV states that the valuable tangible and especially intangible resources that are rare, difficult to copy and difficult to substitute can be the sources of competitive advantage (Barney, 1991). One of the reasons for mergers, acquisitions and strategic alliances is to get access to such valuable resources. The value-added from the resource complementarity is studied and confirmed by a study by Harrison, Hitt, Hoskisson and Ireland (1991). The study demonstrates that (the access to) complementary, rather than similar resources are related with better firm performance in acquisitions. The authors underline, in their 2001 article, the importance of the effective integration and management of these complementary resources in the alliances (Harrison, Hitt, Hoskisson and Ireland, 2001). The parties in the dyad can combine technical and non-technical complementary resources to enjoy the synergetic benefits. As for the soft factors, shared vision, cultural proximity and trust between the two parties (common expectations about the dyadic relationship) can be other important drivers (e.g. Senge, 1990; Van Wijk et al., 2008, Azadegan et al. (2008), Easterby-Smith et al., 2008; Weterings, 2009).

Proposition 5: The shared vision of the parties in a dyadic relationship positively influences IOL (content and depth), which then influences the type of innovation (innovation context, innovation content, innovation dosage, and innovation model).

Proposition 6: The trust between the parties in a dyadic relationship positively influences IOL (content and depth), which then influences the type of innovation (innovation context, innovation content, innovation dosage, and innovation model).

Proposition 7: The cultural proximity of the parties in a dyadic relationship positively influences IOL (content and depth), which then influences the type of innovation (innovation context, innovation content, innovation dosage, and innovation model).

Proposition 8: The availability of complementary resource and capabilities of the parties in a dyadic relationship positively influences IOL (content and depth), which then influences the type of innovation (innovation context, innovation content, innovation dosage, and innovation model).

3.2.Moderators

Media richness is the variety of the channels and mediums of communication that impact the interpretation of knowledge (Daft & Lengel, 1986; Steensma, 1996). Badir and O'Connor (2015) propose that communication (frequency and media richness) influence the strength of ties for a strategic alliance. We model the communication as a moderating variable between the above independent variables and IOL. We also include the impact of the parties being competitors or not in a dyad as this can directly moderate the relationship of trust, availability of complementary resources and capabilities, knowledge ambiguity, proximity of absorptive capacity, and cultural proximity with the IOL. Having a competitive or cooperative relation leads to different sides of balance in exploration – exploitation dyad. Martinez-Noya, & Garcia-Canal (2016) argue that contracting to the same suppliers with competitors enhance the innovative power of the company in case of IOL that is neither tacit nor firm specific. Leung et al (2019) identifies both cooperative and competitive practices on industry peer networks during vicarious learning process. As another example from the literature survey, Feller, Parhankangas and Smeds (2009) demonstrate that IOL is a function of inter-partner competition, knowledge complementarity, trust, and the use of various knowledge transfer mechanisms. The relationship characteristics moderate the relationship between the use of various knowledge transfer mechanisms and IOL.

Proposition 9: The relationship between knowledge ambiguity and IOL is moderated by communication characteristics (frequency and media richness).

Proposition 10: The relationship between proximity of absorptive capacity and IOL is moderated by communication characteristics (frequency and media richness).

Proposition 11: The relationship between trust between the parties and IOL is moderated by communication characteristics (frequency and media richness).

Proposition 12: The relationship between knowledge ambiguity and IOL is moderated by the parties being competitors.

Proposition 13: The relationship between proximity of absorptive capacity and IOL is moderated by the parties being competitors.

Proposition 14: The relationship between shared vision and IOL is moderated by the parties being competitors.

Proposition 15: The relationship between trust between parties and IOL is moderated by the parties being competitors.

Proposition 16: The relationship between cultural proximity of the parties and IOL is moderated by the parties being competitors.

Proposition 17: The relationship between the availability of complementary resources and capabilities and IOL is moderated by the parties being competitors.

3.3. Outcomes

As a contribution to the reviewed literature, various types of innovation with differentiating factors of context, content, dosage and model are introduced into the picture to discover the impact of IOL on innovation for a thorough understanding. Business innovation is a more frequently studied type, whereas social innovation is a new and less frequently touched research area. Social innovation brings generally big changes into the society consisting of different stakeholders thus collaboration and IOL are indispensable constituents (White, 2014). Relation of IOL to business innovation is more or less identified under different conditions within the scope of the literature survey whereas its relation to the social innovation is yet to be discovered.

Product and process innovations are described as the dependent variables in various articles reached in our literature survey (e.g. Azadegan et al, 2008; Manuj, Omar and Yazdanparast, 2013; Ribeiro-Soriano, Benavides-Espinosa, and Mohedano-Suanes, 2013). Marketing and organisational innovations are appended to complete the content categorisation (OECD Oslo Manual, 2005; Kilic et al., 2015). In the OECD Oslo Manual (2005) the product innovation is further differentiated into two categories as radical product innovation and incremental one (Kilic et al., 2015). Bouncken, Fredrich, Rital, and Kraus (2018) point out the relation of incremental and radical innovation dosage on product innovation. They analyse the relationship of coopetitive environment with new product development, and conclude that during the radical innovation processes, firms should critically manage risk and tension in case of exchanging knowledge with their competitors. However in all steps of incremental innovation, coopetitive collaboration is easier and more productive. More complex relations are mentioned between the radicality and incrementality of innovation and the effect of IOL in this process. Four business model innovation types introduced by Taran et al. (2015) are positioned on three dimensions as: radicality, reach and complexity. Therefore, those types of innovation are directly affected by the building blocks: network openness, core competencies and value chain architecture.

Prange and Schlegelmilch, (2016) introduce the number of innovation types on a continuum of exploration and exploitation (March, 1991) and a specific balance point for a firm is defined as strategic inflection points (SIP). Companies dealing with a single type of innovation and those dealing with multiple type of innovation may need different types of IOL antecedents and moderators to increase performance. Exploration and exploitation performance is found to be related to the institutional environment such as national culture (collectivism, power distance, uncertainty avoidance) and social welfare (level and equilibrium) (Mueller, Rosenbusch & Bausch, 2013). Partanen et al. (2014) state that expansion to autonomous versus systematic dimension seems to bring a second-degree complication on incremental vs radical innovation types with a variation in IOL requirements. Firms with systemic innovations would require more resource commitment and adaptations from their network relationships during the varying steps than those with autonomous innovations.

The last categorisation introduced into the picture is the innovation model identified as open and closed. Open innovation reflects network model of innovation in relation with IOL build through the communication among competitors, supplier partnerships, distributors, customers, strategic alliances, and other liaisons (Berkhout et al,

2010) whereas closed innovation is built within in the limited audience. As a result, we believe that integrating the various innovation types such as context, content, dosage and model, when evaluating the relationship of IOL and innovation helps to fill a gap in the operationalization of innovation and lets the researcher uncover this relationship better. Introduction of various innovation types into the model as dependent variables, and formation of the relationship of the independent variables with those specific innovation variables through the moderating and mediating variables would improve model's predictive performance.

4. Findings

The general focus of reviewed studies is especially on routines and rules about the learning environment, and the types and mechanisms of relationship amongst the actors to increase the joint learning effectiveness. Practitioners are advised to intentionally and explicitly design and manage those inter-organisational elements based on the mutual benefit of the network members:

- Joint activities, interactions, proximity, communication technology and human resources allocation (Eiriz, Goncalves and Areias, 2017),
- Company's network capabilities to handle and exploit network relationship required by the ultimate goal, short term market relation or long-term partnership (Rajala, 2018),
- Social capital practices such as the entrepreneurial imperatives and problem-solving, informal gatherings, consensus development camps, yellow page databases for external referrals and others (Fang, Tsai and Lin, 2010),
- Partner fit in vertical alliances, preference of partners with entrepreneurial orientation for joint product innovation (Bouncken et al, 2016),
- Finding a balance between the accumulation and retrieval of technological knowledge to further learning in research and development alliances (Ernst, Lichtenthaler, and Vogt, 2011)
- Management of innovation by modularization of design components (Grunwald, 2007),
- Application of benefit sharing schemes (Kim, 2006),
- Managing power relations and competitive tensions in alliances (Gogan, Gelinas and Rao, 2007),
- Outsourcing standardized services to specialized supplier without fears of knowledge leakage (Martinez Noya and Garcia-Canal, 2016).

5. Conclusion and Discussions

The important take-outs for practitioners in the systematic literature review are on trust, power asymmetries, stability of alliances and capability development. Trust between parties may lead to open innovation, thus joint platforms for knowledge sharing should be developed between long-term co-operations (e.g. Eiriz et al., 2017; Kim, 2006; Martinez-Noya, & Garcia-Canal, 2016). On the other hand, in asymmetric dyadic inter-firm collaborations, the type and nature of power impacts the type of learning of the smaller organisation. Instead of the general defensive reaction, understanding how the dominant partner uses power, designing proactive interaction mechanisms, and attempting to learn from them is a beneficial strategy (Hao & Feng, 2018). The forces that impact the stability of alliances, "competition versus cooperation", "rigidity versus flexibility", and "short-term orientation versus long-term orientation" vary and shift over time. Project governance type, the participants' ability and willingness to contribute with competitive/complementary knowledge, and the features of Information Technology can impact these tensions (Gogan, Gelinas and Rao, 2007).

As another practical implication, one of the most important watch-outs is the emphasis that should be given to the capability development of firms – a factor that can impact the absorptive capacity, as well as the ability to select the right "teachers" for the student firms in IOL relationships (Lane and Lubatkin, 1998). This is also supported by the study by Operti and Carnabuci (2014), as the authors suggest that even the explicit, codified knowledge gained from the network/IOL can add value to the innovations of an organisation, as they are combined and bundled with the receiving firm's organisational characteristics, resources and capabilities.

Joint exploitation of different parties' resources including human capital may lead to expert transfers from one another, thus strategic human resources management decisions and career plans of critical personnel need to be

done collectively in order to prevent hostile transfers and also to provide enlarged promotion, rotation or outplacement opportunities to the experts in both sides of the relationship. Papers specifically focusing on supply chain suggest that in supply chain collaborations, partner fit is an important issue that can result in successful IOL that support new product development, hence the possibility of learning from each other can be a supplier selection criterion (Azadegan, et al., 2008; Bouncken, et al., 2016). On the other hand, there are a few more specific practical implications in specific innovation cases. Cultural adaptation seems to be the primary advice to the managers of international supply chains due to its causal relationship towards mutual benefits and spill-over rents (Jia and Lamming, 2013).

Due to the lack of detailed empirical studies, we suggest that IOL-Innovation relationship is to be tested also empirically in different settings i.e. cultures, sectors, etc. While doing this, IOL - Innovation relationship can be investigated using case studies or through quantitative studies based on RBV, Institutional Theory, Social Networks, and absorptive capacity literatures with specific reference to IOL. In terms of future research, it can be interesting to study which alliance types creating IOL are related to which types of innovation, and if there is a specific distinction, and if so what can be the leading factors. Another area suggested for future research can be conducted in the networks of organisations with asymmetric power to see the impact of power, and power combinations on the exploration/exploitation outcomes. With the accumulation of empirical studies, IOL's impact on the type, speed, effectiveness and efficiency of innovation can be studied with meta-analyses to derive powerful conclusions for scholars and practitioners.

Based on our literature survey, we can conclude that the innovation concept is not investigated in depth with various dimensions and sub processes, but it is handled rather as a black box consequence of various IOL/OL mechanisms. Therefore, discovery attempts to uncover mediating variables in this complex model of relationships may produce original contributions.

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A PROFILE IDENTIFICATION WEB SERVICE FOR E-LEARNING PLATFORMS

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Abstract

E-Learning environments are constantly evolving, while taking into account two main objectives. The first is to offer a process of knowledge transfer to learners in the most effective way possible, and the second is to keep the learner motivated at all times to continue his studies and not give up. To achieve these objectives, we must offer the most attractive learning environment and styles appropriate to the personality, cognitive level and presentation preference of the learners. The detection of the profile information is done by a static way (by passing tests and filling out questionnaires on personal info) and dynamic way (by capturing behaviour and following the traces of learning, collaboration and communication with other learners, tutors and teachers). Our contribution consists in designing and implementing an independent module as a web service that can be solicited by any Learning Management System (LMS) to provide it with an overview of the learners' profile. This web service, called the Profile Identification Web Service (PIWS), will provide questionnaires for learners to complete and tests designed by specialists in psycho-pedagogy and educational science. The PIWS will return to the LMS, all the parameters that can be used by the LMS to adapt the style and presentation. The choice of a service-oriented architecture is motivated by the advantages it offers in terms of flexibility, agility and ease of reusing web services with any system, even heterogeneous. In order to validate our approach, we developed and tested the PIWS on a remote server. It allows the LMS to identify the profile of each learner.

Keywords: Adaptative e-learning systems, profile identification, service oriented architecture, service based e-learning, web service

1.Introduction

Adaptive learning platforms are being used more and more. they make it possible to adapt the content of the different courses, of the different learning styles to the learners according to their cognitive profile and their capacity for assimilation.

The cognitive level is the characteristic of the student, the most used to personalize learning. The goal is to present the student with a set of concepts and a subject that reflects his current cognitive level to avoid the failure of learning.

The level of knowledge is used to create individualized instruction from the point of view of concepts and subjects (Sands, P. 2002).

Many other parameters can be taken into account to promote effective knowledge transmission on the one hand and to maintain an attraction to the use of the learning platform to avoid boredom and minimize the risk dropout courses.

Adapting the learning process to the learner profile may also help to minimize the problem of lack of teacher support which remains a serious problem to consider (Ward, J., & La Branche. 2003).

The idea of developing a separate module as a web service that supports the identification and detection of the learner's profile is motivated by the generalization of this functionality for all learning platforms. The SOA service-oriented architecture provides great ease in terms of agility, reusability and compatibility (Anonymous 2019).

In this paper, we begin by exposing the advantages of the use of the SOA in blended learning systems, after that we present related works, then we describe our approach to identify the architectural part of the eLearning platform that can be transformed as service After that, we focus on the details of the Profile Identification Web Service (PIWS), and finally, we give an overview of our experience for the development of the described service

2. Literature Review and Theoretical Framework

Since 1999, eLearning platforms have started to focus on sharing learning objects and have started to adopt the principle of "services", exposing some aspects of their functionality externally (D. Dagger & al, 2007). Since that time, the number of e-learning platforms, which are based on web services, has increased steadily (Xiaohong Q, Anumit J. 2005) (M. Papazoglou, Van-Den-Heuvel 2007), due to the need to share and reuse certain components or characteristics of e-learning platforms (Ali Seridi, & al 2017).

Several approaches and proposals have been made in this field; we cite as an example (Al Muhaideb, Sarab, & & al 2010) where the entire eLearning system is broken down into loosely coupled components called services. From our point of view, claiming that all components of the eLearning system can be considered as reusable services is optimistic if we really respect the SOA characteristics for each component.

In (SU, Moon Ting, & al. 2007), a multi-layer architecture was proposed, divided into presentation layers, E-Learning service layer, common service layer and resource layer.

A more detailed survey was presented in (Jamuna, Rani S. & al 2009). where different architectures were proposed and classified.

3. Research Method

Existing approaches that integrate SOA into e-learning systems attempt to redevelop new e-learning platforms where all components are technical services that communicate and use Web service standards (XML, SOAP, WSDL, UDDI, etc.), without having to strictly comply with SOA's fundamental criteria.

3.1. Approach for Migration to a Service Oriented Architecture

Our approach is distinguished by the strategy we have followed.

a) We have begun to identify the fundamental characteristics of a service in SOA, namely: loose coupling, autonomy, statelessness, distribution, accessibility, reusability, etc.

b) Then, we analysed the e-learning platforms, which allowed us to identify and highlight the autonomous components (which seem to be willing to be shared by eLearning systems) as web services.

c) Finally, we verified that these components can be put in the form of reusable modules while respecting the quality criteria of an SOA service.

We can say that our approach is a progressive integration approach, i.e. we have the core of the e-learning platform which is fixed and we can gradually add new options and functionalities in the form of services.

3.2. Identification of E-Learning Services

A preliminary analysis of the e-learning platforms allowed us to identify and highlight the autonomous components (which were willing to be shared by the eLearning systems) in the form of web services (Ali Seridi & al 2019).

We took care to take as candidate services only those components that were completely autonomous, stateless and in loose coupling with their environment in order to best meet the requirements of the SOA.

Thus, four types of web services could be identified, namely:

- Course Web Service: provides access to remote courses and seamlessly integrate our platform or other similar platforms.
- Profile Identification Web Service: allows assigning a cognitive level to each learner.
- Collaboration Web Service: that enables collaborative work between learners.
- And finally, the tutoring web service which we describe the features and characteristics in the following.

We present below (Fig1) the general architecture of our E-learning system that consists of the local part, the layer that ensures the smooth running, the connection between the system and the distant reusable services and the different web services.

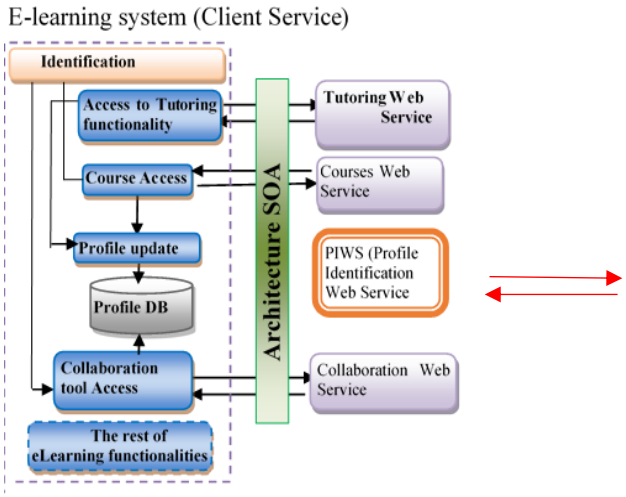


Figure 03. Global architecture for e-learning system-based web service.

4. Findings

4.1. The Profile Identification Web Service

The Profile Identification Web Service (PIWS) is an independent tool which was developed as a web service, it provides all the information about the profile of each learner.

The IPWS does not contain any information locally (Fig 2), all the learner's information is transferred instantly when needed. In return, it provides all necessary treatments. The necessary information is duplicated from the database of the eLearning platform (Profile DB) to a temporary database accessible by the IPSW. This solution has been proposed in order to avoid access by the IPWS to the main DB and to guarantee IPWS stateless.

There are several kinds of information that can be detected throw the PIWS.

a) Cognitive level,

b) personality,

c) representation preferences.

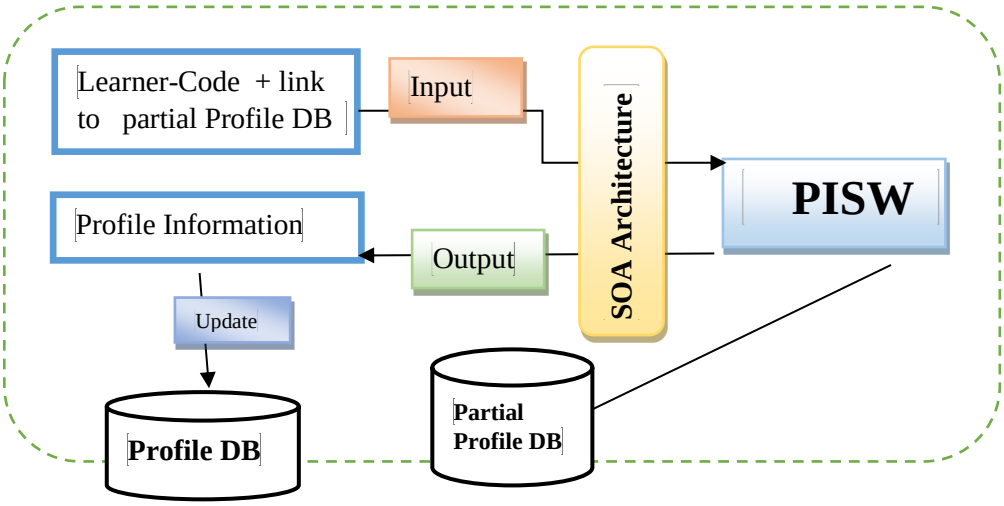


Figure 04. Architecture of PIWS.

4.2. Experimentation

In order to validate the proposed IPWS, an experimental e-learning platform was developed as part of an end-of-study project within the computer science department.

The entire e-learning platform has been implemented with PHP / MYSQL, the IPWS, the course web services and the Collaborative web service have been developed using the PHP language, and will be interpreted on remote servers.

To make the learning platform as customer service, we have integrated the "NUSOAP" library for web services, it defines the rights and communication mode with web services, and it is developed as classes in PHP.

"NUSOAP" also allows handling all types of errors that can suspend communication between the server and customer service.

To test interoperability between web services, we chose to implement the PIWS with java language. According to our experience, web services worked very well despite they were installed in different remote servers.

5.Conclusion and Discussions

In this article, we have proposed a profile identification web service that allow to identify information profile of each learner in an adapted eLearning system, it makes it possible, on the one hand, to adapt the learning style to the profile of the learner, on the other hand, to minimize the risk of premature dropping out of learning process.

To achieve this objective, we had to develop an eLearning platform based on Web services. The learning platform consists of two parts; the first is the one with the local part which is responsible for managing the local database with all the spaces of the different actors (learner, teacher, tutor, administrator), and the second representing the remote part in the form of web services, and which is composed of 4 types of web services: Course web services, Profile Identification Web Service, collaborative web service and finally Tutoring web service.

The proposed approach is based on a gradual integration, that is to say, that we have the heart of the eLearning platform, which is fixed, and we plug in progressively new options and features as services.

Our approach is distinguished by the strategy we have followed. We began to identify the fundamental characteristics of a service in SOA, namely: loose coupling, autonomy, stateless, distribution, accessibility, reusability, etc.… then we identified the components that may be shared while respecting the criteria for the quality of a service. Each candidate service can be integrated to the main platform, as it can be used by other remote platforms.

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ARTS MANAGEMENT, LEADERSHIP AND COMMUNICATION: THE CASE OF CURATORS

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Abstract

The works of art contain the information about the societies and the time of they are produced and may transmit ideas and emotions of their producers, therefore, we argue that art can be considered a means of communication. Arts Management uses business administration techniques and processes for managing the art events and private and public art institutions. Leadership in art management is the duty of the artistic directors or managers. Curators are the professional art managers, who lead the collections of museums and galleries and may conduct public service activities for institutions. Due to the complicated relationships between the contemporary art theories and art management, the role of curators have become crucial and sometimes their ideas define "the importance and value of the works of art". They become the leading actors of the contemporary art management and their position is sometimes considered above than the artists. Many of the contemporary art events are defined and evaluated by their curators. This paper contains a discussion of the role of the curators as leaders, to communicate new ideas of art to the public via managing visual art exhibitions.

Key words: Arts management, biennial, communication, curator, leadership

1.Introduction

According to Cambridge Dictionary of English, "art" is "the making of objects, images, music, etc. that are beautiful or that express feelings". (https://www.dictionary.cambridge.org/dictionary/english/art)

Merriam Webster Dictionary defines art as "something that is created with imagination and skill and that is beautiful or that expresses important ideas or feelings: works created by artists: paintings, sculptures, etc., that are created to be beautiful or to express important ideas or feelings". (https://www.merriam-webster.com/dictionary/art)

The concept "communication" can be defined as, "a process by which information is exchanged between individuals through a common system of symbols, signs, or behaviour". https://www.merriam-webster.com/dictionary/communication

The definition and the function of "art" chronologically and socially differs. Due to lack of enough data, we can only guess that, the first works of art, the cave paintings might be done for some religious rituals. While the development of the first civilisations, the works of art were done for different aims. In the Ancient Egypt, the main reason of producing works of art was to prepare humans' life after death. In Ancient Greece, the works of art were done for depicting their Gods, Goddesses and other mythological creatures. In the Medieval Europe, the art aimed to transmit the orders of the Christianity to the people. In the Renaissance, the artists became professionals and started to depict the daily life of the new social class "the bourgeoisie" in a realistic manner. Until the modern period, the artists reflected their ideas, emotions in works of art, according to some rules to create beauty. Modernist art theories, and their successors, contemporary art theories rejected the previous western art techniques and movements that occurred until the end of 19th century and aimed to create new ways of seeing. The contemporary art exhibitions, especially biennials have become a new media to discuss issues and ideas of their societies and time.

The works of art, contain the information about the societies and the time of they are produced and may transmit ideas and emotions of their producers. Therefore, we may argue that one of the leading qualities of the art is that it creates a special way of "communication", or in other words, "art can be considered as a means of communication".

Management is a process of planning, decision making, organizing, leading, motivation and controlling the human resources, financial, physical, and information resources of an organization to reach its goals in an efficient and effective manner. (https://iedunote.com/management)

"A leader is one or more people who selects, equips, trains, and influences one or more follower(s) who have diverse gifts, abilities, and skills and focuses the follower(s) to the organization's mission and objectives causing the follower(s) to willingly and enthusiastically expend spiritual, emotional, and physical energy in a concerted coordinated effort to achieve the organizational mission and objectives" (Winston, B.-Patterson, K., 2006:7)

The definition of the concept "leadership" can be summarised as:

- -The individuals who are the leaders in an organization, regarded collectively.
- -The activity of leading a group of people or an organization or the ability to do this.

(http://www.businessdictionary.com/definition/leadership.html)

Arts management is a relatively new discipline that emerged after the second half of the 20th century. It combines the concepts of arts and management and uses business administration techniques and processes. The main aim of arts management is to analyse the administrative structure and operations of the public and private funded profit and non-profit arts organisations that focused on presentation of the works of visual and performing arts to the public.

The term "visual arts" comprises the paintings, sculptures, photographs, new media, cinema, video art etc. The visual arts organisations aim to manage the art events, such as, exhibitions, biennials, art fairs and festivals.

The term "performing arts" comprises music, theatre, dance, opera, and other types of the performances. The performing arts organisations aim to manage the art events of any kind of performances, festivals. Both visual and performing art organisations can be private or public funded and may act as profit or non-profit basis.

The arts management organisations employ two group of professionals. The first group is the "Artistic Staff" that include the artists: painters, sculptors, authors, composers, performers, choreographers, curators, designers, directors, etc. The second group is the "Managerial Staff" that include the administrative managers (accountants, marketing managers, etc.). In small-scale organisations, either the artistic or administrative manager lead the organisation, whereas, in large scale organisations, these two groups are leaded by the board of directors that consist of artistic and administrative directors and the representatives of the investors, sponsors, etc. Due to the nature of the product "the artwork", Lapierre argues that the "leadership of the art organisations rest with the artists", and "the real president or chief executive officer is the artistic director." (Lapierre, 2001:6).

The expectancy from the leaders of the art organisations, is to achieve economic, managerial, and aesthetic goals of their organisations. They need to be an expert on an artistic field, they are presumed to ensure the accessibility to their events and audience development and have the experience on managing the monetary issues. (Enamhe, 2014:82)

Merriam Webster dictionary defines the word "curator" as, "one who has the care and superintendence of something, especially: one in charge of a museum, zoo, or other place of exhibit". https://www.merriam-webster.com/dictionary/curator . In the contemporary art world, curators are exhibition makers who work for museums, galleries and freelancers who manage the biennials and large scale exhibitions. https://uk.phaidon.com/agenda/art/articles/2011/september/09/a-brief-history-of-the-word-curator/

The word biennial means "occurring every two years" in Merriam Webster dictionary. https://www.merriam-webster.com/dictionary/biennial In the contemporary art world it refers to the exhibitions of art or design that are held every two years. According to different uses in different languages, it is written as "biennial" in English, biennal(e) in French, "biennale" in Italian and "bienal" in Portuguese."

This paper will discuss the role of the curators as leaders, to communicate new ideas of art to the public, by managing contemporary art organisations (especially the art biennials).

2.Curators as Art Managers

The origin of the word curator comes from Latin "curare", that means "taking care". History of the "curators" begins with the "Ancient Rome, where the "curatores" were civil servants in charge of various departments of public works, overseeing the Empire's aqueducts, bathhouses and sewers". In the Medieval Europe, "curatus" was the priest who devoted to care (cure) of souls". https://uk.phaidon.com/agenda/art/articles/2011/september/09/a-brief-history-of-the-word-curator/

Ownership and collecting works of art in the west were the privilege of the religious and political elites in the Europe, until the Renaissance. In the 15th century Florence, the Medici family and their connoisseurship of the artists and collecting works of art imitated by the other bourgeoisie and aristocratic families. With the increase in the number and type of objects in the collections of the ruling elite of the Europe, cabinets of curiosities (The rooms where the collections of interesting objects were kept in the Europe since the 15th century) were formed. These collections became the core of the first museums and kept in private rooms of palaces or mansions. The first museums opened in Europe in the 17th century. Amerbach Cabinet in Basel turned into a museum in 1671 and Ashmolean Art Museum opened in Oxford in 1683. The collections of Medici Family opened to the public in their Uffizi Palace in 1765 and Louvre Palace became a museum in 1793. There was a need to appoint a person to keep, classify and arrange to display the collections to the public and the job of the curators emerged. In the 18th century, the word curator used for the person who looked after collections of art and artifacts.

In the 19th century, as a result of the industrial revolution, "Great Fairs" were organised in the Europe. The first Great Fair opened in London in 1851, aimed to show the industrial products of Great Britain to the customers from all over the world, for enhancing trade. The fairs became so effective that, until the end of the century, they rapidly spread to the other countries. With the effects of these international fairs, a national exhibition of art in Venice opened in 1895, to celebrate the King of Italy's silver wedding anniversary. This event became the core of the Venice Biennial.

At the same century, the new rich, "the industrial bourgeoisie", started to collect works of art. The number of the museums increased in worldwide, especially new rich countries, like America.

After the second half of the 19th century, some young artists started to rebel against the rules of the Academies and tried to find new routes in art in the Europe. They arranged independent art exhibitions and leaded the modernism art movement in the 20th century.

In the 20th century, the curators' job have become multifaceted. They become experts on special topics, collections or items, and responsible for collecting, exhibition preparation, and management of a museum or a gallery. They were in contact with the artists and the works of art and sometimes invited to arrange exhibitions elsewhere.

The art has become a more stable and specific means of investment in the 20th century. "Art is unique as an investment in that there are many non-monetary investment reasons behind collecting". In addition to the enjoyment it brings to the owners, "art providers collectors with social status and prestige, an outlet to signal to their wealth and lifestyle to the others. There are also the philanthropic benefits of purchasing art, from financing up-and coming artists to building a collection to preserve cultural heritage". When considering the returns on investment in art, "most studies show that over long periods of time, art prices have trended upwards, kept pace with inflation and, in several studies have outperformed more traditional asset classes such as equities and bonds over certain time periods." https://www.jpmorgan.com/jpmpdf/1320620625096.pdf.

The modernist art movements of the West, changed the course of the art and the job of the curators in the 20th century. The modernist rejection of the past theories, techniques and movements of art and artists' struggle to find new routes, the new art has become distant and difficult to be understood for the ordinary people. And especially with the theories of French Artist Marcel Duchamp, who argued that "the artists' look may turn everything into an artwork", the line between what is art and what is not has become blurred. In the contemporary art world, the artworks evaluated by the artists' handling of a concept, rather than the technical mastership of the artists or the aesthetic qualities of the artwork. With the increasing importance of the "concept", the art comes closer to the communication. The curators have become a kind of "communicator" of the modern and contemporary art to the public. Since the second half of the century, the curators' role evolved to a more creative and individualistic way of exhibition management. In addition to the curators who work for the institutions, the independent curators' work comprised to a broader understanding and interpretation of the issues of their time through the socio-economic and historical context and to represent and discuss their approaches via arranging special exhibitions.

New types of large scale exhibitions, such as art biennials, or triennials (the art or design exhibitions that occur every three year) have become common, after 1980's worldwide. The curators broadened the notion of art and arranged exhibitions in non-traditional art spaces, such as streets, abandoned buildings. The independent curators have collaborated to each other while working on some big exhibition projects of biennials.

With the effect of globalisation on the world art, the demand for the independent curators increased. The global world of art "imposed the need for new forms of alliances and for a culture of global and interdisciplinary networking between interested agents: groups of artists and curators, theorists, activists, academics and other." (Fotiadi, 2014:8). The impact of globalisation on the developments in the electronic technologies and emergence of new medium for communication and transportation, participated to the forming of global art world.

Karen Love describes the curators' role in the 21st century, as "to articulate the concept for an art presentation and conceptualize the manner in which this art can be presented to the public; to organize and implement that presentation, representing the artist(s) and their work; to function as a kind of go-between for the presenting institution and the artist, while respecting the mandate, needs and priorities of the gallery; to provide professional and public access to the project's ideas and art by organizing the exhibition or project itself, by writing various kinds of texts (curatorial, didactic and promotional) and by organizing public presentations associated with the project." (Love, 2010:5)

Curators create narratives by using the works of the artists within a thematic framework. Their job is closely related to and depended on their knowledge on the course of art histories both local and global levels, that comprise the artists, their works, techniques and the movements they belong to. They may foresee the emergence of the new movement and young, talented artists. Their position in local and global art world frequently make them more popular than the artists. "So many exhibitions are mainly known by the names of curators rather than by the artists or even the art itself" (Wang 2009:23). The Chinese art critic Wang argued that "The interest of leading curators has largely determined or influenced many artists' thinking about the content and style of art. Initiated as a representation of a global avant-garde concept that aims to break established boundaries, institutions, and authorities, independent curators have grown into a new authority for the contemporary Chinese art world." (Wang, 2009:23) In some cases, the exhibitions of the curators are considered as the artworks.

The current position of the curators is due to an expanding global art market which is ruled by the countries that lead the global economy. In 2016, "the U.S. remains the largest country in the world art market, with a 29.5% market share, followed by the U.K. with 24%, and by China with 18%" (Pownall, 2017:13). Global art market reached to "$67.4 billion in sales in 2018. https://www.artbasel.com/about/initiatives/the-art-market. This total number consist the sum of the sales of the art and antique dealers, galleries, auction houses and art fairs and on line sales worldwide. Generally the artworks that are exhibited at the biennials are not sold, but can be purchased after the closing of the show. The curators' decision to participation of the artists to the biennials have become a criterion of the importance of the artists in the contemporary art world.

Curators work in a global art market where the global investors buy artworks from every parts of the world, with the help of the contemporary communication techniques. The art events like biennials have become a new means of the global capitalist economy, where the sponsorship, marketing, communication and other management concepts widely applied. The curators are the managers and the communicators of this complicated market. They use the new media for communication, social media and networking platforms to promote their works.

The contemporary curators are not only responsible for the artistic and communicative issues of their exhibitions but also expected to having experience on managerial duties of organising and international events, such as budgeting, logistics, insurance of the artworks, leading a team that consisted of different professionals and experts, etc.

In order to elaborate the curators' work in the 21st century, we want to take a brief look to the leading curators and current art biennials of the world.

3.Leading Curators, Art Biennials and Global Art Market

The names of leading curators are widely known and they sometimes considered as artists by the contemporary art world. According to Artland Magazine's list "The 10 Influential Curators Shaping the Art World today", the most influential curator is Hans Ulrich Obrist, a Swiss national. https://magazine.artland.com/10-influential-curators-shaping-the-art-world-today/. He is Artistic Director of Serpentine Galleries, London. Prior to this, he was the Curator of the Musee d'Art Moderne de la Ville de Paris. Since his first show "World Soup (The Kitchen Show") in 1991, he has curated more than 300 exhibitions. In 2011, he received CCS Bard Award for Curatorial Excellence and in 2015 he was awarded the International Folkwang Prize for his commitment to the arts. Obrist has lectured internationally academic and art institutions, and is contributing editor to several

magazines and journals. He is the author of many books on art. https://www.berlinerfestspiele.de/en/berliner-festspiele/programm/bfs-kuenstler/bfs_kuenstler_detail_215509.html

Carolyn Christov-Bakargiev occupies the second rank on the mentioned list. As an American independent curator with a degree on Art History, she organised many art exhibitions. Under her leadership, documenta 13 in 2012 was considered as one of the most significant exhibitions in the art world, enlisting art and culture for the purpose of reconstruction, healing and dialogue. She is the first woman to have reached first place on *Art Review's* "Power 100" list. https://magazine.artland.com/10-influential-curators-shaping-the-art-world-today/.

Nigerian born, Okwui Enwezor occupies the 3rd rank on the list. He is the Director of Haus der Kunst in Munich. While studying political science in the United States, he observed the absence of African artists and started to criticise these shows and founded his own art magazine. He became known as a curator in 1996. He sees art as an expression of social change and he puts this theory into practice in his curatorial work. He was the first non-European curator of documenta in 2002.

The biennials are generally named by the cities that they are organised. They are the showplaces of the newest and leading artworks of contemporary art and followed by the art lovers, experts, the art collectors and dealers worldwide.

We may argue that the globalisation changed the artistic production worldwide and created a global art language. The artworks produced by different artists from all over the world have some similarities, together with some minor and local (ethnic) differences. Therefore, a biennial may be comprised of the works of many artists of different nationalities. At the same time, globalisation encouraged to offer new ways of approaching, seeing and commenting on art.

As the oldest and the most influential one, Venice Biennial ranked as the 1st on the leading biennials of the world list. https://www.thebalancecareers.com/top-international-art-biennales-1295877.The Biennial is invested and sponsored by some private and public funds and institutions and commissions of sales of catalogues and artworks that are exhibited. The 58th Venice Biennale (the official name is Venice Biennale) is being held on 11 May-24 November 2019 and curated by Ralph Rugoff. Together with the participation of 79 artists, the title of this year's show is "May You Live in Interesting Times" . https://universes.art/en/venice-biennale/2019

Sao Paulo Biennial is ranked as 2nd at the mentioned list. 33rd Sao Paulo Bienale held in 2018, curated by Gabriel Perez-Barriero, with the title of "Affective Affinities", **"**aims to encourage each spectator's individual appreciation of art by avoiding an overarching theme that could prompt pre-established understandings". http://www.bienal.org.br/post/5106

Istanbul Biennial occupies 6th rank on the list. It has been organised by IKSV (Istanbul Foundation for Culture and Arts), a non-profit private organisation. The founders and sponsors of the IKSV are the leading capitalist families and some public institutions of Turkey. The management board of the IKSV choose the curator and the curator chooses his/her theme. The first exhibition in 1987 and the second were curated by a Turkish art historian and critic Beral Madra and aimed to introduce Turkish contemporary art to the world and world artists to the Turkish audience. In the following shows, the biennial gained a more "international" character and organised by Turkish and international curators like Vasıf Kortun, Fulya Erdemci, Rene Block, Rosa Martinez, Yuko Hasegawa. The themes chosen by the curators are always related to the city, Istanbul.

In 2009, 10th Istanbul Biennial was curated by Chinese curator Hou Hanru, the theme was "Not Only Possible but Also Necessary: Optimism Against the Global War". The biennial contained a discussion of the global war in different aspects, with the economic, social and artistic consequences and had a specific look to the contemporary art and the meaning of Istanbul in the global world. According to Hanru, "contemporary art has been a product of modernisation and modernity. Along with the globalisation and integration of many developing countries, in the global system of production and communication, contemporary art is being created and presented everywhere, far beyond the West". He stressed that as a consequence of the modernism in global scale "the explosive urban growth of Istanbul, is remarkably creative, original, and chaotic"; and said that, the city had contained many layers of culture, and it also projected the melancholia and nostalgia. He saw Istanbul as a metropolis of today and it can be commented as "the mirror of the contradiction of the globalisation" by quoting from Antonio Negri. (The 10th Istanbul Biennial Guide, 2007: 24-26)

In 2015, 14th Istanbul Biennial, curated by Carolyn Christov-Bakargiev, with the theme of "Saltwater". Christov-Bakargiev stressed the importance of the sea in the history of the city and pointed the relationship of the people and sea in a socio-economical context. Her show consisted of a wide range of artworks, from an artistic reconstruction of ancient salt ships of Bosporus, depiction of sea voyages of migrants who aimed to reach to the Europe to the sea myths of the indigenous people of Oceania, created by Turkish and international artists. A group of the artworks (sculptures), belonged to Argentinian artist Adrian Villar Rojas, titled as "The Most Beautiful of All Mothers" installed at the shore of Büyükada, so much enjoyed by the audience that, it became a trending topic at the social media and the artist was invited to visit the headquarters of the company in California. After the closing the show, majority of the artworks of Villar Rojas, exhibited at the biennial, purchased by one of the leading art institutions of the United States, The Metropolitan Museum of Art.

The last show, 16th Istanbul Biennial, held between 24.09-10.11.2019, curated by a French curator, Nicolas Bourriaud, with the main theme of "7th Continent", contained a discussion of the consequences of the global pollution. 451.374 visitors attended to the Biennial venues. This number reflects 21% the increase on the numbers of visitors, when compared with the data of 2015's show. https://bienal.iksv.org/tr/haberler/16-istanbul-bienali-sona-erdi

Biennials may have some specific purposes to fulfil, such as Dakar Biennale in Senegal, (Dak'Art) that occupies 8th rank on the list; concentrated on the African art and politics, since 1996. In addition the event's artistic devotion, it also has a politico-cultural agenda, as declared on its' web site "Dak'Art is no doubt a relevant cultural proposal for the African Union. The history of the Biennale of Contemporary art is the national extension of a sum of reflections and actions carried out by the intellectuals and culture experts from Africa and diaspora who have very early been aware of the role of culture plays faced with the varied challenges met with at various stages in our societies' progress towards a better life". http://www.biennialfoundation.org/biennials/dak%E2%80%99art-the-biennial-of-the-contemporary-african-art/

4.Criticising the Curators' Job after the 20th century

The curators have become the leaders of the contemporary art and the communicator of the art world to the public. Their leadership positions and their skills as communicators in organising art exhibitions occur in two different ways. The first one is, they lead a team that consisted of the professionals with different artistic, administrative, national and cultural backgrounds to achieve their goals. The curators' skills as leaders of their teams help to ensure the success of their shows. And they transmit their ideas, goals and expectations to their teams and their skills of communication ensure the success of their shows. The second one is their skills as leaders and communicators help them to declare their specific approaches or revolutionary theories on art and emerging young artists to the art world and the public by their exhibitions.

It is obvious that the art world in the 21st century is dominated by the curators. In some cases, the exhibitions of the curators can be considered as the works of art, therefore curators have become a new kind of artists, with the conceptualising and commenting of the work of other artists, with their creative approaches. Without producing any kinds of works of art, by managing and arranging, sometimes re-arranging the artworks produced by other artists, they gained a status that is above than the artists. Therefore, we may distinguish artists of the 21st century as "artist-manager (commentator-communicator)" and "artist-producer". Many of the contemporary art events are evaluated by their curators and participating to these events has become a criterion to the artists. This situation enhanced by the demands of international, global investors.

Discussions of the problems that we face in the 21st century, like war, migration, pollution, rapid urbanisation, global warming, the clash between local and global cultures, post-colonialist issues, are communicated into the global world by the curators. Their profession is considered as a new form of leadership, the "artistic leadership".

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LEADERSHIP AND ORGANIZATIONAL BEHAVIOUR

THE EFFECTS OF EMOTIONAL LABOR BEHAVIORS AND TOP MANAGEMENT SUPPORT ON THE PERFORMANCE OF THE ICT PROJECT TEAMS

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Abstract

In the literature of organizational behavior, emotional labor is a very new concept that has been studied since the 1980s. However, when the relevant literature is examined, it is seen that emotional labor is generally studied at the individual level and very few studies are conducted on the basis of project teams. The main question of this study is whether some of the emotional labor behaviors and top management support determined by the organization and which the team members must comply with have an impact on the team performance in the project team works in the ICT sector. In this study, which was carried out using partial least square (PLS 3.0) method on 85 project teams, it was found that other structural antecedents outside the discipline had a significant and positive effect on some emotional labor behaviors. In terms of project output, none of the emotional labor behaviors had any effect on team performance and the speed to market affected the market succeses. In addition, the moderating role of top management support in the relationship between surface behavior and market succees is demonstrated. Top management support does not appear to have any effect on market speed.

Keywords: Emotional labor behaviours, project team's performance, team contextual antecedents, top management support

1.Introduction

In order to develop their competitiveness within the sector in which they operate, businesses need to increase their efficiency by renewing their products, services and business processes with income-generating business models. It makes it even more important to identify the factors that influence the teams' innovation, creativity and performance in order to get the maximum benefit from the talents of the members of the project teams. In the studies, it is stated that, people are a very emotional entity, emotions are the most important sources of individuals, they can be exhibited in the work environment and emotions can be educated (Günsel, 2008). Akgün et al. (2011) states that social interactions can reveal various emotions, especially in knowledge-intensive projects, while Barczak et al. (2010) states that managing these emotions in line with the goals and objectives of the team has significant effects on team outcomes. In this context, especially when the literature on organizational behavior from the 1980s to the present is examined, it is seen that the emotional behaviors and representations that the team members exhibit in order to form an effective team are expressed under the concept of "Emotional Labor" which is a specific type of labor (Çelikyay, 2019). Most of the studies on the concept of emotional labor starting with Hochschild (1983) focus on individual outcomes such as job satisfaction, commitment, burnout syndrome and intention to leave. It is also seen that there is not much work in the related literature about the outcomes of the teamwork and the structural antecedents that will enable the team members to make an emotional effort.

Therefore, in this study, the organizational structural context first presented by Ghoshal & Barlett (1994) is constructed in three dimensions as discipline, stress and trust. This organizational context is considered as the antecedent of emotional labor behavior in project teams and the role of emotional labor behavior on team performance is researched. In addition, the effect of top management support on the relationship between emotional labor behaviors and team performance has been investigated in parallel with the studies (Ernst, 2002; Akgün et al., 2007b; Grandey, 2000; Chollet et al., 2012). In this respect, this study tries to contribute to the project team works.

2.Literature Review and Theoretical Framework

It is stated that people are very emotional entity and sometimes individuals' behavior is affected by their emotions, while sometimes individuals can control their emotions (McPhail, 2004).

In addition, thanks to the knowledge of the existing emotions within the organization, it is stated that organizations can exhibit more effective and productive behaviors since they will deal with less problems (Grama & Botone, 2009). As a result, project teams, which are a sub-dimension of organizations are seen as a display area of their feelings towards each other, customers and internal and external stakeholders.

2.1. Emotional Labor Behaviors

Directing the emotional representation of the employees by the organization management, sometimes can be in written rules or sometimes can be in the form of informal expectations. Employees use emotion management and representation consciously or unconsciously in order to behave as expected from them (Mann, 2006). Emotional Labor (Emotional Labor), which is also referred to as emotional workmanship, is defined as "the display of emotions in the form of facial or physical representations such as gestures and mimics for a fee" by Hochschild (1983), who first used this in management literature. Other than Hochschild (1983) definitions as act of displaying appropriate emotions by Ashforth and Humprey (1993), necessary efforts, planning and control to express the feelings expected by the organization in interpersonal activities by Morris and Feldman(1996), strengthening, modifying or suppressing certain emotions to regulate emotional expression by Grandey (2000), and adherence to the emotional representation norms of the organization and their individual appreciation in the process of emotion and regulation by Liu et al.(2008) have been introduced.In this study, among the dimensions of these four main approaches, deep behavior, surface behavior and automatic emotional regulation, which best define emotional labor in both process and behavior context, are considered (Çelikyay, 2019).

Deep Behavior (DB), can be defined as an internal effort by an individual to really feel the emotions expected by the organization (Hochschild, 1983; Ashforth and Humphrey, 1993). In this form deep behavior involves the harmonization of the emotions that one really feels and exhibits (Grandey, 1998).

Surface Behavior (SB) refers to the emotional labor behavior that occurs when there is a significant difference between what employee really feels and the emotions which is expected to exhibit. (Hochschild, 1983; Ashforth and Humphrey, 1993). Surface behavior occurs when an employee changes verbal, facial and body expression of emotions without changing their basic emotions.

Automatic Emotional Regulation (AER) is the automatic display of emotions expected by the organization and occurs only when there are minor differences between the internal emotions of individuals and the demonstration rules expected by the organization (Yalçın, 2012). For example, it is stated that a nurse can feel sympathy for a wounded child without having to play any role and this can be evaluated under the concept of automatic emotional regulation (Zapf, 2002).

2.2. Hypotheses Development

2.2.1. Effective Team Contextual Antecedents and Emotional Labor Behaviours

Organizational structure is considered as one of the most important elements of research on team effectiveness. Organizational structure or environment is defined as a set of overarching structures and external systems that facilitate or prevent the work that the team is responsible for. It is stated that organizations need discipline and stress in order to direct their members in line with organizational goals and targets, and they need support and trust in order to create a synergistic work environment with cooperation (Ghoshal and Bartlett, 1994; Gibson and Birkinshaw, 2002). In this study, the structural context of teams which is a subset of organizational structure, is considered a three dimensional concept as a discipline, stress and trust. Top management support which is another dimension, is considered as moderator in the relationship between emotional labor dimensions and team performance (Peng, 2015; Roxana, 2013; Özbingöl, 2013).

Trust: Trust expresses an expectation that other people will behave as expected and will not be opportunistic (Barczak et al., 2010). Team trust can also be defined as the project manager's perception of a team member's goodwill that a team member will not be harmed by the actions of other team members and can perform the assigned task, regardless of the control and monitoring of other team members. Trust makes it possible to manage conflicts within the team in an appropriate way and to minimize the negative impacts, thus makes

significant contributions to team performance (Akgün et al., 2007b). In such a climate, trust is expected to make it easier for team members to implement the rules of emotional representation expected of them. Therefore,

H1: Trust has a positive and significant effect on emotional labor behaviors.

***Stress*;** Team stress is defined as a type of stress that affects the team as a whole, which is commonly felt, associated with perceived terms and conditions (work load, team size or time pressure). It is stated that sense of urgency of team crisis is related to fear experienced in team anxiety (Akgün et al, 2007b). Although the presence of stress in the work environment positively affects the work outcomes up to a certain threshold, it brings negative outcomes such as burnout, taking a dislike to work, intention to leave, and lack of harmony in employees if a certain level of stress is exceeded or can't be managed well (Günsel, 2014). As a way of eliminating the negative effects of stress in the teamwork process, it can be understood that team members should learn to control their emotions individually and as a team, and that they should engage in an emotional labor work without waiting for a force or demand from the organization or top management (Jarvi, 2015). Thereby;

H2: Crisis-induced team stress has a positive and significant effect on emotional labor behaviors

H3: Anxiety-induced team stress has a positive and significant effect on emotional labor behaviors

Discipline; Discipline is expressed as a key element that makes teams a real team as a feature that encourages the voluntary efforts of the members of the organization to meet the standards expected from them (Ghoshal and Bartlett, 1994; Katzenbach and Douglas, 2005). In team discipline studies, it is stated that joint control creates strong norms of behavior that result in members' common values. In case of violation of these common values or norms, it is stated that other members may feel this as a threat to team identity and react more than expected from managers (Fitch and Ravlin, 2004). In general within the framework of the disciplinary rules determined within the team, it is possible for individuals to have to resort to emotional labor behaviors as they will not be able to express and show their feelings in their natural state or will be restricted. Thereby;

H4: Discipline has a positive and significant effect on emotional labor behaviors

2.2.2. Team Performance (TP) and Emotional Labor Behaviors

In the related literature, it is seen that team efficacy is evaluated as an indicator of team success under the name of performance (Akgün et al., 2004). Product or market success indicates the market performance of a new product and the market speed is the time between development and launch of the product or project (Dayan and Elbanna, 2011; Stanko et al, 2012; Aga,2016). It is stated that success in software projects depends on a natural process requiring knowledge, skill interaction and intensive social interactions among team members. In this respect, it is stated that the management of the emotions of both the individual and the team members gains importance (Akgün et al., 2011). In this process, it is seen as a necessity for the team members to present their real or sudden emotions as a controlled emotional representation through an internal control in communication with each other. Thereby;

H5: Surface behavior has a positive and significant effect on market speed.

H6: Deep behavior has a positive and significant effect on market speed.

H7: Automatic emotional regulation has a positive and significant effect on market speed.

H8: Surface behavior has a positive and significant effect on market success.

H9: Deep behavior has a positive and significant effect on market success.

H10: Automatic emotional regulation has a positive and significant effect on market success.

2.2.3. The Relationship between Speed to Market and Market Success

Both introducing new products and services before the competitors (market speed) and achieving market success all together is considered a very challenging process. In the new product and service development process, it is stated that the project teams can apply innovative approaches different from the traditional production process or they can introduce a new product or service to the market with the pressure of the top managers (Akgün et al 2007b). Thereby;

H11: Market speed has a positive and significant effect on market success

2.2.4. Top Management Support's Moderating Effect

It is stated that the emotional support provided by a top manager in the project works is a key element in the formation of a common emotion, attitude, comment and reaction within the team (Hekkala et al., 2011). It is reported that management support strengthens the positive effect of deep behavior on job satisfaction and burnout and alleviates the negative impact of surface behavior (Duke et. al., 2009; Grandey,2000; Chen et al., 2012; Roxana, 2013; Özbingöl, 2013; Peng, 2015). It is also stated that in case of top management support, the sense of crisis and concern within the team positively affect the speed of learning, presentation to the market and new product success of the team (Akgün et al., 2007b). Thereby;

H12; H13; As top management support increases, the relationship between emotional labor behaviors and market speed, market success is intensified.

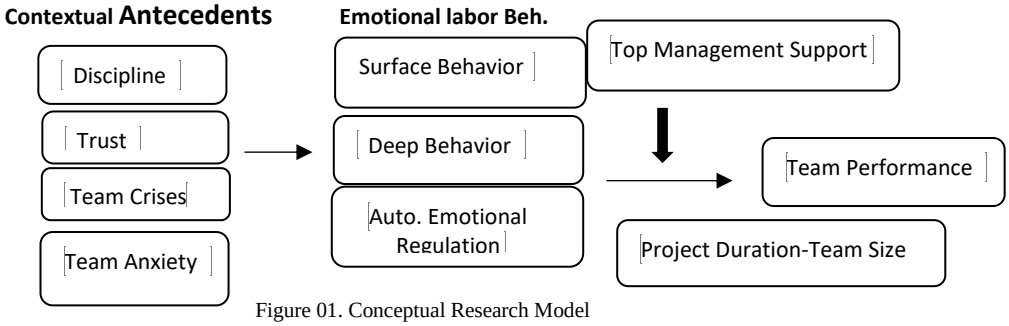


Figure 01. Conceptual Research Model

3. Research Method

3.1. Sample and Data Collection

Research, according to the 2013-2015 data of The Information and Communication Technologies Authority (ICTA) which has been operating in Turkey, was conducted with 25 private companies, which cover 93% in terms of market shares in the ICT sector and agreed to respond to the survey. The Survey was conducted with 291 questionnaires from 85 different projects by selecting the convenience sampling technique between May 2016 and January 2017. The questionnaire forms were delivered to the participants by hand or by e-mail. The partner participants in our sample consisted of senior engineers / technical specialists (32.6%), product/project managers (5.2%), department managers (4.8%), engineers / technicians (44.4%), general managers/director (1%), chairman / owner (0.7%) and other titles (11.3%).

3.2. Measures

The questionnaire was used for data collection method and consists of two parts. Questions about the demographic variables of the participants are included in the first part of the questionnaire. In the second part of the questionnaire, questions related emotional labor behaviors, team contextual antecedents, top management support and team performance were included. A five-point Likert Type Rating scale ranged from 'strongly agree' (5) to 'strongly disagree' (1) was used throughout the measurement instruments.

3.2.1.Emotional Labor

The questions developed by Brotherdige and Lee (2003) were used for surface behaviors (5 items) and deep behaviors (5 items), which are the sub-dimensions of the emotional labor variance. The questions used in Wong et al. (2006) and Çekmecelioğlu et al. (2012) for automatic emotional regulation (7 items) were adapted to the team level and included in the questionnaire. The scale has a reported alpha reliability of ,88.

3.2.2Team Contextual Antecedents

The scales included in the studies of Park et al.(2014) for trust(6 items), one of the structural structural premises related to effective project teams, Gibson and Birkinshaw (2002) for discipline(4 items), Akgün et al (2007b) for stress caused by team anxiety and crises(6 items) were adapted to the team level. The scale has a reported alpha reliability of ,84.

3.2.3.Top Management Support

The 5 items developed by Ghoshal and Bartlett (1994) and used by Birkinshaw and Gibson(2002) in the studies were used by adapting to the level of the team to measure the moderator role of top management support. The scale has a reported alpha reliability of ,86.

3.2.4.Team Performance

For market speed and market success 17 items adapted from Akgün et al.(2007c)'s works were used. The scale has a reported alpha reliability of 0,93. All dimensions were found to be above the acceptable Cronbach α of 0,70.

3.2.5.Project Duration:

The logarithmic values of the measurements of elapsed time in months between the start of the project and launching of the new product by completing are included in the analysis.

Team Size*:* As the logarithmic values of the actual number of people involved in the project work are included.

3.3. Analyses and Results

Factor analysis was conducted for both the scales of the questionnaire separately. Firstly, the items were subjected to exploratory factor analysis with Statistical Package Program-SPSS 21.0. In order to test construct validity of the research model, variables were tested with factor analysis using principal component analysis with varimax rotation method for determining the factors structure of dependent and independent variables and the results are presented in Table 1. Cronbach alpha values for our measurements ranged from 0.769 to 0.945 and exceeded the threshold of 0.70.

Furthermore, the Kaiser-Meyer-Olkin test which informs the researchers about the adequacy level of the scales has been found between KMO: 0,854 and 0,920, with a threshold value of 0.70 and Barlett's test ρ-sign(<0.1) were also seen to be 0,000 for all of our models. After the EFA analysis, 2 questions were taken out of the questionnaire consisting of 64 questions and a total of 62 questions were evaluated. Since our measurements meet the required validity and reliability criterias and it is seen that for our scale can be applied feasibility of confirmatory factor analysis (CFA). As shown in Table 1, all normalized pattern loadings are statistically significant ($p<0.01$), therefore convergent validity was demonstrated. To calculate reliability, a Chronbach's Alpha, Composite Reliability (CR), and the Average Variance Extracted (AVE) were utilized. Internal consistency is demonstrated when the reliability of each measure in a scale is above 0.7 (Brown, 2006; Kline, 2011). Cronbach's alpha and composite reliability values explain over the threshold value of 0.7 as recommended by Nunnally &Bernstein (1994). As it is demonstrated in Table 1, the measurement model provided enough evidence for internal consistency.

Convergent validity has been established by the examination of factor analysis results displayed in Table 1. Each manifest variables (MV) are loaded above in relationship to the related latent variables (LV). Convergent validity is also ensured when the average variance extracted (AVE) is higher than 0.5 (Hair, Anderson, Tatham,&Black,1998) With these, the measurements were subjected to CFA in the SEM and it was seen that all the remaining questions were loaded at a value exceeding 0.60 after deduction of 2 questions with a factor load less than 0.60.Following this, the data was subjected to correlation analysis to test the discriminant validity of the measurements. The correlation values between the pair of variables are lower than the square root of the AVE value as shown in Table 2. The Cronbach Alpha's reliability value of the discipline variable is 0.69. Although this coefficient is less than 0.70, Gupta & Somers (1996) suggest that for a relatively newly developed scale, the threshold value can be taken as 0.60. Therefore, it was seen that our metrics meet the criterias of validity and reliability.

Table 01.Factor Analysis Results

Variables	**Factor load.**	**Ind.Wh.**	**Mean**	**Std. Dev**	**Cr.Alph**	**CR**	**AVE**
Trust(Team members)..			**4,23**	**0,72**	**0,927**	**0,943**	**0,733**
were open and honest when they encountered a problem during the project.	0,808	0,181					

helped each other in making a critical decision during the project	0,890	0,195					
were always willing to help each other during the project.	0,891	0,184					
were always willing to help each other during the project.	0,841	0,191					
were completely reliable during the project.	0,842	0,210					
always felt great confidence in the project.	0,861	0,209					
Discipline			**3,19**	**0,9**	**0,697**	**0,825**	**0,612**
The project team was rewarded or penalized based on a meticulous measurement of the performance of the project objectives.	0,811	0,532					
To improve performance in the project team, the members were provided with feedback on performance evaluation results.	0,669	0,333					
All members of the project team made efforts to measure / take critical success factors.	0.829	0,417					
Stress(Team Crises) Team Members..			**3,96**	**0,74**	**0,834**	**0,9**	**0,75**
were aware that this project could help in overcoming a crisis in the company or department (low sales, profits, etc.).	0,873	0,381					
were aware that this project could help to reduce the crisis caused by the environment (competitors, suppliers and legal regulations).	0,877	0,393					
were aware that this project could help solve the crisis caused by customers and potential users.	0,849	0,381					
Stress(Team Anxiety) The Project Team**..**			**3,14**	**1,06**	**0,827**	**0,894**	**0,738**
While .. was working on the successful launch of this project, the company or department chief felt a great pressure.	0,857	0,421					
thought that if this project failed, their business would be at risk.	0,852	0,468					
generally felt great pressure to succeed in this project.	0,868	0,277					
Surface Behaviour(Team Members…)			**3,19**	**0,9**	**0,823**	**0,874**	**0,584**
Although ... were distressed and frustrated during the project, team members were act to strive not to show to each other.	0,731	0,235					
tried to exhibit the feelings they should reflect during the project and the feelings they expected from them even if they did not match the actual moods	0,711	0,290					
made an effort not to show what their feeling to each other in during the project.	0,718	0,202					
during the project to act in accordance with team work to suppressed the their real reactions.	0,826	0,257					
during the project to act in accordance with team work to suppressed the their real reactions.	0,834	0,318					

Deep Behaviour(Team Members..)			**3,81**	**0,75**	**0,839**	**0,892**	**0,674**
tried to evaluate the events during the project with the perspective of other team members.	0,754	0,212					
made a sincere effort to adapt to each other during the project.	0,837	0,291					
were aware of the necessity of working together in collaboration with each other during the project.	0,806	0,284					
While our .. were communicating with each other during the project, they felt like the problem of their other friends.	0,832	0,293					
felt really cheerful after a while when they often tried to look cheerful while working collaboratively during the project.	0,618	0,199					
Automatic Emotional Regulation(As a Team..)			**3,99**	**0,59**	**0,854**	**0,892**	**0,583**
We motivated ourselves during the project as a team.	0,745	0,259					
we checked our rage during the project, discussed the challenges as rational and surpassed them.	0,764	0,232					
Even if we were very angry at each other during the project we were able to calm down quickly and overcome these negative emotions.	0,869	0,258					
we were able to control our emotions well during the project.	0,815	0,218					
we were able to consider with each other's perspective during the project and be respectful.	0,811	0,281					
Team Performance(This Project..)			**4,04**	**0,65**	**0,921**	**0,936**	**0,645**
Market Success							
met or exceeded volume expectations	0,817	0,197					
met or exceeded the production and commercialization expectations of the first year.	0,792	0,183					
met or exceeded sales expectations	0,884	0,201					
met or exceeded profit expectations	0,869	0,201					
met or exceeded Return on Investment expectations	0,852	0,213					
met or exceeded market share expectations	0,767	0,209					
Speed to Market							
was launched faster than our biggest competitor.	0,781	0,324					
was completed in less time than is normally accepted for our Industry.	0,844	0,329					
was introduced to the market before or after the original timetable developed at the beginning of the Project.	0,832	0,291					

top management was pleased with the time from design to full commercialization.	0.769	0,295					
Top Managemet Support(Our Top Managers…)			**3,71**	**0,84**	**0,901**	**0,938**	**0,834**
devote considerable effort to developing their subordinates	0,718	0,194					
give everyone sufficient authority to do their jobs well	0,841	0,351					
push decisions down to the lowest appropriate level	0,838	0,263					
quickly replicate best practices across organisational boundaries	0,715	0,210					
give ready access to information that others need	0,812	0,239					
Note: Loadings shown are after oblique rotation and Kaiser normalization.Furthermore, discriminant validity is supported by two criteria in this study:							
The AVE of each latent construct should be higher than the construct's highest squared correlation with any other latent construct (Fornell and Lacker, 1981).							
An indicator's loading should be higher than all of its cross loadings (Hair et. al., 2011).							

In this research, Partial Least Squares (with the PLS-Smart 3.0 statistical package program) approach was used within the Structural Equation Model (SEM) to perform survey-related measurements and to calculate the structural parameters. According to the results obtained using the Smart PLS program, that team structural premises in the model explain 16% of the change in surface behavior (R2 = 0.16), 54% of the change in deep behavior and 43% of the change in automatic emotional regulation. The premises, control variables and emotional labor behavior presented in the model explain 23% change in market speed and 41% change in market success.

Table 02. Correlations among latent variables with sq. rts. of AVEs

Construct	1	2	3	4	5	6	7	8	9	10	11	12
1.Trust												
2.Discipline	0,438**											
3.Team Cris.	0,611**	0,350**										
4.Team Anx.	-0,188	-0,113	0,01									
5.Surface Beh.	0,002	0,076	0,273**	0,363**								
6.Deep Beh.	0,678**	0,442**	0,650**	-0,095	0,230**							
7.Auto.Em.R.	0,581**	0,373**	0,607	-0,046	0,290**	0,741**						
8. Speed to Market	0,529**	0,337**	0,610**	0,034	0,13	0,498**	0,481**					
9. Market Success	0,294*	0,055	0,479**	0,187	0,322**	0,382**	0,380**	0,599**				
10.Top Man.Sup.	0,574**	0,534**	0,417**	-0,211**	-0,038	0,480**	0,420**	0,358**	0,189			
11.Team Size	0,076	-0,021	0,142	-0,099		0,131	0,183	0,019	-0,004			0,292*
12.Project Duration	-0,056	0,052				-0,096	-0,107	-0,076	0,006			

*p<.05, **p<.01,
Note: Square roots of average variances extracted (AVEs) shown on diagonal

4. Findings

Results of the analyses have been shown in Table 4. According to the results, it was found that trust has a positive relationship with the deep behaviour (β:0,376, ρ<0,001), thus H1 is partly supported. Team crise has a positive relationship with the surface behavior (β:0,352, ρ<0,001), deep behaviour((β:0,341, ρ<0,001) and Auto .Emotional Regulation((β:0,352, ρ<0,001),therefore H2 is supported. Team anxiety has a positive relationship with the surface behavior (β:0,331, ρ<0,001), therefore H3 is partly supported. Besides, there isn't relationship between discipline and emotional labor behaviors, therefore H4 is not supported. There are no relationships between emotional labor behaviours and team performance. Therefore, H5, H6, H7, H8, H9, H10 are not supported. However, there is a positive relationship between speed to market and market success (β:0,534, ρ<0,001), therefore H11 is supported. Finally, top management support has a moderating affect between surface behaviour and speed to market (β:0,192, ρ<0,1), thus, H13 is a partly supported.

5. Conclusion and Discussions

As the first antecedent regarding the structural context, trust has a positive and significant effect on deep behavior and automatic emotional regulation, which is two of the dimensions of emotional labor, in other words, as trust increases, deep behavior and automatic emotional regulation increase which exhibited by members (Barczak et al. 2010; Geng et al. 2013; Al-Rais 2011). It is understood that the feeling of trust of the project team members towards the other members and the management will make it easier for the members to internalizing the emotions which they do not actually feel and adopt them as their own. Findings for team stress in this study as the second structural antecedent, in parallel with the studies of (Dyne et al., Zahavy and Freund, 2007; Liu et al., 2008; Jarvi, 2015), team crisis has positive and significant effects on all emotional labor dimensions. Team anxiety, the second sub-dimension of stress, has positive and significant effects only on surface behavior.

One of the striking results of this study is that, as the third structural antecedent, the discipline involved in this study, unlike Ghoshal and Barlett,1994; Manz,2009, did not have an effect on emotional labor behaviors. This situation may be due to the fact that the need for ICT projects to be conducted according to specific project management processes by its nature and team members have at least associate degree and have above average cognitive intelligence and competencies, the organization does not need to introduce additional disciplinary rules. An another interesting finding of this study is that; it is seen that emotional labor behaviors do not have any direct effect on team performance (market success and the speed to market) in project teams. However, the findings reveal the moderating effect of top management support on the relationship between surface behavior and market success.

According to the findings of this study, it is seen that there is a significant and positive relationship between the speed of market launch and market success. Especially in the ICT sector, it is understood that the introduction of new products and services earlier than its competitors and close replacement product contributes to the expected market success. This result is parallel to the results of Akgün et al.(2007b).According to the findings, it is seen that top management support does not affect the relationship between emotional labor behaviors and market speed. However, the findings reveal that the relationship between surface behavior and market success increases as top management support increases. It is understood that relationship between stress and market success which is explained by (Collins et al. (2015); Dyne et al. (2002); Akgün et al.(2007b) provide with team anxiety-surface behavior-market success relationship. In this respect, this finding is in parallel with the related literature.

The generalizability of these results is subject to certain limitations. Firstly, the study was conducted in Turkey. For generalizability, it is recommended that the current research model should be tested in different cultural context and sectors. Additionally, increasing the sample size would be crucial for the generalizability of the results. This study focuses only on the results of emotional labor behaviors under the influence of some team structural antecedents. Besides, similar studies can be performed with other emotional labor behavior, if any, such as emotional diversity in the literature. Future researchers may evaluate the consequences of emotional labor behaviors that relate to organizational culture, leadership types, and organizational climate.

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THE EFFECTS OF LOCUS OF CONTROL, ORGANIZATIONAL SIZE, THINKING STYLE AND PROBLEM-SOLVING STYLE ON DECISION MAKING[1]

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Abstract

Decision-making is accepted as equivalent to management and has become the center of management studies, and it is seen as a black box of organizations. So, to understand the managerial activities, it's crucial to explore decision making behaviors in organizations. As a conclusion of literature review, decision-making behavior is basically influenced by four common factors those are the characteristics of the organization, personality traits, behavioral traits of the decision-maker and decision itself. Locus of control as a personality trait, organizational size as part of organizational characteristic, thinking style and problem solving style as a behavioral traits are determined as a antecedents of decision making style. Within this context, this study was conducted to explain the antecedents of the decision-making styles in a structural equation model. A survey was conducted by the members of the Turkish Defense Industry Manufacturers Association (SASAD), from 342 managers who worked at various levels. The data were analyzed using SPSS and AMOS programs. Besides structural equation model analysis, one-way ANOVA, correlation and regression analysis were used to test the hypothesis. Findings showed that the antecedents of decision-making style those thinking style, problem solving style, self-evaluations of the employees on locus of control and organizational size had significant effects on decision making style.

Keywords: Decision making style, locus of control, organizational size, problem solving style, thinking style

1.Introduction

Individuals are in the position of making decisions to reach organizational and personal goals or sharing resources, regardless of the type and size of the organization or the level of members of the organization. If we discuss an organization at a more holistic level, we come across the major problem of organization theories that describe organization as a living organism, which can be summarized as "why do organizations act as they do" (Hambrick and Mason, 1984). The researches carried out to explain this problem focus on two aspects. These are "flow of information" and "decision-making". It could be said that decision-making researches constitute the widest area of interest of both the management field that defines organization as the decision maker and the organizational behavior field. It is considered that it is highly important to address this concept of decision, which is extremely important for organizations, in terms of style, set a theoretical framework as to what its antecedents are, and look into such antecedents in a holistic model.

By centering on the decision-making style, the research intends to investigate the "locus of control" as a personality trait, "organizational size" as part of organizational characteristic, and "thinking style" and "problem-solving style" in an inclusive model. The model is also deepened by including demographic variables, which are term of department of employment, position, educational background, age and gender. In summary, this research tries to understand decision-making behavior through style within an organization and intends to test a model, which is set up to include the antecedents of such behavior, on defense industry companies. Thus, it is aimed to make descriptive contributions in the theoretical field, provide explanatory and definitive data in terms of management, and come up with suggestions to the defense industry. Various hypotheses were formulized based on the relations discovered in the research, and such hypotheses were tested in a holistic structure within the frame of the model created and the findings were discussed. The studies on decision-making in the national literature are mostly analytical decision-making studies. Others focus on individual decision-making behaviors and the psychological factors that influence that behavior. No holistic study discussing organization as a decision-making unit was encountered. In this sense, this could serve to explore organizatıns as decision making unit.

[1] This study is produced from PhD Thesis

2.Literature Review and Theoretical Framework

2.1. Decision-making

The main problem of organization theories is summarized with the question "why do organizations act as they do" (Hambrick and Mason, 1984). In the studies that aim to explain this situation, there are lots of theories ranging from the idea that organizational behaviors are shaped by the environment to the idea that an organization influences the environment and dominates its behaviors (Sargut and Özen, 2007). In this context, the studies that either try to find an answer to the question how organizations should be managed or try to explain and understand it (Sargut and Özen, 2007) and the studies on strategic management focus on two subjects. These are "flow of information" and "decision making" (Hambrick and Mason, 1984). It could be said that decision-making researches constitute the widest area of interest of the management field.

Furthermore, it is suggested that effective decision-making is an important life and work skill (Loo, 1999). A thorough look into the decision-making function of management within an organization reveals that the most important qualification for a manager is mastership at decision-making. Hence, a good manager, i.e. a good decision-maker, becomes a value that organizations want to possess (Tural, 1988). For such reasons, the center of the researches in the last three decades has been occupied by organizational decision-making (Tindale, and Kluwe, 2015).

Decision-making researches fall under three main groups: "descriptive, normative and prescriptive" (Bell et al., 1988). In studies defined as "descriptive", the focus of the studies is the decision itself and how the decision is made, and the studies try to understand how people think. The studies defined as "normative" present canonical approaches, such as logical decision-making processes, how a decision should be made, and what the important things are when making a decision. Lastly, the studies defined to be "prescriptive" center on what kind of training should be provided to make a good decision and improve the decision (Bell et al., 1998; Imas, 2003). It could be said that this study is definitional in the way it sets forth how and from what the decisions of decision-makers are influenced.

2.2. Decision-making Style

Decision-making style is a consistent, perceptive and mental activity that originates from the characteristics of an individual (Nutt, 1990). Decision-making style is also defined as the response of an individual to a decision-making task and the manner of interpretation (Baiocco, 2009). Decision-making style suggests why different decision-making processes are adopted in similar situations. Shortly, it indicates that individuals and managers response to similar situations they encounter with different decision-making processes (Nutt, 1990). Scott and Bruce (1995) suggest that the definition of decision-making style is "the learned habitual response pattern exhibited by an individual when confronted with a decision situation" and it is not a personality trait, but "a habit-based propensity to react in a certain way in a specific decision context".

There are five different decision-making styles suggested by Scott and Bruce (1995), which are also used in the research. These are Rational Decision-Making Style, Intuitive Decision-Making Style, Dependent Decision-Making Style, Avoidant Decision-Making Style, and Spontaneous Decision-Making Style, as given in the order of the scale. (i) Rational Decision-Making Style: Alternatives are logically assessed and researched. (ii) Intuitive Decision-Making Style: Hunches and feelings are relied on. (iii) Dependent Decision-Making Style: Advice and direction of others are evaluated. (iv) Avoidant Decision-Making Style: It is the tendency to avoid making decisions. (v) Spontaneous Decision-Making Style: It is the tendency to make quick decisions spontaneously, without thinking and considering the alternatives.

2.3. Factors that Affect the Decision-making Behavior

In a review of critical literature on the decision-making process, it is suggested that there are three main factors that have an effect on this process (Rajagopalan, 1993). These are environmental factors, organizational factors and decision-specific factors.

In another study investigating the factors that affect manager decisions (Simons and Thompson, 1998), organizational environment and managerial concepts are examined. Four factors were found to affect the decision-making behavior; which are "past experience of the manager", "level of complexity of the decision to be made", "the political aspect of the decision", and "time reserved for decision-making".

Another factor that affects the decision-making process is defined as the contextual conditions (Elbanna and Child, 2007). The context here is the personality traits of the decision-maker, the decision-specific characteristics, the external environmental factors of the organization, and the organization itself.

In a similar study, the contextual variables of decision-making process are grouped into three groups (Schneider and Smith, 2004). These are the personality traits of the decision-maker, internal context of the organization and environmental factors.

As a conclusion of these studies, decision-making behavior is basically influenced by four common factors. These are the characteristics of the organization of the decision-maker, the personality traits of the decision-maker, and the behavioral traits of the decision-maker. This study discusses the size of the organization as an organizational characteristic, locus of control as a personality trait, and thinking and problem-solving behaviors as a behavioral trait.

2.3.1. Size of the Organization

The scope of the studies on organizational factors consists of organizational structure, culture, decision-making units, and participation of employees in the decision. In this frame, organization structure is rather at the forefront when compared to the others (Child, 1973).

When trying to analyze both the internal processes of the organization and the environmental changes during the decision-making processes, managers also try to act upon systematic analyses and objective criteria. In this sense, the size of an organization is the main factor that affects the decision-making style (Lorange and Vancil, 1976; Mintzberg, 1973). The prominent concepts in the studies that investigate the effect of organizational size on the decision-making style include defining problems and opportunities, conducting extensive analyses, and using formal planning processes. Organizational performance comes to the fore along among the decision-making studies. On the other hand, it is seen that size of an organization has an impact on participation and extensiveness in decision-making processes, and the greater the size of an organization, the greater the rational processes are in the decision-making(Fredrickson, 1984).

2.3.2. Demographic Characteristics

There is a recent consensus among the researches that demographic characteristics of managers are a significant definer in the organizational processes, in particular decision-making process, which affects the organizational performance (Simons et al., 1990). On the other hand, knowing why and how decision-makers do everything they do within an organization is termed as the “black box” (Lawrence, 1997). Understanding organizational demography is considered important in terms of understanding the black box. For this reason, the study also includes the effects of demographic characteristics on the decision-making behavior.

2.3.3.Thinking Style

Thinking style characterizes the choice of deliberation of an individual during or after learning. The most important characteristic of the thinking style is the absence of skill as in other styles. In short, it is people’s choice about processing the information related to tasks (Zhang, 2001). Thinking styles have the effect to direct the decision-making behavior at each of its stage. It has an impact on which alternatives to address from the stage to defining the situation to selecting alternatives. The thinking style used in the research is Cognitive Experiential Self Theory (CEST). The theory suggests two types of information processing systems called Experiential-Intuitive System and Rational-Analytical System, which are independent of but interactive with each other (Epstein et al., 1996). Analytical-rational thinking style basically functions at the cognitive level and is independent of purposeful, analytical, verbal and relatively emotional effects. On the other hand, intuitive-experiential thinking style is a system that functions under the influence of automatic, preferably cognitive, associative, holistic, essentially nonverbal and spontaneous feelings.

2.3.4.Locus of Control

Locus of control relates to the reinforcements experienced by individuals, i.e. to what the results they obtain are attributed. It is seen that people tend to believe that the things that happen to them, good or bad or positive or negative, are mostly determined by either factors beyond their control or their own will. People tend to attribute the situations they experience either to their own behaviors or factors beyond their control, such as luck or fate (Lefcourt, 1982). Rotter (1966) names this point, in or outside of which an individual lives and on which the

individual focuses, as the locus of control. In this article, people who perceive that control internally resides with them are expressed as "people with internal locus of control" whereas those perceive that external factors have control over what happens are expressed as "people with external locus of control".

Individuals with external locus of control believe that fate, luck or certain forces other than themselves have a control over the outcomes (Rotter, 1954). Their belief that they have no control over the environment indicates that they are rather passive people that trust less in themselves and environment (Loosemore and Lam, 2004; Silvester et al., 2002). People with internal locus of control, on the other hand, feel themselves responsible for the things that happen to them and believe that they have control over the results (Rotter, 1954). From this point of view, people with internal locus of control are said to be more successful, effective, assertive, enterprising, confident and independent people (Loosemore and Lam, 2004; Silvester et al., 2002).

2.3.5.Problem Solving

In philosophical terms, problem is defined as anything that confuses and challenges people and obscures belief (Gelbal, 1991:167) whereas, in managerial terms, it means an obstacle to the existing powers a person has collected to reach a desired goal (Bingham, 1998; Morgan, 1999). In terms of management, managerial problem-solving has been investigated in many perspectives. In the studies conducted to establish a theory in this context, "managerial problem-solving, problems, problem solvers, nature of managerial task and traits of people" have been among the most-studied subjects (D'Zurilla et al., 1998). It is suggested that problem-solving should involve at least three processes: being aware of the situation, choosing between alternative courses of action and evaluating the outputs (Tallman and Gray, 1990).

Decision-making and problem-solving activities are generally referred to as work of "choosing". The basic constituents of such work of choosing are defining goals, finding the necessary course of action, evaluation and choosing from alternatives. Defining goals and setting the courses of action are defined as problem-solving. The last part, which is evaluation and choice, is named as the decision-making stages (D'Zurilla et al., 1998). It is evident that the problem-solving process that is initiated right before making a decision is an antecedent of the decision-making behavior.

It can be inferenced from the literature that there are four major factors that affect the decision-making style those are organizational characteristics (performance, size, etc.), personality traits, decision-specific characteristics and environmental characteristics. Two of these (personality traits and organizational characteristics) are included in the model. In addition, thinking style and problem-solving style, which are suggested to be the antecedents of the decision-making style, are included in the model to explain the decision-making style. In terms of demographic variables that reflect the personal state of the decision-maker and their status within an organization, gender and age of the person were used in addition to the department of employment within the organization, term of employment, position of employment, and educational background.

Below are the hypotheses established as part of the model shown in Figure 1 and tested in the study.

H1 : Organizational size has significant effect on decision-making style.

H2 : Organizational size has significant effect on thinking style.

H3 : Organizational size has significant effect on problem-solving style.

H4 : Locus of control has significant effect on thinking style.

H5 : Locus of control has significant effect on problem-solving style.

H6 : Locus of control has significant effect on decision-making style.

H7 : Thinking style has significant effect on problem-solving style.

H8 : Thinking style has significant effect on decision-making style.

H9a : Age has significant effect on decision-making style.

H9b : Gender has significant effect on decision-making style.

H9c : Term of employment has significant effect on decision-making style.

H9d : Position of employment has significant effect on decision-making style.

H9e : Education has significant effect on decision-making style.

H9f : Department has significant effect on decision-making style.

3. Research Method

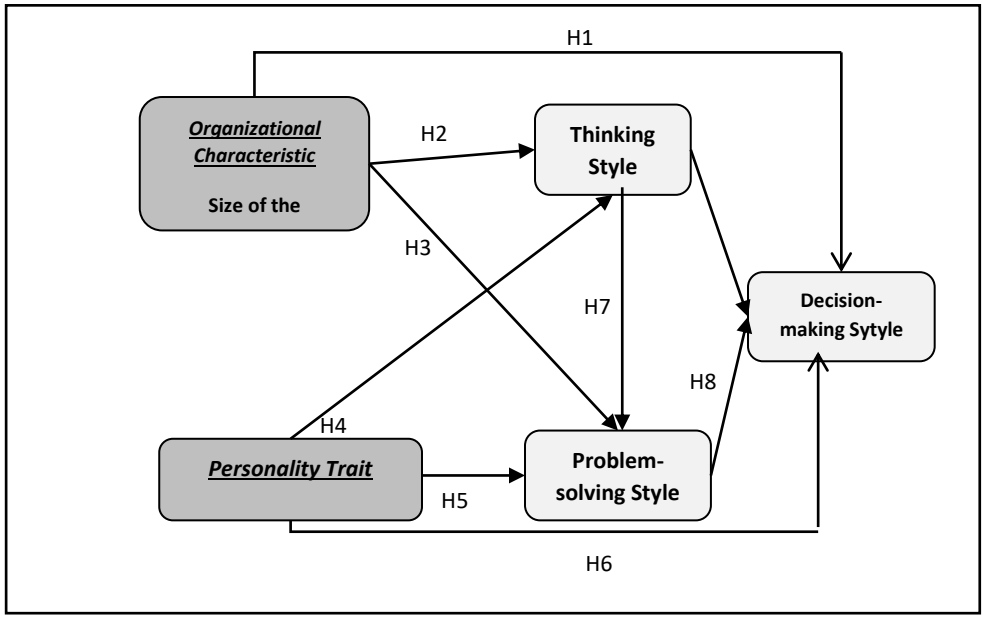


Figure 01. **Hypothetic Model**

3.1. Sample and Data Collection

Population of the study is constructed among the members of the Defense Industry Manufacturers Association. In this sector, there are approximately 10,000 people working in the Defense Industry. The sample of the research are the participants that would represent the population, who were randomly selected from 27 different companies. The establishments were sent 464 questionnaires in total. 342 of them were returned. The rate of return is 73%.

3.2. Analyses

The data was analyzed using SPSS and AMOS programs. The scale developed by Scott and Bruce (1995) was used for decision-making style, the scale developed by Epstein et al. (1996) was used for thinking style, the inventory developed by Heppner and Peterson (1982) was used as problem-solving inventory, and the scale developed by Rotter (1996) used as the locus of control. The Cronbach's Alpha values for each of the factors exceed 0.70, which indicates the reliability of scales used in the survey. A Sampling Sufficiency Statistics (Kaiser-Meyer-Olkin/KMO) test was conducted to see the relevance of the inter-variable correlation of the scales to the component analysis, and the reliability of the scales for the Decision-making style, Thinking style, Problem-solving inventory; and Locus of control was found to be 0.823, 0.873, 0.928 and 0.740, respectively.

In the research, the model shown in Figure 02 was created, which was supported by the theoretical framework in order to understand the relations of all the variables with each other at the same time by centering on the decision-making style; and the relations were analyzed holistically in this model.

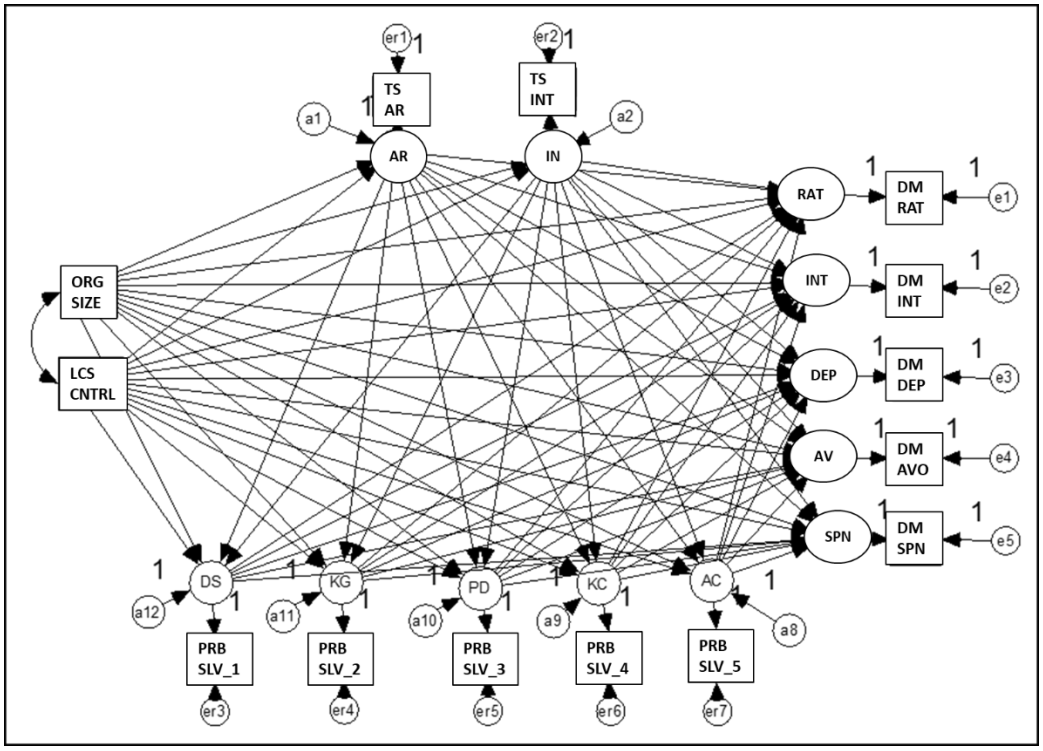


Figure 02. Final research model

4. Findings

The inter-variable relations found out as a result of the analysis are shown in Table 1. Accordingly, it is seen that organizational size (β= 2,100 p<.05) and locus of control (β= 3,369 p<.001) have an effect on analytical-rational thinking style; analytical-rational thinking style (β= 5,662 p<.001) and experiential-intuitive thinking style (β= 3,097 p<.05) have an effect on rational problem-solving style; and analytical-rational thinking style (β= 5,423 p<.001) and experiential-intuitive thinking style (β= 3,390 p<.001) again have an effect on self-confident problem-solving style. Again, analytical-rational thinking style was found to be effective on planned-evaluator problem-solving style (β= 4,680 p<.001), avoidant problem-solving (β= 2,388 p<.05) style, and intuitive decision-making style (β= 1,995 p<.05).

On the other hand, experiential-intuitive thinking style is effective on rational problem-solving style (β= 3,097 p<.05), self-confident problem-solving style (β= 3,390 p<.001), avoidant problem-solving style (β= 3,828 p<.001), intuitive problem-solving style (β= 3,272 p<.05), dependent decision-making style (β= 2,769 p<.05), and spontaneous decision-making style (β= 1,982 p<.05).

Another effective factor is rational problem-solving style. This variable was observed to be effective on rational decision-making style (β= 2,337 p<.05), avoidant decision-making style (β= -2,332 p<.05), spontaneous decision-making style (β= -2,463 p<.05), and dependent decision-making style (β= -2,398 p<.05).

All of these findings indicate that the variable that has the greatest effect on the rest of variables included in the model is the thinking style.

Table 01. Regression Weights (Significant Relations)

VARIABLES			Estimate (B)	S.H.	Standardized β	p
A_R	<---	ORG_SIZE	,000	,000	2,100	,036
A_R	<---	LCS OF CNTRL	,086	,026	3,369	***
AVO	<---	LCS OF CNTRL	-,238	,111	-2,138	,032
PD	<---	LCS OF CNTRL	-,265	,108	-2,467	,014
DS	<---	A_R	2,749	,486	5,662	***
KG	<---	A_R	2,759	,509	5,423	***
PD	<---	A_R	2,152	,460	4,680	***
KC	<---	A_R	1,000	,419	2,388	,017
DS	<---	Y_S	2,092	,676	3,097	,002
KG	<---	Y_S	2,495	,736	3,390	***
PD	<---	Y_S	2,635	,722	3,651	***
KC	<---	Y_S	2,701	,706	3,828	***
AC	<---	Y_S	3,173	,970	3,272	,001
INT	<---	A_R	-1,240	,622	-1,995	,046
RAT	<---	DS	1,388	,594	2,337	,019
AVO	<---	DS	-2,186	,937	-2,332	,020
SPN	<---	DS	-1,725	,700	-2,463	,014
DEP	<---	DS	-1,101	,459	-2,398	,016
DEP	<---	Y_S	1,356	,490	2,769	,006
SPN	<---	Y_S	1,025	,517	1,982	,048

The analysis of the structural equation model allows us to see the inter-variable effects on three groups: total, direct and indirect. The total effects of the variables effective on the decision-making styles are given in Table 2. It was found out that the direct effects was "0" for such variables, which indicated that all the effects seen in total were indirect effects.

Table 02: Total Effects on the Decision-Making Styles

	LCS OF CNTRL	ORG_ SIZE	TS_INT	TS_AR	TNK	SCN	PLN	AVO	SPN
DM_SPO	-,111	-,021	-,132	-,959	-1,412	,915	,253	,076	,019
DM_AVO	-,117	-,060	-,360	-1,039	-1,642	1,154	,378	,176	,020
DM_DEP	-,009	-,150	-,043	-,555	-,859	,336	,093	,027	,035
DM_INT	-,015	-,180	,824	-,345	,342	-,292	-,251	-,112	,191
DM_RAT	,173	,077	,204	,516	1,080	-,580	-,237	-,001	,018

p<.001

5. Conclusion and Discussion

The aim of this research is to identify the predecessors of decision making in the context of organizational characteristics, personality traits and behavior style of decision maker. Size, locus of control, thinking style and problem-solving style are used respectfully. In the research, organizational size and locus of control were studied as independents variables, thinking style and problem-solving style were studied as both dependent and independent variables, and decision-making style was studied as a dependent variable.

Findings of regression analysis show that organizational size has a meaningful effect on the decision-making style. It was found out that the small size organizations preferred intuitive decision-making style whereas the organizations greater in number preferred analytical-rational thinking style relative to smaller ones. As a result of the findings, it was seen that Hypotheses 1 and 2 were supported and Hypothesis 3 was partly supported.

A regression analysis was conducted to see if locus of control had an effect on thinking style, problem-solving style and decision-making style; in addition. It was found that decision-making styles of the people with internal locus of control had positive relations with rational decision-making style whereas the people with external locus of control had negative relations with rational problem-solving style and analytical-rational thinking style. As a result of these findings, it was seen that Hypotheses 4, 5 and 6 were supported.

Correlation and regression analyses were conducted to see the effects of thinking and problem-solving styles on decision-making styles; and many effects were seen to be supported by the theoretical data. Analytical-rational thinking style was found to be effective on rational decision-making style and planned-evaluator problem-solving style, experiential-intuitive thinking style was found to be effective on intuitive decision-making style. As a result of these findings, it was seen that Hypotheses 7 and 8 were supported.

Looking at the hypotheses related to the demographic variables, it was seen that only gender had no effect on the decision-making styles. On the other hand, increase in age, management level and term of employment caused an increase in the tendency to prefer rational decision-making style. Considering the education, it was found out that holders of master's degree used rational decision-making style more than holders of doctoral degree and bachelor's degree. Again, no differentiation was detected across the departments studied; however, employees of finance department were seen to rather possess spontaneous decision-making style when compared to the employees of production, marketing and R&D. As a result of these findings, it was seen that Hypotheses 9a, 9c and 9d were supported, 9e and 9f were partly supported, and 9b was not supported.

In conclusion, as inferred from the descriptive literature, decision-making is used as an analysis unit of both organizations and individuals. Considering choosing process before organizational activity or individual action, decision-making is a subject that must be addressed in itself when explaining organizational behavior.

As a conclusion, analysis of decision-making behavior starts with psychological traits of people and extends to organizational structure. Therefore, studies on decision-making should be examined as a function of the human mind, as a mental process, and together with various personality traits, and lastly with demographic characteristics, environment and the position of the decision-maker within the organization along with the organization-specific characteristics. The model used in this study may be developed and made more comprehensive with various variables. We hope that holistic approach to the concept of decision-making style will provide a certain model for the decision-making behaviors of individuals within organizations.

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PSYCHOLOGICAL EMPOWERMENT AND ATTRACTIVENESS IN EMPLOYER BRANDING: THE MEDIATOR ROLE OF PERCEIVED ORGANIZATIONAL SUPPORT

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Abstract

In recent years, both firms and researchers focus on concepts of psychological empowerment, perceived organizational support (POS) and employer branding to find out and test their effects on leading competitive advantage, internalizing company values and assisting in employee retention. In the literature, there are many studies conducted on these concepts, however there is no one which investigates relationship between them. In this context we proposed a research model to investigate the effect of psychological empowerment on attractiveness in employer branding mediated by the effect of POS empirically. Depending on previous studies, we investigate psychological empowerment motivations as meaning, impact, self-determination and competence and attractiveness of employer branding factors as values of interest, development, application, social and economic. We also treated POS as mediator because of the possibility to affect the relationship between psychological empowerment and attractiveness in employer branding. This study aims to prove that the state of psychological empowerment makes employer branding attracted. That possible finding supports two possible results: retention or employment of employees who have high commitment and performance. These results can be useful for firms managers. They can also be inspiring for following researchers to analyse relationship between psychological empowerment and employer branding with new mediators.

Keywords: Attractiveness in employer branding, perceived organizational support, psychological empowermen

1.Introduction

In recent years, both firms and researchers focus on concepts of psychological empowerment, POS and employer branding to find their effects. In order to discuss their effects and find out the relationship between them, introducing these concepts can be crucial.

Until recently, only external ones are seen as customers and internal customers are ignored (Ewing & Caruana 1999). The concept of internal marketing claims that employees are internal customers and works are internal products that should captivate, develop and motivate the employees (Berry & Parasuraman 1991). As Kotler (1994) defines internal marketing as the work of successful recruiting, training and motivating employees. In order to make both current and potential employees believed that the place is great to work, it is needed to make an effort and that efforts are described as employer branding by Ewing, Pitt, de Bussy and Berthon (2002). Strong employer brands can have opportunity to decrease the employee acquisition cost, develop employee relations, enhance retention of employee and even offer lower-average salaries compared to market (Ritson, 2002).

In order to make employer branding measurable, Berthon, Ewing and Hah (2015) use the concept of employer attractiveness that means benefits that are visualised by a potential employee for working a specific organization. In their study, employer attractiveness has five different factors, these are interest, social, economic, development and application values. These factors are related to exciting environment to work, distinctive practices of work, use of employee creativity to produce high quality services and products, joyful environment of work, good collegial relationship, above-average salary, package of compensation, security of job, opportunities of promotion, recognition, self-esteem and confidence, career enhancing experience, being a spring board to future employment, applying what is learned and to teach it to others, both humanitarian and customer oriented working environment.

Psychological empowerment can be defined as intrinsic motivations which are exhibited in four cognitions that reflect a human being's orientation to his or her job role: meaning, impact, self-determination and competence

(Thomas & Velthouse,1990). These dimensions are related to subjective assessment of the importance of the job, belief in ability to influence job environment, sense of control and autonomy and personal sense of efficacy (Vardi, 2000). We believe that these dimensions have effect on the attractiveness in employer branding. We propose that whether empowering an employee psychologically or not has an effect on the one's perception and prioritization which is made while choosing a new employer.

The relationship between psychological empowerment and attractiveness in employer branding can be mediated by many things. In this study, we have focused on mediator role of POS which is defined as global beliefs that is developed by employees to determine readiness of the organization to award increased effort of work, concerning the extent to which organization values their well-being and contributions. Organizations' treatments aim to increase POS can be classified as justice, assist of supervisor, organizational awards and conditions of work (Eisenberger, Huntington, Hutchison & Sowa, 1986). They are respectively relevant to resource distribution among employees (Greenberg, 1990), valuation of employees' contributions and well-being by the organization (Kottke & Sharafinski, 1988), recognition, pay and promotions, security of job, autonomy, role stressors, opportunity to trainings and organization size (Rhoades & Eisenberger, 2002). We believe in that the relationship between psychological empowerment and attractiveness in employer branding can be mediated by any of these POS instruments.

As explained briefly, in this study, we investigate the role of psychological empowerment dimensions on the factors of employer attractiveness under the mediator role of POS. Our aim is to reach usable results for both future studies and managers of firms.

This paper is organized as follows: the first section gives theoretical information about psychological empowerment, POS and employer branding. The following section focuses on research model and proposition development. In the last section, expected results, research contributions and limitations will be given.

2. Literature Review and Theoretical Framework

2.1. Psychological Empowerment

Empowerment is an attention drawn concept in the studies of organization literature (Spreitzer, 1995). It can be defined as a process followed by people, organizations or community to dominate their affairs and it differs by people, organizations and settings (Rappaport, 1987). Recent researches focus on its psychological sides in the work place (Spreitzer, Janasz & Quinn, 1999) and there are some empirical studies which relate empowerment to satisfaction of work and symptoms of general stress (Thomas, Tymon & Thomas, 1994); socio-political support and climate for participation (Spreitzer, 1996). Thomas and Velthouse (1990) who built their work on the work of Conger and Kanungo (1988), defined psychological empowerment as main motivation exhibited in four cognitions that reflect an human being's orientation to his or her job role: meaning, competence, self-determination and impact. Meaning is the worth of work target according to a judgement of an individual's own standards and ideals (Thomas & Velthouse, 1990) or subjective evaluation of the importance of the work activity (Vardi, 2000). Competence, also called as self-efficacy is a belief in one's ability to perform an activity of work well (Gist, 1987) or personal understanding of efficacy (Vardi, 2000). Work role is focused in competence dimension (Spreitzer, 1995). Self-determination is a sense of preference to direct one's action (Deci, Connell & Ryan, 1989) and reflection of autonomy over processes such as deciding for something related to work (Bell & Staw, 1989; Spector, 1986) or one's autonomy or sense of control. Lastly, impact can be defined as belief in one's capability to affect the work environment (Vardi, 2000). It is also called as opposite of learned helplessness (Martinko & Gardner, 1982). Previous researches show that meaning leads to sacrifice, high commitment and concentration of energy (Kanter, 1968), competence leads to persistence in challenging cases (Gecas, 1989) and high performance (Locke, Frederick, Lee & Bobko, 1984), self-determination leads to interest in activity and learning (Deci & Ryan, 1987) and accomplishing the aim of the task (Thomas & Velthouse, 1990).

According to Spreitzer's (1995) tested Partial Nomological Network of Psychological Empowerment in the Workplace model, general feeling of self-esteem, access to information and rewards as an incentive affects dimensions of psychological empowerment and resulted in managerial effectiveness and innovative behaviour. Managerial effectiveness is defined as the degree to which a manager meets or exceeds job role expectations. It is claimed that empowered managers consider themselves as competent and able to affect their environments of work (Spreitzer, 1995). Innovative behaviours are change oriented because they contain the creation of a new

product, idea, service or process (Woodman, Sawyer & Griffin, 1993). When empowered individuals believe in that they have impact and autonomy, they are tended to be more creative, feel less prevented and likely to be innovative (Amabile, 1988).

2.2. Perceived Organizational Support

As defined in The American Heritage Dictionary, commitment is "the state of being emotionally or intellectually devoted, as to belief, a course of action or another person" (n.d) and in parallel to that, organizational commitment defined as orientation or attitude toward the organization which combines identity of the individual to the organization by Sheldon (1971). According to Levinson, employees have inclination to see actions of organization's agents as organization itself (1965) and that point of view helps for creating a concept of POS which was defined as global beliefs that is developed by employees to determine readiness of the organization to reward increased effort of work, concerning the extent to which organization values their well-being and contributions (Eisenberger, et al., 1986).

Organizational support theory, developed by Eisenberg et al. (1986), claims that the improvement of POS is encouraged by inclination of employees to define the organization manlike characteristics. That theory addresses some psychological processes underlying consequences of POS. Firstly, POS should produce the feeling of obligation to care organization well-being and help the organization to attain its goals. Secondly, POS attitudes like caring, recognition and esteem should meet employees' socioemotional needs and empower their organizational membership. Thirdly, POS should make employees believed in that increased performance is recognized and awarded by the organization. The processes should have affirmative results for both employees and the organization, results can be increased satisfaction of work for employees, commitment and performance and reduced turnover for the organization (Rhoades & Eisenberger, 2002).

Organizations' treatments aim to increase POS can be classified as justice, assist of supervisor, conditions of work and organizational awards. Procedural justice concerns the justice of resource distribution among employees (Greenberg, 1990) and it has both structural and social aspects. Structural aspect is relevant to decisions that influence employees, including enough briefing before decisions are performed and social aspect is relevant to quality of interpersonal treatment in resource distribution, including behaving employees with respect (Rhoades & Eisenberger, 2002). Supervisory support concerns valuation of employees' contributions and well-being by the organization (Kottke & Sharafinski, 1988). According to organizational support theory, organizational awards such as recognition, pay and promotions also contribute to POS. Similar to these, job conditions also affect POS. Job security, autonomy, role stressors, opportunity to trainings and organization size can be classified as job conditions (Rhoades & Eisenberger, 2002).

According to Rhoades and Eisenberger's qualitative study (2002), POS has strong relationships with organizational commitment, satisfaction of work, positive state of mind at work, desire to remain with the organization and intention to leave the organization. POS has medium relationships with strains, involvement of job, behaviours of withdrawal, sort of turnover such as lack of continuity and lateness.

2.3. Employer Branding

All organizations work for having a sustainable competitive advantage in order to make profit and survive (Sivertzen, Nilsen & Olafsen, 2013). In order to succeed in having competitive advantage, recruiting qualified employees and combine their skills is a good way (Boxall, 1996). The importance of brand is well known in recruitment process (Sivertzen et al., 2013) and it can be defined as a collection of perceptions in consumers' mind (Kapoor, 2010). Ambler and Barrow (1996) describes employer brand as "the package of functional, economic and psychological benefits provided by employment, and identified with the employing company" (p.187). The term of branding comes from marketing (Cascio & Graham, 2016) and defined as "a name, term, design, symbol or any other feature that identifies one seller's good or service as distinct from those of other sellers" by American Marketing Association Dictionary (n.d). Backhaus and Tikoo (2004) defines employer branding as a process of creating unique identity of employer that differentiates from competitors. They claim that employer branding creates asset of organizational culture and employer brand associations. Brand associations can be defined as ideas and associations that comes mind when a brand name is heard (Aaker, 1991) and they are determinants of brand image that can be defined as senses relevant to a product or non-product related features (Keller, 1993). These brand associations and images affects employer attraction. Employer brand loyalty is seen as attachment of a brand by Aaker (1991) and it is another asset that is created by employer

branding with affecting organization identity and organizational culture (Backhaus & Tikoo, 2004). Morgan and Hunt (1994) claim that when there is a brand loyalty of customer, it is not very likely to change the customer preference, the source of that attitude is trust between the customer and the product. According to Backhaus and Tikoo (2004), brand loyalty of employer is the promise that is made by employees to their employers and that promise can be seen as worker's feeling of loyalty to the organization. That promise makes employees productive.

In brief, employer branding is an effort to develop relationship between brand loyalty of employer and productivity of employee and to create good brand associations and images to make a brand attracted. That effort has effects on both retention and recruiting best possible human talent (Backhaus & Tikoo, 2004).

In order to make employer branding measurable, Berthon, et al. (2005) use the concept of employer attractiveness that means benefits that are visualised by a potential employee for working a specific organization. In their study, employer attractiveness has five different factors. Factor of interest value is relevant to exciting environment of work, distinctive practices of work and use of creativity of employee. Factor of social value concerns happy and fun working environment and good collegial relationship. Factor of economic value related to above-average salary, compensation package, job security and promotional opportunities. Factor of development related to recognition, self-worth and confidence, career enhancing experience and a spring board to future employment. Finally, factor of application value concerns with applying what they have learned, to teach it to others and both humanitarian and customer oriented working environment.

3. Research Model and Propositions

In this study, we propose that there is a positive relationship between psychological empowerment and attractiveness in employer branding and POS has mediating effect on that relationship. As mentioned further, there are many studies about psychological empowerment, attractiveness of employer branding and POS, however any study gather these concepts can be found.

This study aims to prove that the state of psychological empowerment makes employer branding attracted. That possible finding supports two possible results. First, because of the limited counts of firms which have a good employer brand, a jobseeker employee's potential job alternatives decrease and it is resulted as increased retention of employee who has high commitment and performance. Second result shows itself up when the jobseeker finds a firm which has a good employer brand. In that situation, the firm which has a good employer brand employs an employee who has high commitment and performance.

As remarked above, meaning, competence, impact and self-determination dimensions of psychological empowerment has some positive results such as high commitment (Kanter, 1968), self-efficacy (Gist, 1987), autonomy (Vardi, 2000) and we propose that these positively affect interest, social, economic, development and application values of attractiveness in employer branding. According to Rhoades and Eisenberger (2002), POS has effect on satisfaction of work, positive state of mind at work, job involvement and desire to remain with the organization. Because of our assumption that these effects can mediate the relationship between psychological empowerment and attractiveness in employer branding, we include POS to our research model as a mediator. Our research methodology is quantitative, we will collect questionnaires from respondents. In order to limit scope of research, we choose bank employees in Turkey. According to report of The Banks Association of Turkey (n.d), there are c.a. 190k bank employee in Turkey as of September, 2019 and it is needed to collect questionnaires from at least 384 people to reach a statistically meaningful result for the size of that universe (Gürbüz & Şahin, 2016). In order to measure psychological empowerment, attractiveness in employer branding and POS, we plan to use scales of Spreitzer (1995), Berthon, et al. (2005) and Eisenberger, Cummings, Armeli and Lynch (1997) respectively.

3.1. The Relationship Between Psychological Empowerment and Attractiveness in Employer Branding

Concept of psychological empowerment is used frequently in literature as mediator, moderator and main variable. For example, mediating role of psychological empowerment is examined on relationship between transformational leadership and organizational commitment (Avolio, Zhu, Koh & Bhatia, 2004) and relations between the job, interpersonal relationships and work outcomes (Liden, Wayne & Sparrowe, 2000). In the study that transformational and transactional leadership and innovative behaviour relationship is discovered, moderating role of psychological empowerment is examined (Pieterse, Knippenberg, Schippers & Stam, 2010). The relationship between psychological empowerment and leadership (Spreitzer, et al., 1999), job satisfaction

(Wang & Lee, 2009), organizational commitment (Joo & Shim, 2010) and even leader's humour (Gkorezis, Hatzithomas & Petridou, 2011) was studied in various works.

Concept of employer branding is also used frequently in literature but the studies about employer branding are generally definitive. The studies of "Conceptualizing and researching employer branding" (Backhaus & Tikoo, 2004) and "Captivating company: dimensions of attractiveness in employer branding" (Berthon, et al., 2005) can be examples of that definitive works. There are also some works that examine the relationship between employer branding and its influence on managers (Davies, 2008), employee attraction and retention (Sokro, 2012) and job seeking behaviour (Gomes & Neves, 2010).

Although both employer branding and psychological empowerment is linked with many concepts in literature, any study which is on the relationship between psychological empowerment and attractiveness in employer branding can't be found.

Effects of psychological empowerment are stated above. In the light of such information, we propose that fulfilment of psychological empowerment's dimensions such as meaning, competence, impact and self-determination affect interest, social, economic, development and application values of attractiveness in employer branding. If an employee feels as psychologically empowered, attractiveness in employer branding will be affected positively for the one, because with the possible results of interest in activity and high commitment and performance, the state of psychological empowerment makes the one more selective for a potential job. The one will possibly find the firms which have a good employer branding as attractive. Based on this assumption, we state the following proposition:

P1: *There is a positive relationship between psychological empowerment and attractiveness of employer branding.*

3.2. The Mediator Role of Perceived Organizational Support

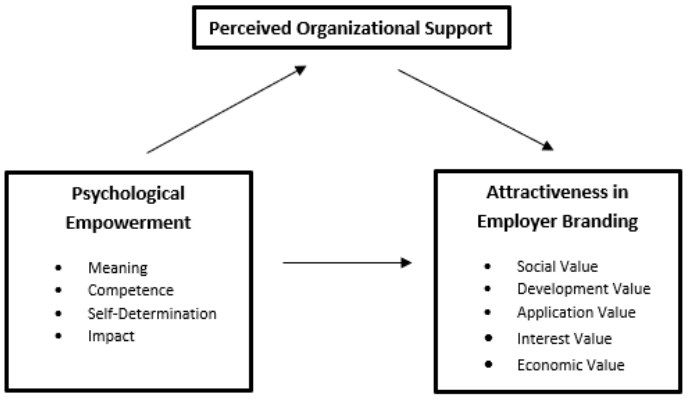
There are many studies that examine the relationship between variables with the moderating or mediating effect of POS. For example, while the relationship between psychological contract and employee performance (Conway & Coyle-Shapiro, 2012), emotional labor and job-related outcomes (Hur, Han, Yoo & Moon, 2015), organizational stressors and organizational citizenship behaviours (Jain, Giga & Cooper, 2013) are examined with the moderating effect of POS; the relationship between procedural justice, supervisor autonomy support, work satisfaction, organizational identification and job performance (Gillet, Colombat, Michinov, Pronost & Fouquereau, 2013), justice perceptions to organizational commitment and intention to leave (Loi, Hang-yue & Foley, 2006) are examined with the mediating effect of POS.

As stated in perceived organizational support section, POS has relationships with organizational commitment, satisfaction of work, positive state of mind at work, desire to remain with the organization, intention to leave the organization, strains, involvement of job, behaviours of withdrawal, sort of turnover like lack of continuity and lateness (Rhoades & Eisenberger, 2002). As seen, job related judgements can be affected from the perception of organizational support and that's why we propose that it has a mediator effect on the relationship between psychological empowerment and attractiveness in employer branding. With that acceptance, we state the following proposition:

P2: *Perceived organizational support mediates the relationship between psychological empowerment and employer branding.*

In this paper, depending on our literature review and propositions we settled proposed research model as below:

Figure 1: Proposed research model



4. Conclusion and Discussions

This study is expected to contribute employer branding literature with findings of psychological empowerment and attractiveness of employer branding relationship mediated by POS. There are many studies about psychological empowerment, attractiveness in employer branding and POS, however any study gathers these concepts cannot be found. In this model, we highlight that the relationship between psychological empowerment and attractiveness in employer branding can be affected by such effects which are driven by POS, like satisfaction of work, positive state of mind at work, job involvement and desire to remain with the organization and that is why we emphasized mediating role of POS. We hope that results of our study will be useful for firms and further researchers with getting psychological empowerment and attractiveness of employer branding and POS together.

The proposed model has some limitations for future researches. First limitation is about generalization. In this study, we choose bank employees as subject of our research and it can be claimed that our universe can represent just employees in banking sector, that is why it is difficult to generalize results of our model especially for different sectors. Another limitation can be biased responds. Although respondents are allowed for completing questionnaires whenever they want, because of that questionnaires contains questions about respondents' current work satisfaction and expectations in future, possible lack of confidence and any current job security concern could affect responses of participants.

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FACIAL EXPRESSION RECOGNITION USING VERY DEEP CONVOLUTIONAL NETWORKS

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Abstract

Facial expressions and emotions can have important implications, as a sign of satisfaction and quality of service. People's emotional states, such as joy, anger and fear, are deduced using facial expressions and tone of voice, visual expressions are one of the main vehicles for information in person-to-person communication. Recently, interest in automatic facial expressions recognition has evolved with the increasing evolution of artificial intelligent technologies. Facial expression recognition (FER) is an important problem, traditional methods such as SVM in Szwoch and Pieniążek (2015), Adaboost in Wang et al (2004), and Random Forest in Dapogny(2015) have been proposed since the past decades. Due to the importance of FER in the design of human-machine interaction systems, several algorithms for feature extraction and machine learning have been developed. Recently, deep learning is widely applied in the field of computer vision as well as in Facial expression recognition. VGG16 is a convolutional neural network model proposed by Simonyan, K., & Zisserman, A. (2014) , The model reaches an accuracy of 92.7% over the IMAGEnet database (Krizhevsky et al 2012) which contains more than 14 million images belonging to 1000 classes. In this work, we propose an architecture of a CNN for the recognition of the facial expression, inspired by the VGG16 model. The richness of the layers, which constitutes the VGG network, makes it possible to treat a maximum of parameters. Experimental results on the FER-2013 dataset show that our model offers precision comparable to advanced methods and the higher level of traditional methods.

Keywords: Facial expressions Recognition, CNN, VGG16

1.Introduction

Facial expressions can naturally be used to evaluate a customer's satisfaction with a product, or to detect a driver's lack of attention to increase driving safety, or to assess the level of passenger stress when landing or arriving at the station. Ekman and Friesen (1971) in the early 1970s showed that there are six universal emotional expressions: disgust, anger, happiness, sadness, surprise and fear. Recently, facial expression recognition (FER) is an important matter in the field of computer vision and artificial intelligence.

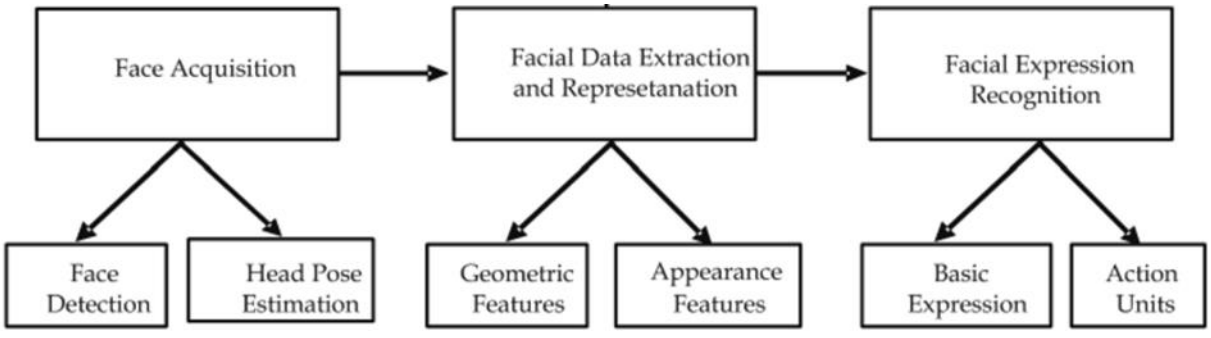


Figure 05. Architecture of a facial expression recognition system

First, conventional approaches have been used, where FER consists of three steps (Fig.1): face and facial component detection, feature extraction and finally, expression classification. The first step is to detect the facial region in the images or input image sequences. A face detector can detect faces in each image or simply detect the face in the first image, then follow it in the rest of the video. The second step is to detect facial features, which are typically landmarks around the facial components. This detection usually starts from a rectangular bounding box returned by a face detector that locates the latter. The last step is a classification of the

characteristic vector obtained from the previous step. Various classifiers have been applied such as, Neural Network, Bayesian Network (BN), Support Vector Machine (SVM) [MNT16], Adaboost, and Random forest.

With the recent high success of deep learning techniques in different fields, deep neural networks are more and more used for automatic FERs. Deep Learning is based on the idea of artificial neural networks and is designed to handle large amounts of data by adding layers to the network. A deep learning model has the ability to extract characteristics from raw data through multiple processing layers consisting of multiple linear and non-linear transformations and learn about these features gradually through each layer with minimal human intervention. FER approaches based on deep learning greatly reduce the dependence on face physics based models and other preprocessing techniques by allowing "end-to-end" learning in the pipeline directly from the input images (Walecki atg al 2017).

2.Literature Review and Theoretical Framework

Among the many models of deep learning available, the convolution neural network (CNN) is the most widely used model. In CNN-based approaches, the input image is converted by a collection of filters into the convolutional layers to produce a feature vector. Each feature vector is then combined with a fully connected network and the Softmax algorithm recognizes that facial expression belongs to a particular class.

The Convolutional Neural Network (CNN) are the most efficient structures for image classification. The name "convolutional neural network" means that the network uses a mathematical operation known as convolution, a special linear operation. Convolutional networks are simply networks of neurons that use convolution, in at least one of its layers(Fig.2).

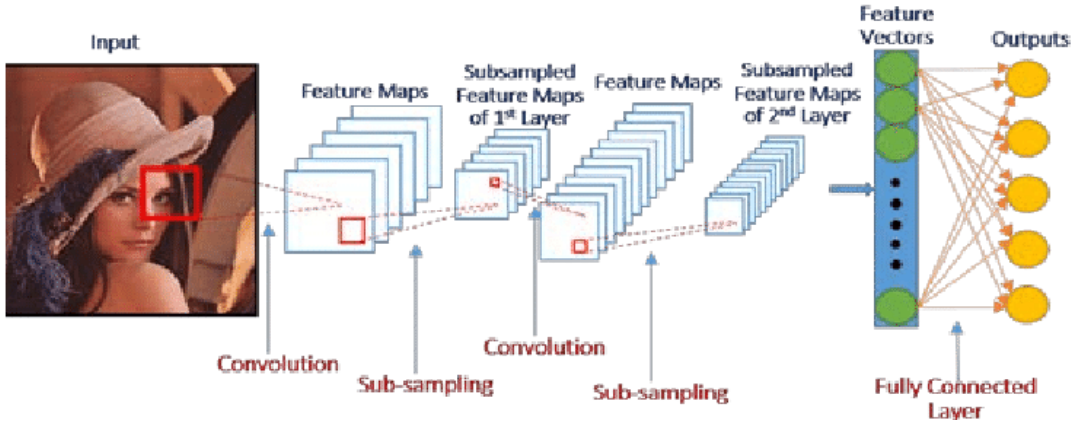


Figure 06. Standard architecture of a convolutional neuron network

Convolution neural networks are based on the multilayer perceptron (MLP) and are inspired on the behavior of the visual cortex of vertebrates. Despite their efficiency in image processing, MLPs have great difficulty processing large images due to the exponential increase in the number of connections related to the size of the images. For example, if we take an image of 32x32x3 (32 wide, 32 high, 3 color channels), a single fully connected neuron in the first hidden layer of the MLP would have 3072 entries (32*32*3). An image of 200x200 would thus result in treating 120,000 entries per neuron which, multiplied by the number of neurons, becomes enormous.

A CNN is structured in three layers: layer convolution, max pooling layer and fully interconnected layers. Convolutional layers take images or feature maps as inputs and transmit them using a series of filter banks to produce feature maps that represent a spatial disposition of the facial image. The weights of the convolutional filters of a feature map are shared and the inputs of the feature map layer are connected locally (LeCun et al 1989). Second, sub-sampling layers lower and reduce the spatial resolution of the map by averaging or maximizing the pooling of given input feature maps, in order to decrease their size and thus ignore variations in small shifts and geometric distortions.[8, 9]. The last layer of a CNN is the fully connected layers, it calculates the class scores of the original image.

Most methods based on deep-learning have adapted a CNN directly for AU detection. Breuer and Kimmel (2017) used CNN visualization techniques to understand the characteristic maps obtained by forming the

detection of emotions of seven universal expressions. They verified the ability of FACS-based features to generalize cross-data providing high accuracy scores. Their models were applied to the detection of micro-expression and allowed to obtain recognition rates superior to the advanced methods. Jung et al. (2015) extracted the temporal characteristics of image sequences, and geometric features from temporal landmarks of the face using two different types of CNN. These two models are combined to offer improved facial expression recognition performance, using a new integration method. Zhao,Chu & Zhang (2016) proposed a unified deep network called deep region and multi-label learning (DRML). It is a new layer of regions that uses feed-forward functions to induce important facial regions for the capture of the facial structural information. This region layer is used as an alternative design between locally connected layers and conventional convolutional layers. The complete network can be end-to-end formed and learns automatically from robust representations of the variations embedded in a local region. Zhao et al. (2015) proposed to integrate the DBNs's (Deep belief networks) advantage of unsupervised feature learning with the MLP's (multi-layer perceptron) classification advantage. First, they used DBNs to learn the raw pixels of facial expression images and to obtain a higher level of abstract features. Then, using the learning results of the DBNs, they initialized an MLP model to perform the classification of the facial expression.

3.Research Method

VGG16 is a convolutional neural network model proposed by K. Simonyan and A. Zisserman from the University of Oxford in the paper "Very Deep Convolutional Networks for Large-Scale Image Recognition". It was one of the successful models submitted to ILSVRC-2014. It improves on AlexNet by replacing the large kernel size filters (respectively 11 and 5 in the first and second convolution layers) with several filters of 3 × 3 kernel size, one after the other. The model reaches an accuracy of 92.7% in the top 5 of ImageNet, which is a data set of more than 14 million images of a thousand classes. VGG16 was trained for weeks and was using NVIDIA Titan Black GPU's in Simonyan and Zisserman (2014).

The input is a fixed RGB image of size 224 x 224. The image passes over a pile of convolutional layers, where very small filter sizes were used: 3×3. The convolution stride is defined as one pixel; the padding is one pixel for 3×3 convolutional layer. The model uses spatial pooling with five max-pooling layers that succeed some of the convolutional layer. Max pooling uses a 2×2 pixel window, with a stride of two.

In the penultimate stage, the model uses Three Fully-Connected (FC) layers (after the convolutional layers which has a different depth in different architectures): the first two layers have 4096 channels each, the third performs 1000 channels (one for each class). At the end, the final layer is the soft-max layer. The fully connected layer configuration is the same in all networks (Fig.3). The rectification non-linearity is applied at all hidden layers

The learning phase of the model takes weeks on this gigantic data basis (Simonyan and Zisserman 2014). Unfortunately, VGGNet has two major weaknesses: It is very slow to train and the weights of the network architecture itself are very considerable. (in terms of bandwidth / disk).

The deployment of VGG a tedious task, because of its depth and number of fully connected nodes, it exceeds the size of 533 MB. The VGG16 model is used in many classification problems; although smaller network architectures are often more desirable.

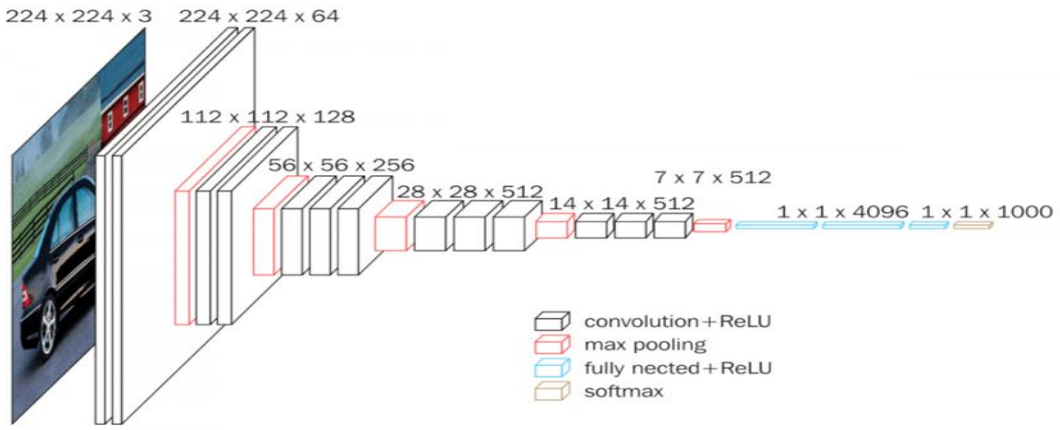
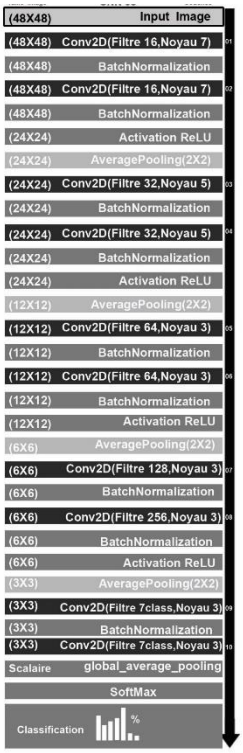


Figure 07. VGG16 Architecture

The VGG model inspires our proposed CNN. It consists of eleven layers(Fig. 4), after elimination of the first two layers because of the input image size already reduced, and the last three layers are fully connected, including 10 convolution layers using different size filters and Batch Normalization is applied, then ReLU corrections are applied to eliminate the negative values. At the end, we added an Average Pooling Global layer, and we applied the Softmax function to calculate the rate of the seven expression classes (the six universal expressions and the neutral state), so it returns a vector of size 7, which contains the probabilities of belonging to each class.

Figure 08. Architecture of the proposed CNN



4.Findings

In this paper, we utilized the FER-2013 database to evaluate the proposed CNN for facial expression recognition. This dataset contains 35,887 grayscale images where each image belongs to one of the following classes: “angry”, “disgust”, “fear”, “happy”, “sad”, “surprise”, “neutral”.



Figure 09. Samples of the FER-2013 emotion dataset (Goodfellow et al 2013).

Images are processed so that the faces are almost centered and each face is occupying about the same quantity of area in each image. Each image was classified into one of seven classes representing different facial emotions. These facial emotions are categorized as follows: 0 = angry, 1 = disgust, 2 = fear, 3 = happy, 4 = sad, 5 =

surprise and 6 = neutral. The data images are structured into two different sets, which are training, and validation sets. There are approximately 28,709 training images and 3589 validation images.

Table 10. Normalized confusion matrix of our CNN network

angry	0.32	0.02	0.02	0.13	0.14	0.20	0.07
Disgust	0.25	0.20	0.02	0.05	0.06	0.13	0.02
fear	0.13	0.00	0.40	0.08	0.16	0.24	0.00
happy	0.05	0.01	0.00	0.54	0.00	0.05	0.02
neutral	0.30	0.03	0.03	0.14	0.35	0.00	0.03
sad	0.33	0.01	0.02	0.07	0.00	0.60	0.00
surprise	0.03	0.00	0.04	0.09	0.07	0.04	0.18
	angry	**disgust**	**fear**	**happy**	**neutral**	**sad**	**surprise**

The results we get after learning our model inspired VGG16 model is a test accuracy of 62%. We see through the matrix of confusions of VGG16 that some classes are more oriented towards the class anger. There are many images in the Sad class that are recognized as images of the angry class. Therefore, the model is not able to completely distinguish the "angry" and "sad" classes, and we note that the VGG16 model does not effectively recognize both expressions of disgust and surprise. These confusions are probably due to the size of the database.

5.Conclusion and Discussions

The goal of this project is to study the use of a convolutional neural network, while eliminating fully connected layers for recognition of facial expression. The richness of the layers, which constitutes the VGG16 network, allows a maximum of parameters to be processed. Nevertheless, this technique has resulted in a somewhat weak precision. The performance gain is notable.

As perspectives, we want to test our model on other databases larger data such as ck +, apply our model on 3D images aquired by depth cameras and include more classes, so extend the FER to recognize the microphones expression, that will allow more precision to indicate the emotional state.

Acknowledgments [if any]

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THE RELATIONSHIP BETWEEN LEADERSHIP STYLES AND INNOVATION- CASE STUDY USING STRUCTURAL EQUATION MODELING IN THE NATIONAL ELECTRICITY AND GAS DISTRIBUTION

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Abstract

The main objective of this study is to determine the relationship between leadership styles and innovation for the employees of the National Electricity and Gas Distribution Company. The study included 104 questionnaires collected from the employees of the National Electricity and Gas Distribution Company in BECHAR. Data were analyzed using SPSS and AMOS. After the questionnaires were adopted, the following conclusions were reached: There is no relationship between autocratic style and innovation, there is no relationship between democratic style and innovation, there is a relationship The Laissez-faire leadership style and innovation The study also concluded with a set of recommendations.

Keywords: Autocratic style, democratic style, innovation, laissez-faire leadership style, leadership styles.

1.Introduction

The accelerating trend of globalization and the changing technology have many companies positively promote innovation or individual creativity(Wu & Lin, 2018). It is worth mentioning that there are various factors in employees' innovation or creativity, and leadership might be the most influential factor in employee creativity, In particular, leadership's role in promoting innovation has been the subject of study over the past decade, Leadership is one of the popular subjects that are currently receiving attention in terms of research, theory, and practice, There are many strong indications that leadership is important for managing innovation (Denti & Hemlin, 2012). Somech (2006) believes that it is corporate leaders who promote or prevent innovation management in the organization, The failure of innovation projects is probably due to ineffective leadership skills (Łukowski, 2017). Through this paper we try to clarify the relationship between leadership styles and innovation.

Hypotheses of Research:

H1: There is a significant relationship between the Autocratic leadership style and innovation in the National Gas Electricity Distribution Company.

H2: There is a significant relationship between the democratic leadership style and innovation in the National Gas Electricity Distribution Company.

H3: There is a significant relationship between the Laissez-faire leadership style and innovation in the National Gas Electricity Distribution Company

2. Literature Review

2.1. The Concept of Leadership

According to Rost (1993) there are almost 220 definitions of leadership. Wart (2003) argues there are limitations on doing scientific leadership research because it is hard to find appropriate definitions of leadership. Therefore establishing a normative framework of leadership is a difficult task. In order to develop an understanding of the concept of leadership some of the current definitions of leadership are presented below:

According to the definition of Bass, "leadership consists of influencing the attitudes and behaviors of individuals and the interaction within and between groups for the purpose of achieving goals." (Bass & Stogdill, 1990).Leadership is a process whereby an individual influences a group of individuals to achieve a common

goal"(Northouse, 2018).Chemers (1997) defines leadership as "a process of social influence in which one person is able to enlist the aid and support of others in the accomplishment of a common task." Leadership style is viewed as a combination of different characteristics, traits and behaviors that are used by leaders for interacting with their subordinates. Wu and Lin (2018) defined leadership as the capability to affect a team achieving the objectives. Such an influential capability was perceived by people or teams.

According to Jackson and Parry (2011), leadership is a process where leaders use their skills and knowledge to lead and bring a group of employees in the desired direction that is relevant to their organization's goals and objectives. Lee and Chuang (2009) explain that the excellent leader not only inspires subordinate's potential to enhance efficiency but also meets their requirements in the process of achieving organizational goals.

2.2. Leadership Styles

2.2.1Autocratic Style

Autocratic leadership style is task oriented, is more convincing and manipulator being efficient to communicate a clear vision and conceive strategic objectives(Clark, Hartline, & Jones, 2009).Most followers of autocratic leaders can be described as biding their time, waiting for the inevitable failure this leadership produces and the removal of the leader that follows(Bass & Stogdill, 1990).the leader believes that human beings are evil, weak, unwilling to work, incapable of self-determination, and have limited reasoning. Therefore they must be directed, pushed and forced to do work(Akor & Research, 2014).The autocratic leaders make vital decisions on their own (Dyczkowska & Dyczkowski, 2018).the autocratic leadership style does not instill learning mentality which is crucial to stimulate proactive attitudes among employees(Dyczkowska & Dyczkowski, 2018).According to the experiments by Probst and Raisch (2005), autocratic leadership can cause leaders to possess too much power which can resort to negative implications to the performance of organization. Moreover, the employees are not involved in making decisions and whatever the top management wanted to impose, it will be carried whether the lower management agree to it or not .Autocratic leadership also limits the potentials of other members to excel and thus, discourages employee participation and contributes to low level of job satisfaction and trust in the organization (Dalluay & Jalagat, 2016).

2.2.2.Democratic Style

Democratic leaders oftentimes embrace a collaborative, participative and highly cooperative decision-making environment(Trinidad & Normore, 2005).The democratic leadership style is also called the participative style as it encourages employees to be a part of the decision making. The democratic manager keeps his or her employees informed about everything that affects their work and shares decision making and problem solving responsibilities(Khan et al., 2015).The democratic leader tries to be a regular group member in spirit without doing too much of the work (Lippitt, 1960) Anderson (1959) defined the democratic leader as one who shares decision making with the other members. He asserted that democratic leadership is associated with higher morale in most situations. He denied that democratic leadership is associated with low productivity and high morale and that authoritarian leadership is associated with high productivity and low morale.

Participation is a core characteristic of democratic leadership; and the ideal of democratic leadership is friendly, helpful, and encouraging participation(Choi, 2007).The democratic style of leadership emphasizes group and leader participation in the making of policies. Decisions about organizational matters are arrived at after due consultation and communication with various people in the organization. The leader attempts as much as possible to make each individual feel that he is an important member of the organization (Kalu Dolly & Okpokwasili Nonyelum, 2018)

2.2.3.Laissez-Faire Leadership Style

Luthans and Youssef (2007), defined laissez-fair style as "Abdicates responsibilities avoids making decisions"**.**Authors defines that in this style the Leaders normally don't want their interference in decision making process. They normally allowed to their subordinates that they have power to get their personal decisions about the work. They are free to do work in their own way and they are also responsible for their decision. Normally Leaders avoids to making decision and don't involve in working units because the leaders gives to subordinates to completely freedom to do decisions.(Chaudhry & Javed, 2012)

Laissez-faire leadership can thus be mani-fested in a lack of presence and/or being avoidant of intervention , resulting in lower perceived leader effectiveness(Wong & Giessner, 2018).Laissez-faire leaders do nothing and this omission has negative consequences for firms(VonBergen, 2012).Laissez-faire leaders who withhold reinforcement (e.g., praise), whether intentionally or unintentionally, may very well produce negative consequences. This finding is supported in studies by Hinkin and Schriesheim (2008).This leadership style is suitable for organizations that have long-term employees. It is, however, not suitable for environments that require direction, quick feedback and praise (Al Rahbi, Khalid, & Khan, 2017)

2.3. The Concept of Innovation

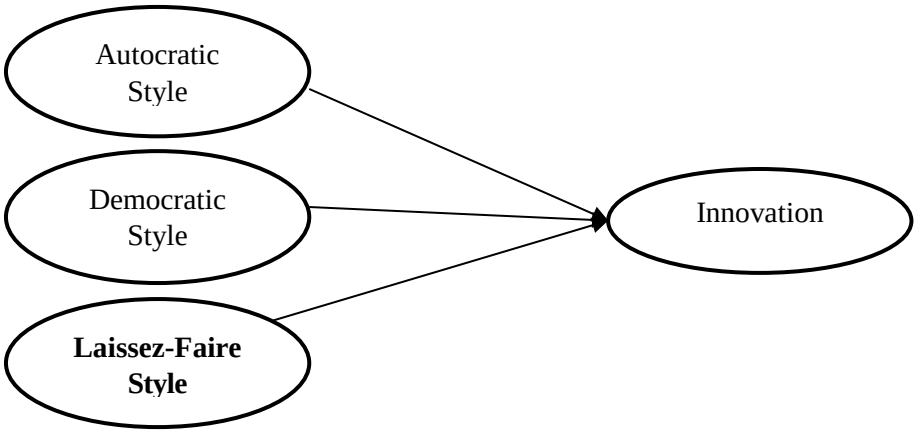
According to Twiss, innovation - a process that combines science, technology, economics and management, as it is to achieve novelty and extends from the emergence of the idea to its commercialization in the form of production, exchange, consumption(Twiss & Goodridge, 1989).According to Covin and Miller (2014),it is the ability of a business enterprise to be up to date with a new idea, new technologies and improved creative processes to provide products. There is increasing evidence from the literature that innovation plays a vital role in shaping the growth and competitiveness of firms in a country(Forsman & Temel, 2011)

Innovation has been defined in various perspectives according to which analysis is used. Innovation according to West and Farr (1990) is the intentional introduction and application within the role, group or organization of ideas, processes, products or procedures, new to the relevant unit of adoption, designed to significantly benefit the individual, the group, organization and society. OECD (2005) defined innovation as "the implementation of a new or significantly improved product (good or service), or process, a new marketing method, or a new organizational method in business practices, workplace organization or external relations," while Woodman, Sawyer, and Griffin (1993) defined creativity as "the creation of a valuable, useful new product, service, idea, procedure or process. According to a rather broad definition by Baregheh, Rowley, and Sambrook (2009), "Innovation is the multi-stage process whereby organizations transform ideas into improved products, service or processes, in order to advance, compete and differentiate themselves successfully in their marketplace."

3. Materials and Methods

3.1. Research Method and Conceptual Model of Study

This study was applied in terms of objective and is descriptive in terms of data collection method. Data were collected by questionnaire through the survey method. The sample size was estimated using the Cochrane formula to 135 members of the National Electricity and Gas Distribution Company BECHAR. The number of questionnaires distributed is 135, and 117 questionnaires were retrieved. After screening, 104 questionnaires were valid for statistical analysis. All elements were measured using a five-point Likert scale: strongly agree: (5 degrees), agree (4 degrees), neutral (3 degrees), disagree (2 degrees), strongly disagree (one score). Exploratory factor analysis was used to delineate elements, which hinder confirmatory factor analysis (having Factor loading less than 0.50),No element has been scrapped. Because all Factors loading are greater than 0.50 (see table 2) This study also adopted the Structural Equation Model (SEM) to analyze data and test hypotheses through a program AMOS V.21. The figure (1) illustrates the conceptual model of the study and consists of three leadership styles (Autocratic Style, Democratic Style, Laissez-Faire Leadership Style) and innovation



3.2. Demographic Characteristics of the Sample

Table 1: Demographic characteristics of the sample (*n=104*)

Demographic Variable	Sample Composition	Percentage
Gender	Men	84.2%
	Women	15.8%
Age	Less than 30 years	7.4%
	31-40 years	49.5%
	41-50 years	34.7%
	More than 51 years	8.4%
Education	Secondary and lower	24.2%
	university	64.2%
	higher studies	11.6%
Work Experience	Less than 5 years	12.6%
	6-15	61.1%
	16-20	7.4%
	More than 21 years	18.9%

From Table (1) it is clear that the majority of respondents are the sex of males by 84.2%, while the percentage of females is 15.8%.The majority within the age group between 31-40 years is 49.5%, followed by the age group between 41-50 years with 34.7% and then 8.4% for the group for more than 51 years and 7.4% for the age group less than 30 years. The respondents have a university education level of 64.2%, the remaining percentage of secondary education level is lower by 24.2% and graduate studies by 11.6%, while the maximum percentage of professional experience is 61.1% with 6 to 15 years of experience, and 7.4% as the lowest percentage and they are experienced from 16 to 20 years.

3.3. Reliability and Validity

Table 2: Summary for all constructs

Construct	item	Factor loading	Cronbach alpha	AVE	CR
Autocratic Leadership Style	Q1	0,843	0,813	0,548	0,892
	Q2	0,810			
	Q3	0,685			
	Q4	0,500			
	Q5	0,641			
	Q6	0,881			
	Q7	0,750			
Democratic Leadership Style	Q8	0,660	0,839	0,611	0,886
	Q9	0,725			
	Q10	0,861			
	Q11	0,829			
	Q12	0,815			
Laissez-faire Leadership Style	Q13	0,749	0,763	0,679	0,864
	Q14	0,858			
	Q15	0,861			

Innovation	Q16	0,731	0,890	0,655	0,919
	Q17	0,830			
	Q18	0,887			
	Q19	0,865			
	Q20	0,858			
	Q21	0,660			

CR=$(\Sigma\kappa)^2 / [(\Sigma\kappa)^2 + (\Sigma 1 - \kappa^2)]$ AVE = $\Sigma\kappa^2 /n$ K = factor loading of every item n = number of times in a mode

3.3.1.Internal Reliability

The value of Cronbach Alpha is greater than 0.60. The internal reliability was achieved the

required level. (Refer Table 2)

3.3.2.Construct Reliability

The value of CR for all constructs are greater than 0.60. The composite reliability was achieved the required level. (Refer Table 2)

3.3.3.Average Variance Extracted

The value of AVE for all constructs are greater than 0.50. The required level was achieved. (Refer Table 2)

All items in a measurement model are statistically significant. Other than that, the value of AVE for all construct is greater than 0.50. The Convergent Validity was achieved the required level.

Table 3: Discriminant validity

Construct	ALS	LED	LLS	INNOV
ALS	**0,74**			
LED	-0,58	**0,78**		
LLS	0,63	-0,43	**0,82**	
INNOV	-0,36	0,71	-0,44	**0,80**

ALS: Autocratic leadership style LED: Democratic leadership style LLS: Laissez-faire leadership style
INNOV: Innovation

Table (3) shows that the diagonal values in bold are the square root of AVE for the construct while other values are the correlation between the respective constructs. The discriminant validity is achieved when the diagonal value in bold is higher than the values in its row and column. From Table (3), all the diagonal value in bold is higher than the values in its row and column, therefore the discriminant validity was achieved.

3.4. Evaluating Model Fit

Table 4: Model fit index

Index	$\chi 2$ /*df*	CFI	TLI	RMSEA
Acceptable value	Less than 3	>0.9	>0.9	Less than 0.08
Score	1.33	0.94	0.93	0.05

According to Table (4), general indexes of testing the structural equation model of the research show the appropriateness of the model's goodness of fit. This goodness can be resulted from the fact that X2/df is less than 3, RSMEA is less than 0.08 and nearer to zero, and also because the indexes of CFI, TLI are nearer to 1; therefore, the proposed model has been confirmed and Table 5 possesses all standards.

3.5. Hypotheses testing

Table 5: Summary of the hypothesis test result

Hypothesis	Casual Path	Path Coefficient	P-value	T-Value	Estimate	Significant
H1	ALS→INNOV	0.53	0.100	1.645	0.301	No

H2	LED→INNOV	0.06	0.000	4.573	0.746	Yes
H3	LLS→INNOV	0.20	0.036	-2.100	-0.226	Yes

ALS: Autocratic leadership style LED: Democratic leadership style LLS: Laissez-faire leadership style INNOV: Innovation

The first hypothesis: There is a significant relationship between the autocratic leadership style and innovation in the National Gas Electricity Distribution Company.

As shown in table (5), since observed value is equal to P-value and 0.100 is more than Sig level 0.05and $|T\ value| < 1.96$, so there is no relationship between the Autocratic leadership style and innovation in the National Gas Electricity Distribution Company with 95% confidence.

The second hypothesis: There is a significant relationship between the democratic leadership style and innovation in the National Gas Electricity Distribution Company.

As it is obvious in table (5),since observed value is equal to P-value and 0.000 is less than Sig level 0.05 $|T\ value| \geq 1.96$,so there is a relationship between The democratic leadership style and innovation in the National Gas Electricity Distribution Company with 95% confidence.

The third hypothesis: There is a significant relationship between the Laissez-faire leadership style and innovation in the National Gas Electricity Distribution Company.

As it is shown it table (5), since observed value is equal to P-value and 0.036 is less than Sig level 0.05, and $|T\ value| \geq 1.96$, so there is a relationship The Laissez-faire leadership style and innovation in the National Gas Electricity Distribution Company with 95% confidence.

4. Conclusion

Through statistical analysis of field research data, the following conclusions can be drawn:

- There is no relationship between the autocratic leadership style and innovation in the National Gas Electricity Distribution Company.
- There is a relationship between the democratic leadership style and innovation in the National Gas Electricity Distribution Company.
- There is a relationship the Laissez-faire leadership style and innovation in the National Gas Electricity Distribution Company.

Based on the results of the research we can give some of the following recommendations:

- Promoting democratic style and Laissez-faire leadership style because of their positive results on innovation.
- The development of a sense of belonging is essential in the development of innovation and creativity.
- Holding seminars and workshops discussing leadership styles, and what is attributed to each style of advantages and disadvantages.
- Creation of a department for innovation and creativity that is interested in the creators and innovators, and benefit from them and help them.
- To simplify the rules and procedures of the work procedures, and to move away from the centralization and strictness in the implementation of the issues, this would give employees a margin It is freedom for employees to show their innovations on the ground

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INNOVATION AND SUSTAINABILITY

THE RENEWABLE ENERGY CONSUMPTION-ECONOMIC GROWTH NEXUS IN TURKEY

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Abstract

Energy has been a significant production factor for all countries. Turkey's energy demand has been increasing due to economic and population growth. Turkey's energy dependency on import is high. For this reason, it is important to take into account increasing energy demand and import dependency that determines the causal relationship between energy consumption and economic development. This study examines the causal relationship between renewable energy consumption and economic growth in Turkey by using the nonlinear Granger causality analysis. The annual data from 1990 to 2015 were obtained from the World Bank Indicators. The empirical results support that the neutrality hypothesis is valid for Turkey, and indicate that renewable energy consumption and economic growth are not sensitive to one another in a given time.

Keywords: Economic growth, energy consumption, nonlinear Granger causality, Turkey

1.Introduction

With increasing levels of industrialization, interest in global warming, rising economic growth, energy consumption and energy safety, studying the relationship between renewable energy and economic growth has gained more attention for countries. In addition to Turkey's economic growth in recent years, the fact that large quantities of non-renewable energy resources are still used for power generation and high energy dependency ratio on renewable energy resources have gained significant attention

Turkish economy tends to display a steady growth since 1990s. For this reason, Turkey's energy consumption has been constantly increasing due to economic growth. Despite substantial widening in Turkey's energy supply, the country's foreign dependency on energy has been increasing. More than 70% of the energy consumed in Turkey is imported. This situation has led Turkey to invest in renewable energy resources.

The direction of causality between economic growth and energy consumption plays a role in the implementation of energy related policies. The aim of this study is to examine the relationship between renewable energy consumption (REC) (% of the total final energy consumption) and Gross Domestic Product (GDP) (constant 2010 billion US$) in Turkey for the period 1990-2015. In detecting causal linkages, different from past research studies, the nonlinear Granger causality approach is applied. Causality relationships are widely detected based on the traditional linear Granger causality tests which are based on vector autoregressive model (VAR) or vector error correction (VEC) specifications. These types of tests are based on the linearity assumption. Linearity assumption is too strict and the Traditional linear Granger causality tests have high power in uncovering linear causal relations, their power against nonlinear casual relations can be low (Hiemstra and Jones, 1994). Therefore, the nonlinear Granger causality test is preferred.

This paper is organised as follows. Section 2 describes the literature review briefly; Section 3 focuses on the data used in this study, explains the nonlinear Granger causality test and presents the empirical results. Lastly, Section 4 discusses the results of this paper's empirical findings.

2.Literature Review

One of the main macro-economic objectives of the countries is to obtain stable and sustainable economic development. Energy is a main variable of the production function. Demand for non-renewable energy resources is increasing due to the upward trend in economic growth. Given that fossil energy resources are scarce and their impact on global warming is huge, pollutant emissions and environmental changes have forced countries to find alternative energy resources to ensure sustainable economic growth. At this point there is an increasing attention paid to renewable energy resources substituting non-renewable ones. The studies that analyse causal relationship between renewable energy consumption and economic growth have increased recently.

Apergis and Payne (2010) look into the relationship between renewable energy consumption and economic growth for a panel of twenty OECD countries over the period 1985-2005 by using the panel cointegration and error correction model.

Apergis and Payne (2011) examine the relationship between renewable energy consumption and economic growth for a panel of six Central American countries over the period 1980-2006 by using the heterogeneous panel cointegration test reveals.

Menegaki (2011) studies the causal relationship between renewable energy and economic growth for 27 European countries in a multivariate panel framework over the period 1997-2007.

Apergis and Payne (2012) focus on the relationship between renewable and non-renewable energy consumption and economic growth for 80 countries over the period 1990-2007 within several panel frameworks.

Ocal and Aslan (2013) study the causal relationship between renewable energy consumption and economic growth for Turkey over the period 1990-2010 by using the ARDL approach and the Toda and Yamamoto test.

Apergis and Danuletiu (2014) examine the causal relationship between renewable energy and economic growth for 80 countries by using the Canning and Pedroni long-run causality test over the period 1990-2012.

Shahbaz, Loganathan, Zeshan and Zaman (2015) study the relationship between renewable energy consumption and economic growth by using capital and labour as potential determinants of production function for Pakistan in the light of the quarterly data over the period 1972-2011. The VECM Granger causality test and innovative accounting approach is used in the study.

Naseri, Motamedi and Ahmadian (2016) explore the impact of the renewable energy intermediate consumption on the economic growth for OECD countries over the period 1990-2012 using the Johansen Cointegration Test and the ARDL model.

Koçak and Şarkgüneşi (2017) investigate the relationship between renewable energy consumption and economic growth over the period 1990-2012 for five Black Sea and Balkan Countries by using the Pedroni panel cointegration and the Dumitrescu and Hurlin heterogeneous panel causality estimation techniques.

Narayan and Doytch (2017) study the casual relationship between energy consumption and economic growth which are different for renewables and non-renewables for income panels for the period 1970-2011for several countries.

Adams, Klobodu and Apio (2018) study the effect of renewable and non-renewable energy consumption as the regime type on economic growth in 30 Sub-Saharan African countries for the period 1980-2012 by using the heterogeneous panel cointegration and the panel-based error correction methods.

Balcılar, Ozdemir and Ozdemir (2018) analyse time-varying effects of renewable energy consumption on economic growth and economic growth on renewable energy consumption using Burbidge and Harrison's historical decomposition technique with bootstrap confidence interval for G-7 countries.

The direction of causality between economic growth and energy consumption plays a role in the implementation of energy policies. Four hypotheses categorize the direction of the causal relationship between energy consumption and economic growth (Apergis and Payne 2009, Ozturk 2010, Esso 2010, Cowan, Chang, Inglesi-Lotz and Gupta 2014, Narayan and Doytch 2017):

(1) The feedback hypothesis- Bi-directional causality between energy consumption and economic growth: It suggests that energy consumption and economic growth are interrelated and may serve as complements to one another.

(2) The growth hypothesis- The uni-directional causality from energy consumption towards economic growth: It means that the country is energy dependent.

(3) The conservative hypothesis- The uni-directional causality from economic growth towards energy consumption: It suggests that energy savings do not necessarily imply stunting growth.

(4) The neutrality hypothesis- No causality: It implies that there is no causal relationship between energy consumption and economic growth.

3.Research Method

In detecting causal linkages between renewable energy consumption and GDP in Turkey, different from past research studies, the nonlinear Granger causality approach by Diks and Panchenko (2006) is applied.

Diks and Panchenko (2006) show that the nonlinear Granger causality test is as follows:

$$T_n(\varepsilon) = \frac{(n-1)}{n(n-2)} \sum_i \left(\hat{f}_{X,Y,Z}(X_i, Y_i, Z_i) \hat{f}_Y(Y_i) - \hat{f}_{X,Y}(X_i, Y_i) \hat{f}_{Y,Z}(Y_i, Z_i) \right)$$

Diks and Panchenko (2006) prove that the test statistics satisfies

$$\sqrt{n} \frac{(T_n(\varepsilon_n) - q)}{S_n} \xrightarrow{\mathrm{d}} \mathrm{N}(0,1)$$

Annual data for renewable energy consumption (REC) (% of total final energy consumption) and gross domestic product (GDP) (constant 2010 billion US$) over the period 1990-2015 were obtained from the World Bank Indicators.

This paper applies the recently developed unit root and cointegration models to determine the appropriate Granger causality relations between renewable energy consumption and gross domestic product (GDP).

Prior to testing for Granger causality, it is necessary to establish the univariate properties, especially when the order of integration of the series involved. For this purpose, the ADF, PP and Ng-Perron tests are used and the obtained results are tabulated in Table 01.

Table 01. [Unit Root Test Results]

	ADF	**PP**	**Ng-Perron**			
			MZa	**MZt**	**MSB**	**MPT**
REC	-1.223499	-1.30175	-0.16736	-0.12055	0.72028	30.983
GDP	2.4453	2.415028	1.41346	0.70936	0.50186	23.8643
ΔREC	-5.95084[a]	-6.25705[a]	-11.2178[b]	-2.22422[b]	0.19828[b]	2.7192[b]
ΔGDP	-3.59205[b]	-3.57402[b]	-10.9028[b]	-2.25808[b]	0.20711[b]	2.53632[b]

As the results in Table 01 indicate, not all of the three tests used can reject the null of a unit root process for the REC and GDP in level. However, they can significantly reject the null when the two series are expressed in the first difference. For this reason, REC and GDP under study are all I (1).

Given that the two series are integrated in the same order, the test was continued to see whether the two series are cointegrated. The Johansen cointegration test is employed to test whether REC and GDP series are cointegrated and the result is tabulated in Table 02.

Table 02. [Johansen Cointegration Test Results]

	Trace Statistics	**p-value**	**Max-Eigenvalue**	**p-value**
None	6.135792	0.6795	6.08892	0.6018
At most 1	0.046872	0.8286	0.046872	0.8286

Results in Table 02 indicate that there is no cointegration relationship between REC and GDP series. Based on this finding and using the vector autoregression (VAR) model, the linear Granger causality test is performed and the results are tabulated in Table 03.

Table 03. [Linear Granger Causality Test Results]

	Test Statistics	p-value
GDP does not Granger cause REC	0.081148	0.7757
REC does not Granger cause GDP	2.671425	0.1022

As tabulated in Table 3, there is no causal relationship between the GDP and REC series. The BDS test is applied to detect the nonlinear structure of the residual from the VAR model and the results are tabulated in Table 04.

Table 04. [BDS Nonlinearity Test Results]

Dimension	BDS Statistics	p-value
2	-0.031324	0.0226
3	-0.066157	0.0034
4	-0.104524	0.0002
5	-0.099033	0.001
6	-0.081069	0.0073

The BDS statistics show rejections of the null hypothesis of independent identity distributions at a significance level of 5% in favour of nonlinear structures.

Table 05 shows the results from the nonlinear Granger causality test by Diks and Panchenko (2006) based on the residual from the VAR model.

Table 05. [Nonlinear Granger Causality Test Results]

	Test Statistics	p-value
GDP does not Granger cause REC	0.987	0.16185
REC does not Granger cause GDP	0.081	0.4679

As indicated in Table 05, there is no causal relationship between the GDP and REC series.

4.Conclusion

Turkey's increasing economic growth, population and high energy dependency ratio forced authorities to substitute fossil energy resources with renewable energy resources. Within the context of the research, the causal relationship between energy consumption and economic growth is analysed and the conclusion is that there is no evidence of causality between GDP and renewable energy consumption in Turkey. Therefore, in the absence of causality between GDP and renewable energy, the neutrality hypothesis validated for Turkey means that there is not a long-run relationship between the two variables.

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BATTERY WARS OR COLLABORATION: RELATIONS BETWEEN BATTERY SUPPLIERS AND AUTOMAKERS DURING THE TRANSITION TO CLEAN ENERGY

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Abstract

Global automotive industry is on the verge of a significant transformation into the transition to electrified transportation. Batteries, commonly used in many modern devices including electrical vehicles are assumed to be the next engine of economic growth, driven by a global push to reduce greenhouse gases. Therefore, various manufacturers and countries are racing for battery wars to be ahead of the technology race and hence improve their economic competitiveness and development. The aim of the study is to make a network analysis of global battery industry through inter-firm relationships among the battery suppliers and electrical automakers and thus evaluate the importance of technological collaboration for their development. Another aim of the study is to identify the main actors leading these collaborations. The study may have important implications to foresee the future of business organizations belonging to battery manufacturing and automobile industry requiring high level of innovation.

Keywords: *Battery wars, industrial organizations, innovation, inter-firm relations, network analysis*

1. Introduction

The automobile manufacturing circuit contains complex set of relationships between vehicle assemblers and component suppliers, accounting for 50-70 percent of the cost price of an average automobile. As a result of time, price and technology or design driven pressures exerted by assemblers aiming to be competitive compared to their rivals, suppliers are facing consolidation and concentration conducted by mergers and acquisitions. In addition to all these pressures, there are also rising pressures to produce more efficient and cleaner cars meeting the requirements of environmental regulation related to emissions on the transition of transport to clean energy use (Dicken, 2015). Electric vehicles came up on these pressures that supported the demand for environmentally friendly vehicles and quickly started to build their own supply chain.

The demand for batteries, one of the main components of electrical devices and vehicles such as smartphones, electrical vehicles, trains, planes, is continuously growing every day. In today's technology, battery makers produce generally lithium-ion batteries to power them. By 2025, the lithium-ion batteries market is estimated to reach 94 billion dollars globally, due to the rising demand originated especially from the consumer electronics market (Zelenko, 2018).

In 2018, though global electrical vehicles (EV) sales grew 68% compared to previous year, these volumes are still too small compared to fuel powered cars: 1.26 million battery powered cars were sold in roughly 82 million passenger cars. EV sales are not at the same level with their fuel powered rivals, but it is estimated that EV sales will increase in accordance with country-level and city-level electro mobility targets due to global environmental issues. In parallel, most major automakers announce successively their intentions to produce electric powered vehicles in the near future. The expansion of global EV market is expected to be a key driver in increasing battery manufacturing capacity as well as in reducing battery unit prices (Global EV Outlook, 2019).

According to Bloomberg New Energy Finance, annual sales of electrical vehicles are predicted to rise from 1.1 million unit in 2017, to 11 million in 2025, and to 30 million in 2030 (Bloomberg New Energy Finance, 2018). It is also estimated that EV batteries sales will rise from $450 million in 2015 to $35 billion by 2025, and $180 billion by 2040, and they will probably replace the current internal combustion engine-type automobile industry (Goldman Sachs, 2017). China is estimated to be the main market for EV batteries. According to strategists, by 2020, two out of three battery will be produced in China which is also the main market for electrical cars (Berylls Strategy Advisors, 2018).

The dynamic development of battery industry and the electrification of mobility can therefore have strategic implications for industrial development due to large value chain of these industries that is being redefined and redesigned during the transition to clean energy. Our aim in this study is to analyze the relationships among the battery producers and EV manufacturers from a micro level perspective and to reveal the role and importance of the industry in the context of industrial organizations.

This study has been structured as follows: The first part is devoted to theoretical framework. Next, the underlying research methodology is presented. Then, the findings from the research are indicated. Finally, some economic and policy implications are considered.

2. Literature Review and Theoretical Framework

Despite the highly competitive innovation race, the lithium-ion batteries we use today are improved models of a technology developed almost forty years ago and commercialized by Sony in 1991. Since then, researchers in developed countries like South Korea, China, Japan and the USA and Europe tried to develop "super battery" that would allow electric vehicles to go for miles on a single charging. Super battery will not only improve EVs range it will also enable to store energy to reduce and even finish the use of fossil fuels (Zelenko, 2018).

Electrical vehicles' range, considered to be the main issue on EV sales is determined by the energy amount stored in the batteries. Thus, batteries are considered as the "key differentiator" among the EV producers (Horowitz & Coffin, 2018). It is assumed that the manufacturing of battery will represent up to 40 percent of the value creation of electrical cars. Accordingly, many large car producers aim to build their own battery factories to retain a bigger portion of value creation (Berylls Strategy Advisors, 2018).

2.1. Battery Suppliers and Automakers

According to battery technologies experts, the company who dominates battery market will also conquer the electrification of vehicles. China, Japan and South Korea dominate automotive battery production. Top global producers of batteries for electrical vehicles; Chinese CATL (Contemporary Amperex Technology Ltd) and BYD, Japanese Panasonic and South Korean LG Chemicals are racing to expand their battery manufacturing capacity (Table 01). CATL is the world's top EV battery manufacturer followed by Panasonic (Nikkei Asian Review, 2018). In this study, our aim, by implementing the network analysis, is to identify the most significant battery makers, in other words the "conquerors" of the EV market. Thanks to the network analysis perspective, the most influential manufacturers, in other words the leaders, stand out based on their connectedness and their position in the global EV market. Knowing that in such markets where the radical innovations shape the technological evolution collaboration is the key, accordingly in the EV battery market we witness the dominance of the firms' collaborative efforts. While these efforts are predominantly on the national basis, multinational cooperation is also coming into prominence.

Table 01. Battery makers and the automakers they supply

Battery Makers	Automakers
Panasonic	Tesla, Toyota, Honda, Ford
CATL	BMW, Volkswagen, Daimler
LG Chem	Hyundai, Kia, Chrysler, Audi, Volvo, Jaguar, Ford, Renault, Daimler, General Motors
Samsung SDI	BMW, Fiat
SK Innovation	Daimler, Hyundai, Kia, BAIC

Source: Nikkei Asian Review, 2019

Japanese automakers, early innovator of EV battery manufacturing, formed joint ventures to produce lithium-ion batteries with domestic electronics companies. Toyota partnered with Panasonic, while Nissan set up a joint venture with NEC or AESC. The aim of these venturing was to dominate the global EV market. However, the Japanese automakers faced tough competition first from South Korea and then Chinese rivals. Nissan Leaf launched in 2010 became the leader of global EV market. Nissan was forced to sell AESC to a Chinese

renewable energy company as a result of price competition. China that was already the world's largest EV market, became the leader of EV batteries as well (Nikkei Asian Review, 2019). In 2018, The European commission launched the European Battery Alliance to develop a European battery ecosystem and so to get into the battery race. The USA supported the development of battery and EV drive systems through the collaborations with national laboratories and related industries (Global EV Outlook, 2019).

Japanese automakers are investing heavily in this race to get ahead again. For example, Toyota is heavily investing on R&D programs for next generation batteries such as "solid state battery" technology. Under the leadership of Toyota, 23 Japanese manufacturers started the "all Japan" development project to collaborate in new technologies including solid state battery. Solid state batteries seem to be the future technology of EV batteries due to many advantages including higher power capacity and energy density as well as better stability and security they offer compared to today's lithium-ion batteries. Panasonic built the Gigafactory lithium-ion battery factory of $5 billion worth with Tesla in Nevada. Though Panasonic is the main battery supplier of Tesla, the world's biggest EV manufacturer, has lost market share to CATL. In April 2019, Panasonic aiming to reduce its dependence on Tesla decided to halt investment in EV battery plant run with the automaker. Like Panasonic, South Korea's battery producers have lost shares to Chinese makers. LG Chem is building new factory in China to be able to produce 500,000 batteries a year to supply electric-vehicle makers in China and other Asian markets by the end of 2019. Samsung SDI, supplying EV batteries for the BMW i3, BMW i8 and Fiat 500e has little presence in the Chinese market but it is foreseen that the company's sales in EV batteries will continue to grow thanks to rising demand from European carmakers Nikkei Asian Review, 2019).

The United States, another important actor of EV manufacturing was an importer of lithium-ion batteries cells, but U.S battery manufacturing will tend to rise as Tesla's Gigafactory increases its production. Although Japan and South Korea are actually major lithium-ion cell manufacturers, 84 % of cell manufacturing is estimated to be in in the U.S. or China by 2020 according to capacity expansions planned in these countries (Horowitz & Coffin, 2018).

New energy vehicles are an important strategic industry for China, the largest market of EVs. CATL, founded in 2011 as a spinoff of TDK's cellphone battery unit (supplier of Apple and other makers of mobile devices) became the world's top EV battery maker. It is building a new factory in China and plans to build its first overseas plant in Germany. Even though it left the leadership to CATL, China's leading battery company has been the BYD for many years. BYD, founded in 1995 is one of the companies powered by the Chinese state investing immensely in electrical vehicles to dominate the automotive industry in the future. The new $1.5 billion factory of BYD is considered to be BYD's core plant of its battery operations because the region is home to the largest saltwater lake accounting for 80% of the China's lithium reserves. The company aims to access to a stable supply of the main raw material to produce batteries and reduce its transportation costs (Nikkei Asian Review, 2019).

2.2. Electrical Vehicles Value Chain

EV batteries supply chain is generally consisted of cell manufacturing, module manufacturing and pack assembly stages that can be conducted in different locations. Figure 01 presents the simplified value chain of battery manufacturing. Raw materials including lithium and graphite are mined and then processed to be used to produce electrodes. Electrodes, main components of battery cells and cells are generally manufactured in the same facility. Materials and cell manufacturing can be located in regions with competitive advantages. Today, Asia, with its robust supply chain (from materials to cell production) dominates EV cell production. In Japan, China and South Korea, existence of upstream materials suppliers provide supply chain clusters specialized on battery production and thus contribute to advantages of regional supply chain (Chung, Elgqvist & Santhanagopalan, 2015). However, battery pack in which cells and other components are assembled is typically located near the EV assembly due to transportation costs that are higher than cells or modules (Horowitz & Coffin, 2018).

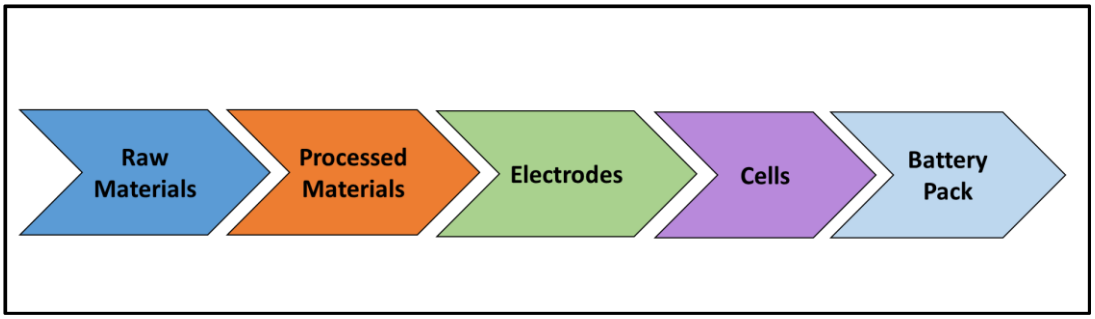


Figure 01. Automotive battery value chain

Source: Chung et al. 2015

Automotive battery production competitiveness is affected not only from region-specific factors (labor, facilities and materials costs) but also from firm-level features. Compared to battery makers concentrated only in automotive markets, incumbent battery producing firms serving to consumer electronic markets benefits from several advantages due to their strong supply chain relationships and important manufacturing experience that they can transfer to automotive market (Chung, Elgqvist & Santhanagopalan, 2015). The development of battery industry value chain requires some policy supports reducing battery production investment risks such as the incentives for the establishment of charging stations, regulation for emission standards. Besides, effective allocation of research and development funds for battery technologies by governments is also another factor improving the battery industry value chain (Global EV Outlook, 2019).

As pointed out by Dicken (2015), the overall supply chain of the automobile industry is transforming. This transformation is mainly based on the prominence of "tier 0.5" which connects the assemblers, automobile manufacturers to the rest of the supply chain, in other words, acts as "system integrator". The system integrator firm is "the organization that sets up the network and leads it from an organizational and technological viewpoint." (Prencipe, 2005: 115). We find here the concept of "hub firm", which "sets up the network, and takes a proactive attitude in the care of it", as proposed by Jarillo (1988: 32). Concretely, the system integrator firm coordinates, first, the development and production activities of a complex product, second, the knowledge bases relevant to those activities, and third, the relations among the participant firms and institutions. In this regard, the system integration capabilities can be categorized as synchronic (coordinating activities, knowledge bases and inter-firm relations within a given architecture) and diachronic (developing new capabilities and technologies in order to propose new architectures) (Prencipe, 2005). Thus, these capabilities cover the firm's (system integrator) internal activities and knowledge bases as well as the activities and knowledge bases of a network of actors. As Hobday et al. (2005) indicate, system integration is not the counterpart to outsourcing, but "the capability needed to manage outsourcing as well as 'joint sourcing' and 'insourcing'". In the following part, our network analysis will highlight the system integrators transforming the battery manufacturing and thus whole EV supply chain.

3. Research Method

The intertwined nature of relations in EV market, especially between EV makers and battery makers, can best be explored and understood with the network analysis. Having its roots in sociology, the network analysis today is widely used in all disciplines of social sciences (Borgatti et al. 2009). The main idea behind the social network analysis is to analyze social or organizational entities within the webs of relations and interactions that they are embedded in. Each entity is defined as a "node" in these webs and the relations they develop within these webs are called "edges". The network analysis allows us to distinguish and characterize the nodes based on the number of edges or relations they have, on how close they are to all other nodes in the network and on their role to connect the other nodes within the network.

In our study, we examined the relations between EV makers and battery makers to highlight the evolution in the EV battery market and to identify the most important battery makers that are or will become the focal actors in the EV market.

To implement the network analysis, a network with nods and edges must be first built. In our study, while EV makers and battery makers are the nodes, the edges are defined as the supply and research agreements between those producers. It is however important to recognize and mark that the relations between EV makers and battery

makers are not only limited to production activities. Those firms are also linked to each other with financial agreements, equity stakes and investment activities. But we are not including these relations into our analysis for the moment.

The edge list, which shows which firm is linked to which firm, is created starting from the supply and joint development agreements made by the EV makers. Using online search engine and EV makers' websites, we track down the agreements made by the EV makers and battery makers. While the oldest agreement dates back to 1997 between Panasonic and Toyota, the number of agreements per year increases as the new actors enter the EV market throughout the years. The relations between EV makers and battery makers are analyzed in three periods; between 1997 and 2009; between 2010 and 2017 and finally 1997 and 2019. An agreement made in a given year is taken as a start of the relation. In other words, a relation started in 2000 is considered continuing also in 2017.

Based on the networks which are constructed using Ucinet (Borgatti et al. 2002), three centrality measures are computed: degree centrality, betweenness centrality and closeness centrality. The degree centrality measures the number of links held by each node. The betweenness centrality measures the number of times a given node stands on a path between two given nodes. The closeness centrality assigns a score to each node based on their shortest path to all other nodes.

4. Findings

4.1. Network between 1997 and 2009: The early period

As Figure 02 indicates, the network between 1997 and 2009 consists of 32 actors, 14 battery makers (shown with red circles in the figure) and 18 EV makers (shown with blue squares in the figure). The average degree centrality, which gives the average number of links of a given node, is computed as 2.786 by Ucinet. Analyzing the centrality measures (Table 02), among the battery makers those that have the highest degree centrality are **A123, Johnson Controls and Enerdel**, all U.S. based battery makers. In other words, these are the battery makers that have the highest number of direct relations within the network. Analyzing the closeness centrality measures, we find out that **Johnson Controls followed by Enerdel and LG Chem** are the battery makers having the highest scores. In other words they keep the shortest paths to other nodes within the network. Finally, regarding the betweenness centrality, **Johnson Controls** is again one of the most influential battery maker in the network. Another influential battery maker is **Panasonic** having a low degree centrality but high betweenness centrality.

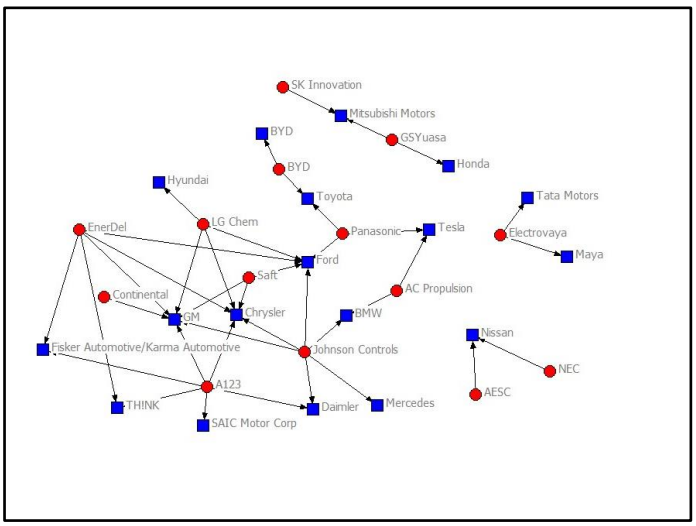


Figure 02. The network between 1997 and 2009

Table 02. Centrality measures between 1997 and 2009

Battery Makers	Degree Centrality	Closeness Centrality	Betweenness Centrality
A123	**0,2**	0,376	0,079
AC Propulsion	0,067	0,313	0,012
AESC	0,033	0,371	0
Electrovaya	0,067	0,375	0,002
EnerDel	**0,167**	**0,406**	0,066
GSYuasa	0,067	0,379	0,005
Johnson Controls	**0,2**	**0,43**	0,14
LG Chem	0,133	**0,396**	0,057
NEC	0,033	0,371	0
Panasonic	0,1	0,376	**0,116**
Saft	0,1	0,385	0,013
SK Innovation	0,033	0,37	0

Source: Authors'calculation.

4.2. Network between 1997 and 2017

The network between 1997 and 2017 consists of 24 battery makers and 37 EV makers (Figure 03). The average degree centrality, which gives the average number of links of a given node, is computed as 3,125 by Ucinet, which shows that the network has become more and more connected throughout the years. Analyzing the degree centrality measures (see Table 03), the battery maker having the highest number of direct links by far is now **LG Chem followed by A123** and **Johnson Controls**. Closeness centrality measures show that **LG Chem** is the "closest" battery maker to all other actors within the network, meaning that LG Chem has the shortest path to all nodes. Finally, **LG Chem** is again the battery maker having the highest betweenness centrality, indicating that it is in the best position to control the collaborations within the network.

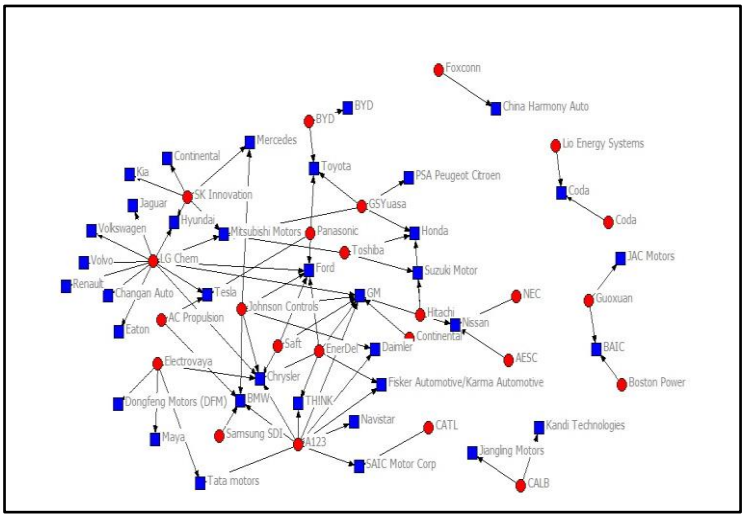


Figure 03. The network between 1997 and 2017

Table 03. Centrality measures between 1997 and 2017

Battery Makers	Degree Centrality	Closeness Centrality	Betweenness Centrality
A123	**0,161**	**0,355**	0,16
AC Propulsion	0,036	0,289	0,008
AESC	0,018	0,224	0
Boston Power	0,018	0,299	0
BYD	0,018	0,222	0
CALB	0,036	0,3	0,001
CATL	0,018	0,23	0
Coda	0,018	0,296	0
Electrovaya	0,071	0,295	0,061
EnerDel	0,089	0,338	0,037
Foxconn	0,018	0,296	0
GSYuasa	0,071	0,294	0,056
Guoxuan	0,036	0,302	0,001
Hitachi	0,071	0,338	0,123
Johnson Controls	**0,107**	**0,355**	0,073
LG Chem	**0,286**	**0,395**	**0,263**
Lio Energy Systems	0,018	0,296	0
NEC	0,018	0,224	0
Panasonic	0,054	0,292	0,038
Saft	0,054	0,33	0,009
Samsung SDI	0,018	0,248	0
SK Innovation	0,089	0,314	0,044
Toshiba	0,054	0,285	0,013

Source: Authors'calculation.

4.3. Network between 1997 and 2019

The final period analyzed in our study consists of 61 actors, of which 20 are the battery makers (Figure 04). Examining the centrality measures computed by Ucinet, among the battery manufacturers **LG Chem** has the highest degree centrality, meaning that the South Korean manufacturer remains the most connected battery maker in the final period (Table 04). LG Chem is now followed by a Chinese manufacturer, **CATL**, having a degree centrality of 0,183. The third most connected battery maker is still the US-based **A123**. Regarding the closeness centrality measures, **LG Chem, A123** and **CATL** are the battery manufacturers having the highest scores. In other words, not only they have the highest number of links within the network, but also they keep the shortest path to all other nodes within the network. The same ranking for these three battery makers holds also for the betweenness centrality measures. These manufacturers' positions in the network is such that they are linking the nodes which are not connected directly, which provide them the advantage to start collaborations.

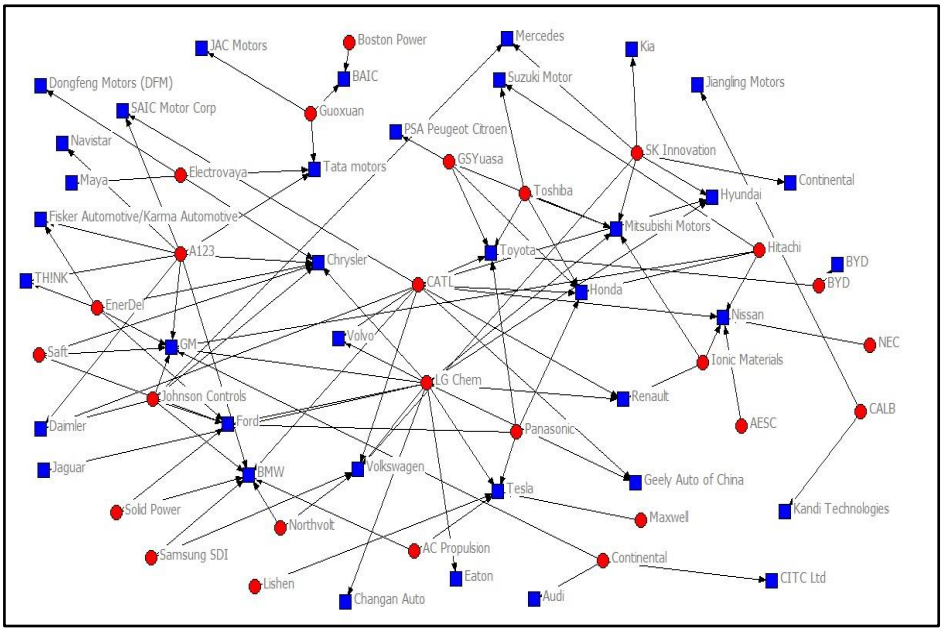


Figure 04. The network between 1997 and 2019

Table 04. Centrality measures between 1997 and 2019

Battery Makers	Degree Centrality	Closeness Centrality	Betweenness Centrality
A123	**0,15**	**0,343**	**0,22**
AC Propulsion	0,033	0,275	0,01
AESC	0,017	0,222	0
Boston Power	0,017	0,159	0
BYD	0,017	0,227	0
CALB	0,033	0,115	0,001
CATL	**0,183**	**0,341**	**0,171**
Electrovaya	0,067	0,269	0,077
EnerDel	0,083	0,305	0,03
GSYuasa	0,067	0,283	0,037
Guoxuan	0,05	0,225	0,093
Hitachi	0,067	0,303	0,044
Ionic Materials	0,05	0,264	0,01
Johnson Controls	0,1	0,323	0,046
Kandi Technologies	0,017	0,114	0
LG Chem	**0,217**	**0,368**	**0,265**
Maxwell	0,017	0,231	0
NEC	0,017	0,222	0
Northvolt	0,033	0,276	0,002
Panasonic	0,067	0,293	0,03
Saft	0,05	0,299	0,007
Samsung SDI	0,033	0,276	0,002
SK Innovation	0,1	0,294	0,063

Solid Power	0,033	0,275	0,002
Toshiba	0,067	0,283	0,017

Source: Authors'calculation.

5. Conclusion and Discussions

In this study, the relations between leading EV makers and battery makers are examined to foresee the most important actors in battery manufacturing in the future. This work contributes to the literature on the relationship among automobile industry and battery manufacturing requiring both high level of innovation and technology, highlighting the role of strategic business organizational leadership. Our study has some economic and policy implications which will be discussed below.

Electric mobility is growing rapidly. As the batteries form the heart of electric cars, battery manufacturing is also undergoing significant transitions. These transitions include the innovation race for battery technologies as well as the important investments made to expand battery productions. In connection with this, the battery supply chain, key element of battery production, becomes increasingly fundamental.

The U.S., China, Japan and South Korea seem to be the most important actors of EV battery supply chain. More specifically, China appear to be the world leader in value added for EV batteries due to its high level of sales of locally manufactured EVs that are mostly consisted of locally manufactured batteries and cells. Furthermore, according to our network analysis, in the early period of battery manufacturing (1997-2009), US based firms dominate the supply chain as well as the technological leadership. Then, if the relations among battery manufacturing and EV makers in 2010-2017 period are included to the study, the South Korean firm, LG Chem is found as the battery maker having the highest betweenness centrality, exhibiting the best position to control the collaborations within the network. Finally, when the 2018-2019 period is included, LG Chem remains as the battery maker having the highest centrality followed by the Chinese CATL and the US A123. These three battery makers have also the highest scores in terms of betweenness centrality measures. Since the battery manufacturing has a very dynamic structure and nature, updating this type of analysis may yield different findings in the future.

The electrical vehicles uptake and related battery manufacturing developments imply bigger interest for studies including inter-firm relations among battery producers and EV makers. In this context, understanding the structure of the battery supply chain and evaluating firm-level relationships affected from increased demand for EVs may have important implications for industrial organizations belonging to these two industries that will shape the future. Studies focusing on relations of these two industries with other industries to investigate their spill-over effects may provide different perspectives and may also give fruitful insights on how will the innovation race shape the future's business organizations as well as the importance of strategic leadership and management during this race.

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REVISITING SOCIAL INNOVATION DRIVERS BY DIMENSIONS: A LITERATURE REVIEW AND RESEARCH MODEL PROPOSAL

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Abstract

The agenda of social sciences research has always included social innovation (SI) due to the rapid increase in the social problems and their expanded impacts as a result of climate crisis, political conflicts and disequilibriums in the political economy in both national and global levels. In recent years, researchers of SI struggled to provide frameworks for evaluating and measuring social impacts-of not only social innovation and entrepreneurship practices but also all corporate social responsibility projects and human development projects as a tool for ensuring the return on investment in terms of benefits, hence for providing the continuity of social investments. However, though the social impact analysis research has contributed to better interpret the validity of Social investments to the investors, there is still room for research on elaboration of drivers/success factors of social innovation activities to provide a framework for ensuring the outcomes of the social innovation efforts. For contributing the body of knowledge on the dimensions of drivers of social innovation, this study aims to present a framework of factors of social innovation derived from content analysis on literature, and to propose a research model on drivers and process components of social innovation practices for future studies. Findings revealed that the drivers of social innovation can be clustered as actors, resources, objectives and the process attributes where the innovativeness dimension is embedded in. Actors dimension presented highest numbers of sub dimensions. The social innovation research should utilize the theories of management, organization discipline.

Keywords: Actors, drivers of social innovation, factors of social innovation, social innovation

1.Introduction

Social innovation research has gained significant importance in the era of rapidly increasing social problems like climate crisis and political downturns, regional wars and conflicts, immigration, increasing aging, unemployment, ineffective social policies and public budget constraints which cause availability and quality problems in public health services and education systems etc. Success of social innovation practices and measurement of their social impacts are the most prior topics in this context, however it is possible to achieve the expected result only by the effective combinations of drivers and process attributes of social innovation. Though there exist number of studies which aimed to elaborate the dimensions of social innovation as drivers/enablers in the literature, literature reviews and content analyses that combine and consolidate the findings of these studies are limited, opening a room for research. In this context, we aimed to provide a framework that present a detailed analysis of selected, high impact publications on the driver and process dimensions of social innovation..

In this study we made a content analysis on literature to define (1) “factors that may act as enablers/drivers of Social Innovation Practices , that have impact on Social Innovation Practices’ Outcomes”, (2) “factors that act as Process Dimensions/Characteristics of Social Innovation Practices, that have impact on Social Innovation Practices’ outcomes” and (3) “a research model proposal for exploring the factors that have impact on results of Social Innovation Practices”. We conducted bibliometric Content Analysis method by using relevant keywords on the Journal Publications and the Books in the Books Citation Index , from The Scopus Publication Database in the first round and then in Research Gate database in the second iteration.

In the following sections, theoretical background, methodology, findings, results and model proposal, finally the conclusion and discussion of the research are presented.

2. Literature Review and Theoretical Framework

In the literature, authors reflected the theoretical criteria and variables which have impact on the results of social innovation practices. Reflecting the definitions of Social Innovation which was widely accepted in their publication period, Astorga (2004) indicated that, developing social innovation projects requires changes to the current social practice, to implement these changes requires an organized community or non-governmental organization in order to improve the impact on social care or the productive dynamics of social practice. Before that Engel (1997) had already outlined that SI practices are in need of a sum of skills of different social actors, social competence shared by social actors, and a continous learning of the actors.

One of the initial research on the important factors of Social Innovation Project success was conducted by Rodríguez Herrera and Alvarado (2008). In this study, the important factors or criteria that should be considered in a social innovation were listed as (a) associativity, which is the ability to organize and mobilize groups, especially the participation of actors; (b,) integrality which is the articulation of knowledge, experiences and responses; (c) sustainability, which is continuity over time thanks to creative solutions that adapt to the restriction of resources, this criterion is a necessary condition for replication; (d) innovation, concrete transforming action generally of a collective nature that offers a response to a given) integrality problem, through new processes, new techniques, new ways of organizing the action; (e) replicability, which is the possibility of appropriating the teaching of an innovative experience by other authors in different circumstances. They also mentioned about endogenous (identification of the problem, the elaboration of a diagnosis of what is to be changed; the leadership) and exogenous factors (alliances and networks to mobilize resources especially of the knowledge, expertise of diverse actors;an alliance with the public sector to broaden the impact of innovations on a different scale). For Rodríguez Blanco, Carreras and Sureda (2012) the key factors that influence social innovation in non-governmental organizations are team training, leadership, organizational culture, team commitment, external pressure, resources and available means, external support and demands of interest groups. Nicholls and Murdock (2012) also listed the dimensions (individual, organisation, network/movement, system) of social innovation

Buckland and Murillo (2013) mentioned five important factors for social innovation projects, which they called the pillars of social innovation as (a) social impact, which is to achieve a social transformation and solve a problem addressed; (b) economic sustainability, is that the financial model and economic sustainability guarantee survival in the future; (c) type of innovation constitutes an innovation whether closed or open, that is incremental or radical and presents innovative features; (d) inter-sectoral collaboration; (e) scalability and replicability, scalability is that the initiative can expand or multiply and replicability is the initiative that can be replicated in a different situation. Sánchez (2014) mentioned that innovation is best developed when there are effective partnerships between small organizations and businessmen and large organizations that can develop the idea on a large scale. This publication revisited the associative factor among different social agents that form a group to carry out the social innovation project is important, considering the group to the community's institutionality, volunteering, de facto alliances, whether informal or contractual (Rodríguez Herrera & Alvarado, 2008). Howaldt, Butzin, Domanski and Kaletka (2014) also mentioned that there are five key dimensions that affect the potential of social innovations, their field of action and their impact, as: (a) to conceptualize and understand social innovation, how social innovation relates to technology and business innovation, (b) Societal Challenges and needs, how systemic changes are addressed, (c) actors, networks and governance, how social innovation projects are managed,(d) dynamic process, how innovation is dynamically developed, (e) resources, capabilities and constraints, including financial, human resources, regulations, etc. (Figure01)

In contrast, Neumeier (2017) identified three key factors for the success of social innovations:

(1) the relative advantage that the innovation would have over the current situation, compatibility with the current experiences and values of society; complexity, how complex it is for the environment where it is going to be developed; experience, degree of experience to develop it, observation of results; (2) factors that influence the margin of maneuver of the network of actors of social innovation, responsibility of the actors, organizational culture, organizational structure of the actors; and (3) factors that influence the actual participation process: commitment, skills, competence and willingness to innovate by the various actors.

Morais-da-silva, Takahashi, and Segatto (2016) mentioned that social innovation goes beyond the initial phases of the project and hence it requires to be scalable as Kolk and Lenfant (2015) pointed out the challenges of

scabilitiy and need for government support. One of the recent studies about the dimensions of Social Innovation was published by Correia et al. (2016), providing a developing country perspective from Brasil and was also adapted in the previous work of this paper's author (Yildirim and Aşkun, 2017). In their work, Correia and others presented a 5 dimensioned structure of Social Innovation Practices including Actors, Processes and Activities, Social Needs, Social improvements and answers and innovativeness. They also were inspired by Saucier et al., 2006; Mulgan, 2007; Phills et al., 2008; Howaldt & Schwarz, 2010; Assogba, 2010 while constructing the Results Perspective, which includes Going beyond specific needs, based on values, creation of new meanings, aspirations, Process perspective of Social Innovation was quoted by Correia et al., 2017 from Lassance & Pedreira, 2004; André & Abreu, 2006; Bignetti, 2011 including the emphasis on the participatory and collaborative nature of learning as the product cannot be isolated from the process or the way how innovation was organized and developed.

Some studies also utilized the Levels of Social Innovation as Dimensions which may affect the outcomes. Multilevel perspective, it prompts researchers to distinguish and analyze three conceptual levels: niche innovations, sociotechnical regimes, and sociotechnical landscapes (Geels & Schot, 2007). Nicholls and Murdock (2012) also clustered the levels as incremental, institutional and disruptive. Within level based approach, Social innovation, similarly to technical and economic innovations, is both intelligible and measurable at micro, meso and macro level, and has a key role in competitiveness. The levels of social innovation (Kocziszky et al., 2017) micro (organisational) level, meso (settlements, regional) level, macro (national) level, global level. Beside these levels, they also included innovator type, innovator form, financing and objective types as success determinants, those which align with objective, actor, resource dimensions that were offered in prior studies.

3. Research Method

Our research question can be defined as follows:

1. "Which factors that may act as enablers/drivers of Social Innovation Practices , that have impact on Social Innovation Practices' Outcomes are mentioned in the SI literature?"
2. "Which factors act as Process Dimensions/Characteristics of Social Innovation Practices, that have impact on Social Innovation Practices' outcomes are mentioned in the SI literature?"
3. "Depending on the literature content analysis, which research models can be proposed for exploring the factors that have impact on results of Social Innovation Practices?"

For exploring the factors that are discussed as the dimensions of Social Innovation practice in the literature, bibliometric Content Analysis method is utilized in this study. We included the Journal Publications and the Books in the Books Citation Index , but excluded the Proceedings in order to avoid the duplication risk of the same publication (as it first may be published as a Conference proceeding and then as an extended Journal Article). The Scopus Publication Database was included in the study and searched by these keyword combinations: ["factors" AND "social innovation"], ["key factors"AND "social innovation"], ["dimensions" AND "social innovation"], ["drivers" AND "Social innovation"], ["enablers" AND "social innovation"], ["challenges"AND "social innovation"], ["difficulties"AND "social innovation"], ["requirments"AND "social innovation"], ["elements"AND "social innovation"]. From these analysis, the following citations provided the exact matches with our search:

- Key factors of Social Innovation , bibliometric analysis by Carvache-Franco, 2018;
- Three Dimensions of Social İnnovation by Nicholls and Murdock (2012)
- Five key dimensions of Social Innovation by Howaldt, Butzin, Domanski and Kaletka (2014)
- Three key factors for the success of social innovations by Neumeier (2017)
- Associative factor among SI Agents by Rodríguez Herrera & Alvarado, 2008

Due to the limited number of findings, we iterated the search process with the same keyword combinations in ResearchGate Database, which also includes the publications in the other citation indexes than Scopus. This search provided us a wider screening fort he publications on this topic, especially from the fastly developing and

developing countries' researchers. In the end of this second iteration of keyword search in Researchgate, we have finalized the list of publications abour factors and dimensions of social innovation as given in Table 01.

Table 01. Referred publications for dimensions of social innovation

Author	**Publication**
Nicholls and Murdock (2012) quoted by Carvache-Franco, 2018)	Three Dimensions of Social Innovation
Howaldt, Butzin, Domanski and Kaletka (2014) (quoted by Carvache-Franco, 2018)	Five Key Dimensions of Social Innovation
Neumeier (2017) quoted by Carvache-Franco, 2018)	Three key factors for the success of social innovations
Rodríguez Herrera & Alvarado (2008) quoted by Carvache-Franco, 2018)	Associative Factor Among SI Agents
Correia et al. (2017)	Dimensions of Social Innovation
Buckland and Murillo (2013),	Five important factors for social innovation projects
Rodríguez Blanco, Carreras and Sureda (2012)	Key factors that influence social innovation in non-governmental organizations
Rodríguez Herrera and Alvarado (2008)	Important factors or criteria that should be considered in a social innovation
	Key success factors in social innovation at the endogenous leve
	Key success factors in social innovation at the exogenous leve
Astorga (2004)	Requirements for Developing social innovation projects
Estonsoro (2015)	Facilitators of Social Innovation
Engel (1997)	The current social practice must be accompanied by …
Sánchez (2014)	Innovation is best developed when there are …
Morais-da-silva, Takahashi, and Segatto (2016)	Factors that expand the impact of Social Innovation
Kolk and Lenfant (2015)	Difficulties of Social Innovation
Geels & Schot (2005) quoted by Westley et al. (2014)	Conceptual Multi Level Perspective
Caulier-Grice et al. (2012) quoted by Uysal and Koç (2018)	Core elements of SI
Morais Da Silva (2006)	Factors that promote SI scalability

4. Findings

The list of all variables which define the ourcome of Social innovation practices (as Drivers, enablers, challenges/difficulties etc.) which took place in the publications (given in table 04 above) are constructed first. As a result of the analysis of this list, Table 02 and Figure 01 are constructed.

Table 02. Frequency of concepts for drivers and process of social innovation

Concept	**Concept type**	Frequency (Count) in selected Publications	**% in Total**
Actors	Driver	67	56%
Resources	Driver	21	18%
Innovativeness	Process	22	18%
Objective	Driver	7	6%
Process	Process	3	3%
Total	3 Driver, 2 Process	120	100%

Figure 01. Word cloud for factors of social innovation



As can be seen from the Table 4 and Figure 04, the Word Cloud for the bibliometric analysis of criteria of Social Innovation practices from Literature Review, mostly referred concepts are Actors and Resources which we classified as Drivers of Social Innovation. These are followed by "Innovativeness" which is an attribute of Process concept. Objective of the social innovation practice and the process itself are relatively less referred concepts.

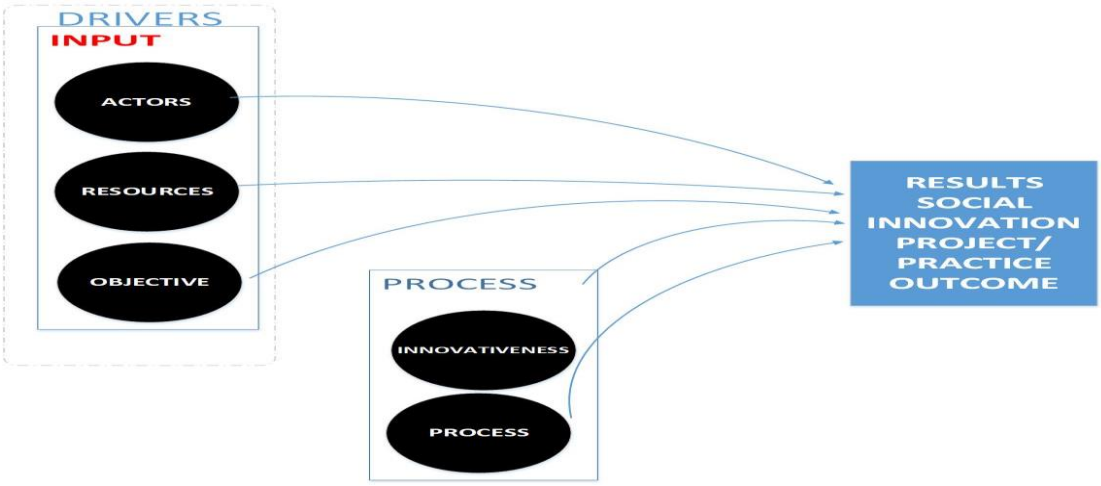
5. Results and a Model Proposal for Research

As can easily be seen from the results of literature content analysis in Table 04, different authors used different terms for elaborating the dimensions that have impact on SI practices' outcomes. Most authors used the term "factors" (Morais-da-silva, et al., 2016 and, Morais Da Silva, 2006; Buckland and Murillo (2013), Rodríguez Blanco, Carreras and Sureda (2012), Rodríguez Herrera and Alvarado (2008), Neumeier (2017)) while some others widely used the term "dimensions" (Nicholls and Murdock (2012), Howaldt, Butzin, Domanski and Kaletka (2014), Correia et al. (2017)) for interpreting the "concept" of their research. On the other hand, some authors prevented to define the concept fort he research question and they used the Word We must also note that various other concepts and constructs had been used by the other authors like "Core elements" (Caulier-Grice et al., 2012), Difficulties (Kolk and Lenfant), facilitators (Estonsoro, 2015). From this variety of concepts used for the similar research questions, it is understood that the priorities of the authors may vary by their context and the concept /construct selection may be overlooked. This caused a blurred understanding about the research question operalisation. We also would like to note that one must avoid to blur the understanding of concepts and constructs in such a research domain, as some constructs can be lower level while factors can have higher level of abstraction. For example, Commitment of Actors include willingness construct, which is more abstract then Government support of Network/alliance/support concept. Hence, we preferred to use the term "Theoretical Variable (1st, 2nd level breakdown) in our analysis referring to the discussion of Markus (2008).

By classifying the list of theoretical criteria of Drivers and Process of Social Innovation Practices in a structured research model (with one way causality to Results, excluding interrelations of dimensions) (Figure 02, Table 03), we have constructed the dimension clusters in the following figures (Table 03). These models have causality with the RESULTS construct, but they do not refer to inter-causality. These models can be adapted to qualitative studies of Grounded Theory (Charmaz, 2004) or Case Study approaches (Yin, 2001) or Delphi studies. Previous

research on factors of social innovation mostly utilized the qualitative approach, hence a consolidated model which includes all dimensions that were discussed in the literature can be practical in SI domain.

Figure 02. Proposed model of social innovation practice research – drivers and process



However, for structuring research models towards quantitative research which can adapt causality tests including Regression analysis, factor analysis (for validating the usage of the dimension/sub-dimensions) these models should be enhanced in a way which includes the hypotheses for elaborating the causalities in between these dimensions (from drivers to process and to results), as well as the correlations between the dimensions. For this, latent variables or moderators must also be considered and added by further literature analysis on the previous quantitative research. The lack of sufficient data on the social innovation practices, either from statistical secondary resources or from the surveys may hinder the validity of these analyses.

Table 03. List of concepts that can act as drivers and process characteristics of social innovation practices

Group	Concept	Theoretical Variable 1st Level	Theoretical Variable 2nd Level
Drivers	Actors	Commitment	Volunteering
			Willingness
			Commitment
			Team Commitment
		Commitment/organization	Responsibility
		Organization	Governance
			Communities' İnstitutionality
			Organizational Culture
			Experience in Business
			Organizational Learning/developing competency
			Organizational Structure
			Experience in Partnership
			Organized Community
		Skills and Competence	Team Training
			Competence
			Skills
		Skills of Competence/Network Alliance Support	Sum of Skills
			Associativity
		Network Alliance Support	Government Support
			Alliance with Public Sector
			Philantrophists
			Local Community İnclusion
			De Facto Alliances
			Civic Participation Volunteers

			Alliances and Networks
			Effective Partnerships
			External Support
			External Pressure
		Network Alliance Support/Leadership	Cooperative Leadership
		Leadership	Leadership
			Political Ability
			Experience
	Resources	Resources	Financial
			Human Resources
			Regulations
		Investors (Actors) (hybrid with Financial Resources)	Business organization
			Self Governments
			State Actors
		Capacities (hybrid with Financial Resources and Investors)	Financial
		Capacities	Human Resource
			Regulations
		Barriers	Regulations
			Human Resources
			Financial
		Framework Conditions	Political Awareness and Environment
			Institutional Normative Regulatory Cultural
			Social Needs and Commitment
		Resources	Integrality
	Objectives	Demands	Demands of Interest Groups
			Social Demands
		Identification	How systemic changes are addressed
			Precise Identification of the problem
Process	Process types	Type of Diagnosis Process	
		Type of Innovation Process Dynamics	
	Innovativeness Capacity	Technology and Business Linkage	Relation to technology
			Relation to business innovation
		Multiplicity	Scalability
			Replicability
		Creating Change	Evident change in the current practice
			Relevant advantage over current condition
		Level of innovation-Scaling up capacity	Niche Innovations
			Sociotechnical landscape change
			Sociotechnical Regime change

6. Conclusion and Discussions

By the content analysis of the selected publications on the concepts related to Social Innovation drivers and processes, there occurred significant number of similarities among the concepts and their sub-level categories that have impact on social innovation practices. The findings revealed that the concepts which act as SI drivers can be clustered under Actors, Resources, Objectives topics, while process attributes can be named as Process and Innovativeness which define the level of outcomes. Actors concept has various sub-level features like Organization, Leadership, Skills and Competence, Network/Alliance and Support, which are obviously major concepts that are widely explored and studied in Management and Organization disciplines. To elaborate these concepts, second level sub-categories are also listed (like governance, organizational culture, organizational structure, organizational learning, institutionality etc. within the "Organization" concept or Associativity, government support, alliance with public sector, local community inclusion etc. within the "Network/Alliance/Support" concept).

Our classification of findings that are derived from the clustering of all concepts in the literature are aligned with the approaches of Correia et al, 2016 and Howaldt, Butzin, Domanski and Kaletka (2014). They both named the concepts as factors that have impact on social innovation performance. There exist a hybrid understanding for defining the concepts in the previous literature as the authors used both the concept of "factors" and "dimensions" and many others like "difficulties", "requirements", "elements" and so forth. However, in our research we preferred to use the term "concept" for higher levels, and theoretical variable for sub-levels to avoid confusions during operationalisation. As well, it can easily be seen from the list of concepts and variables which we presented in the findings, further analysis and thought is required to locate the variables as concepts or constructs, as their abstraction levels differ (for example Concrete variables like Financial Resources or Government support levels versus abstract variables like Commitment or Competence).

To understand the dynamics of both drivers and process attributes of social innovation practices and to provide insights on their sub-level concepts, the practices have to be analyzed by using scales and measurement tools with proved validity and reliability levels. At this point, social innovation research should utilize the theoretical background and accumulated knowledge on the organization and management concepts and make interdisciplinary collaborations to develop appropriate research models. In further research, the measurement scales and validated tools can be explored and recommended for each concept and theoretical variable of our consolidated list to provide a framework for SI social impact/ social investment researchers. As well, the bibliometric analysis can be expanded for covering conference proceedings and reports of official institutions like EC, OECD, World Bank and UNDP. Practitioners in third sector of NGOs and NPOs, managers/leaders of CSR activities in industry can refer to the findings of this study while designing and conceptualizing social projects. We also think all dependencies and interrelations among these factors of Social Innovation Practices provide a room for research, and a detailed literature review can help a lot for offering measurement scales to each factor from the theoretical background of management and organization discipline (e.g. leadership dimension can be measured by transformational leadership scale- MLQ of Bass and Avolio, or commitment dimension of actors by Goal Commitment Scale by Klein, etc.)

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AGILE INTERNAL AUDITING – THE CASE BACK TO NORMAL

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Abstract

In a world of disruption and fast-paced changes, today's internal auditing (IA) needs to be highly adaptive to changing risks. Agile work processes have speeded up product and software development processes and are rapidly spreading to other disciplines, very recently also to IA. This development has received little research focus so far, which leaves IA practitioners unguided in their attempts to become more adaptive. The present research project attempts to make knowledge explicit about context factors which influence how agile IA work processes are implemented and abolished. Specifically, it uses an explanatory grounded case-study approach to analyse the single case of a small IA function which has implemented Scrum for all of its IA work processes in 2015 and has returned to a regular approach in 2018. A within-case analysis identifies context variables which impact agile IA change processes decisively, namely the setup of the change process, the choice of the agile method and agile planning process, and the organization of teamwork and related communication processes. The study finds out that in an already fast-paced and innovative audit team, the implementation of Scrum is fostered by a collaborative involvement of the whole IA team and strengthens knowledge sharing and agility in return. In contrast, the implementation of a lean approach deteriorates the collaborative and communicative practices established by Scrum while the agile mindset of team members and the innovative drive of the team remain constant. These findings call for more agile IA case-studies to generate hypotheses based on cross-case analyses.

Keywords: agile certification, agile frameworks, case-study, end of scrum, internal auditing, scrum

1.Introduction

In today's VUCA world (Bennett & Lemoine, 2014), where variability, uncertainty, complexity, and ambiguity reign, organizational risk management, control and governance processes must keep pace with our disruptive environment. Internal auditing (IA) is the independent, objective assurance and consulting activity designed to add organizational value by improving these processes (The IIA, 2017b). It must keep pace with or, better, anticipate rapid changes in order to fulfil its mission.

Research on how IA can cope with these challenges is scarce. The professional bodies of internal auditors (The IIA, 2019) and external service providers (PwC, 2019) describe what is happening at large scale in the IA profession by conducting surveys with descriptive statistics. The results indicate changes to IA processes. However, surveys with descriptive statistics are of little theoretical and practical value as far as the rich complexity of change processes is concerned and when IA professionals seek guidance on how to lead change and adapt to change in the best possible way.

This explanatory research study adds empirical evidence and case-grounded hypotheses to our common knowledge base of IA in times of disruption. Specifically, it analyses how and under which conditions an IA department has pioneered the implementation of agile frameworks for its audit work processes in 2015 and how it has returned to a more regular work approach in 2018.

2. Literature Review and Theoretical Framework

Rapid adaptation depends on conditions which can be called dynamics, fitness for change, or agility. The following literature review outlines the meaning of agility for IA and traces how the most audit relevant agile frameworks have developed and how they have impacted the work processes of IA functions. This leads towards the research question in the end of this section.

2.1. Agility

While agility is often described as a personal mindset, its organizational manifestation can be defined as the organizational capability to rapidly and pro-actively adapt to a VUCA world and changing customer needs (Schmitz, 2018).

This adaptive power is very core to IA. All ten Core Principles for the Professional Practice of Internal Auditing (The IIA, 2017a), which define IA effectiveness, require agility (Wilhelm, 2019a). Agile auditing is a set of practices that helps IA functions in meeting their objectives in a more wholesome manner, it is a mindset adopted by an IA team to focus on stakeholder needs, drive timely insights, accelerate audit cycles, generate less documentation and reduce wasted effort (Foo & Bhattacharya, 2017b).

According to practitioners, agility in IA processes has explicit manifestations (Wilhelm, 2019b), which are summarized in Table 01. The table shows: agility in IA is not just a new buzzword but affects the core of IA work processes.

Table 01. Differences between regular and agile internal audit work approaches

Criteria	Regular Approach	Agile Approach
Power	Top-down from the CAE	Participation of a self-organized team
Control	Working off tasks; physical presence	Reaching stop-overs and goals
Organization	Structure: expert silos	Cross-team processes
Adaptation	Limited: planning > implementation	Continous; immedicate action
Innovation	Happens accidentally	In the DNA of the approach
Communication	Formal, documented, slower	Rather informal, direct, faster
Media	Formal reports and presentations	Visuals instead of reports
Transparency	Blackbox, from facts to findings	Model, language, insight
Customer impact	Planning and final communication	Continuous involvement

Source: Adapted from Wilhelm (2019b)

While these manifestations of agility in IA have been described by practitioners (Pundmann, Adams & Narayanan, 2018; Herbert, 2019; Wilhelm, 2019a; Wilhelm, 2019b; Coleman & Kasahara, 2019), the academic research into agile IA practices is very thin. To date, there is only one academic case-study to this topic (Foo & Bhattacharya, 2017a), which shows the need for studies like the present one.

The following sections analyse agile frameworks which are most relevant for IA work processes.

2.2. Kaizen and Kanban

The most widespread agile framework in IA work processes today is Kaizen (Japanese for: change to the better). Its basic ideas were conceived as the Plan-Do-Study-Act-Cycle by US professor Walter Andrew Shewhart, and his student and later professor William Edwards Deming (Moen & Norman, 2010). Their ideas spread rapidly in Japan, where industrial companies like Toyota agilized standardized mass production in the 1950s.

The basic idea of Kaizen is to establish and live a culture of continuous improvement, especially by reducing the three main inefficiencies of a process to make it "lean": overcharging a process or a system beyond its capacity ("muri"), inconsistency in performance ("mura"), and wastes within the process ("muda"). Kaizen is translated into different schools of thought, such as Lean & Total Quality Management, Six Sigma or ultimately also the industrial norms of the ISO 9000 family of standards.

Kaizen is very often combined with Kanban (Japanese for: visual signal), a visual pull-system for just-in-time production which was first introduced by Toyota in the 1940s. In Kanban, workflows are visualized on boards with cards in columns, where each column represents a workflow step and cards represent tasks with a focus on the flow of work. According to the "muri"-principle, the maximum number of items in each workflow step are limited, the so-called work in progress (WIP) limit (Baig, 2019).

In IA, the Kaizen ideas of continuous improvement and waste elimination are well established. The IIA's International Professional Practices Framework requires a quality assurance and improvement process (QAIP) for all IA functions (The IIA, 2017c). IA practitioners have long applied "muda" principles to their own work processes (see Table 02).

Table 02. The Seven Categories of Waste with Examples from Internal Audit Work Processes

Waste Category	Waste in Regular Processes	Waste in Internal Audit Processes
Transport	Unnecessary movements, e.g. of raw material	Physical sign-off of reports
Inventory	Anything waiting unproductively for future processes	Archiving of raw data and work papers
Motion	Unnecessary movement of machines or operators	Business travel to field audits
Waiting	Slow pace of a step in a series of steps	Limited availability of auditee
Overproduction	Produced items in excess of customer demand	Excessive documentation
Over-processing	Providing features not demanded by the customer	Detailed report for minimalistic Board
Defects	Not acceptable to customers, requires rework	Wrong information in the audit report

Source: Adapted from Wilhelm (2019a)

The first book on lean internal auditing was published in 2014 (Paterson, 2014), while research on the application of different schools of thought of Kaizen in IA has been published already before. The role of IA in the implementation of total quality management systems, including an empirical survey on how audit work processes apply TQM principles, was a research topic already in 1998 (Wilhelm, 1998). The topic how the work processes of IA can be compatible to certification according to the family of norms ISO 9000 was explored in 2011 (Wilhelm & Waser, 2011).

2.3. Scrum

The most recent and most fundamental agile framework that has been applied to IA work processes is Scrum. The expression Scrum and the underlying approach was invented by the two Japanese professors Hirotaka Takeuchi and Ikujiro Nonaka when they conducted a research study of new product development processes. They found out that successful companies in their study no longer use a sequential approach but employ a holistic method with a built-in instability, self-organizing project teams, overlapping development phases, multilearning, subtle control, and organizational transfer of learning (Takeuchi & Nonaka, 1986). This approach was first applied to software development in 1990 (DeGrace & Hulet Stahl, 1990) and became very popular after 1995, when the two US software developers Jeff Sutherland and Ken Schwaber codified Scrum as agile framework for software development and marketed it all over the world (Rigby, Sutherland & Takeuchi, 2016).

Scrum is, in short, a set of rules which organizes work processes in loops of improving trials and errors (so-called Sprints), running in largely self-organized teams with daily transparent progress updates (Daily Scrum). It allows to deal with complex, adaptive problems and fosters continuous learning and naturally adjusting to changing conditions (Wilhelm 2019a). Scrum incorporates aspects of Kaizen because its rules demand a regular inspection of the work done (Sprint Review) and a regular brainstorming on what went well and what needs to be improved (Sprint Retrospective). It implies aspects of Kanban as it works with a task board, on which the overall list of tasks to-do (Product Backlog), the list of tasks to-do during the next sprint (Sprint Backlog), as well as tasks in progress (Doing) and finished tasks (Done) are visually tracked. In contrast to Kanban, Scrum has specific roles, namely a keeper of the rules (Scrum Master), a person who is responsible for the emerging product, prioritizes the Product Backlog and links to the customer (Product Owner), as well as a self-organized project team which does the work (Scrum Team). Scrum does not know an explicit limit for work-in-progress as Kanban does but has its Scrum Team, jointly with the Product Owner, estimate its capacity and the amount of work to be done in the next sprint. Scrum has more elaborate rules, which is why Kanban is easier and faster to

implement and can be applied more widely. Scrum has more disruptive power and can unleash more agile potential (Wilhelm 2019b).

The first research endeavour to mention Scrum in relation to auditing was published in 2014 (Wright, 2014). The book is written as an overview for auditors and agile teams over agile governance and audit. It bridges the knowledge gap between agile software development teams and auditors (internal and external) because back then auditors and agile teams knew little about each other's work practices, goals and concerns. While its foreword mentions a number of (external?) audit teams looking at agile techniques and tools to plan and undertake their own audit work, the book focuses on the governance and audit of agile software development processes and does not deal with how agile frameworks can be applied to IA work processes.

The first documented application of Scrum in IA work processes happened at the IA department of the Swiss Accident Insurance Trust Suva in March 2015, the start of a full-fledged implementation of Scrum to all IA work processes (Wilhelm, 2017a and 2017b). Since then, the number of IA functions that "went agile" has proliferated. Practitioners have recently picked up the topic, with the first practical guide on how to do lean and agile auditing published this year (Coleman & Kasahara, 2019). Also, external service providers (Pundmann, Adams & Narayanan, 2018) and software companies (Herbert, 2019) have started to position themselves in anticipation of the rapidly growing market of agile IA transformations.

Standard academic books of IA are already mentioning the term "agile", which appears nine times in the IIA Research Foundation's standard book Sawyer's Internal Auditing (Clayton et al., 2019). However, the advice there is that internal auditors should follow their agile organizations and build up knowledge of agile frameworks in order to be able to audit them. The books do not yet mention or advise on the implementation of agile IA work processes. The first research study on Scrum in IA is a case-study on the IA function of DBS Bank in Singapore (Foo & Bhattacharya, 2017a). In the case-study, DBS IA implements Scrum in pilot audit projects. A Sprint Team comprised the usual Scrum roles Scrum Master and Product Owner and only one auditor plus members from all stakeholder teams, namely also process improvement executives, user representatives, and project managers from line management (Foo & Bhattacharya, 2017a).

According to that case-study, DBS IA has adopted their agile approach to avoid the disruptive effects of a full-scale agile adoption. Speaking in the classification of agile IA approaches summarized in Table 03, the DBS case-study exemplifies an IA Project Scrum, where the agile approach is limited to single audit projects and is not comprising all IA activities.

Table 03. Classification of agile internal audit approaches

Scrum Artefact	Scrumpliance	IA Project Scrum	IA Function Scrum
Sprint	All compliance tests	Limited scope: project/area	Covers all IA activities
Epic	Compliance area	N/A	IA project, administrative task
User Story	"As a compliance auditor…"	Audit "who what why", value	Project bit: explore, test, align
Task granularity	Control tests, follow-ups	Must fit into sprint	Mini tasks > 30 minutes
Product Backlog	Compliance areas, tasks	Audit areas; all user stories	(Multi) annual audit plan
Increment	Control status	Sprint audit report (point of view, PoV)	Transparency
Findings & Follow Up	Entered as new tasks	In the audit report (point of view, PoV)	Follow up epic, findings database
Definition of Done	Control tested / remedied	Specific 'done' in a sprint	Epic question; specific 'done'
Bug	Control design error	N/A	Tracking of impediments
Release Plan	Test schedule for areas	N/A	Quarterly audit schedule

Compatibility	SOX (with access control)	QAIP	QAIP; ISO 9001
Specifics	Best fit: compliance audits	Definition of Ready, canvas	Best fit: non repetitive audits

Source: Wilhelm (2019a)

2.4. Research Question

The application of agile frameworks, especially Scrum, in IA work processes is a relatively new phenomenon which has not yet been adequately covered by academic research. Specifically, there is up to date no research study which has analysed an IA function that lives a full-fledged agile approach, an IA Function Scrum, for all its IA work processes. This appears to be the more urgent, the more agile IA work processes get adopted throughout the world of IA, as it is currently the case.

The goal of business administration as applied science is not only to generate new knowledge but also to support practitioners in the field, in this case active internal auditors and chief audit executives (CAE). Given the large number of IA functions in transition from traditional to agile work approaches, the specific research question for this study is: How can the change of an IA function related to agile IA work processes be influenced?

3. Research Method

The choice of a 'how' research question indicates an explanatory research approach which tries to build theory by answering the research question.

3.1. Ontological, epistemological, and methodological position

This research project assumes a post positivistic ontological position, in other words it takes it for granted that reality exists in a complex nature that cannot be fully understood by the limited human mind. As a consequence, the best way to understand reality is to critically examine claims about it. As epistemological position, which concerns the nature of the relationship between researchers and their knowledge about reality, this project accepts the existence of dependence between researcher and research object but upholds objectivity of the researcher as ideal that must be controlled by means of critical questioning or peer review. This is especially important as the author is also an IA practitioner with a large experience and personal convictions about the IA profession and the present case. Methodologically, the study applies modified experimental and manipulative methodologies which are supported by triangulation of perspectives and are based on empirically grounded data derived from natural, situational settings. Research projects with a post positivistic position see theory construction as scientifically equal to theory testing, consider empirically grounded contextual variables and focus also on human behaviour and its aspects, thus trying to bridge the gap between individual cases and generalizations (Guba and Lincoln, 1994).

3.2. Single case-study research design

This study chooses a single case-study research design in its attempt to answer the research question of a case with an unusual outcome, which underlines the suitability of this design (Ragin, 2000). Such a case-study research design starts with data collection, namely writing a case-study on an IA function that has pioneered the implementation of IA Function Scrum in its IA work processes. It aims at developing explanations by finding general patterns in the case observations, which are considered in their context and are obtained and described with the help of interviewed respondents who provide also clues about the meaning of behaviour.

3.3. Grounded case-study approach for within-case analysis

Within-case analysis of the data was done following the methodological procedures of the grounded case-study approach by Wilhelm (Wilhelm, 2005), adapted for the single case-study approach of this study. It starts with data collection in semi-structured, problem-centered interviews, which are methods of data collection that are suitable for case-specific complexity.

The case of an IA department going agile and returning back to regular work processes was selected because of its obvious fit to the research question. Table 04 summarizes key criteria for the initial selection.

Table 04. Criteria of the selected case

Criteria	Case	Remark
Organization selected	Swiss financial services provider with an annual turnover of CHF 4 billion, assets of CHF 50 billion and 4000 employees	The company is kept anonymous in order to speed up the research process by avoiding lengthy corporate review and authorization processes. It will be called "FICO" in the rest of this study.
Internal Audit Function	5 internal audit team members and 1 Chief Audit Executive	All 6 members of the internal audit function were certified as Certified Scrum Masters
Agile internal audit approach	Internal Audit Function Scrum	The agile framework comprised all internal audit work processes, including audit, consulting, fraud prevention, data analytics, management and support processes
Agile Frameworks	Scrum, Lean Management	Implementation of Scrum in 2015, return to regular lean-scented work processes in 2018

Source: Own representation.

Data collection is based on two interviews of 90 and 76 minutes length, covering the IA Scrum roles Scrum Master and Team Member. The interviews were recorded and transcribed, entered into a case-study database and are turned into a grounded case summary with the help of summarizing content analysis.

4. Findings

In the data of the case-study of FICO's IA, the empirical data can be structured into categories which have emerged as influences on the implementation of agile work processes. They are summarized in the following sections.

4.1. Background and change process

Before going agile, FICO's IA employed a classical audit approach where an annual plan was established, decided for each year, then worked off in individual black-box audit projects. The way how agile work process were implemented played an important role. Mental speed has already been IA's key success factor and has allowed it to successfully overcome organizational hostility during the past seven years. The CAE and his team had already implemented several innovations such as dedicated consulting and data analytics teams or a database of findings and recommendations replacing traditional audit reports. After years of trying out in vain audit work process software solutions to find satisfactory IA work processes, the CAE brought forward his agile idea. His five-person team's reaction reached from change fatigue to deep interest in a new potential solution. What followed was a time of intensive reading by those interested. The CAE communicated his wish to give the idea a try and gave every member of his audit team the chance to veto against it – which nobody did.

In March 2015, they decided to go agile. They organized a training workshop for agile methodologies and their implementation in IA to get the knowledge about agile work. The workshop was given by a Tunisian agile coach experienced with software development. It introduced agile frameworks and Scrum, had practical exercises to strengthen the knowledge, and placed its focus on finding a solution on how to adapt agile to IA. Having a professional coach saved a lot of time because of his idea of agile opportunities. He helped to structure the discussions and represented ideas visually. As the coach knew only agile software development, he did not speak the language of internal auditors and therefore the IA team autonomously transferred his ideas into the IA world. At the end of this two-day workshop, every IA team member became certified as Certified ScrumMaster. Whereas several team members were initially rather sceptical, the course sparked their enthusiasm and willingness to try living Scrum. The IA team had decided to use Scrum for all IA processes because also support processes and links to other processes like planning, education or data analytics are relevant for the core audit processes. They felt that the more pervasive Scrum was applied, the better will be the prioritization of tasks. What follows was a period until June 2016 in which the IA team used trial and error and cut its annual plan into pieces until manageable tasks were found as items on the Product Backlog.

In this initial phase, Scrum met much resistance within the IA team. People were used to know in the beginning of a year what audits they will perform. The idea to meet every day and every two weeks to plan anew how little chunks of work can be done took away planning security for the individual auditor. Astonishingly, people with a very structured accounting profile who appeared to be rather inflexible coped with the change process very well whereas other team members had severe concerns and, at one time, tried even to work out an alternative work model which followed a waterfall project method. In intensive team discussions and with the strong dedication of the CAE, the IA team tried to find "their Scrum" and the right aggregation of tasks.

Very quickly, working with Scrum became the normality for FICO's IA team. The agile method lost its initial attraction and became routine. The IA team started to feel well with this new way to work. In this phase, instead of individual motivation the strong structures of Scrum carried the system forward: the sequence of institutionalized exchanges in daily and bi-weekly meetings and the included continuous improvement process.

When the CAE left the company, a new CAE was appointed out of the IA team, who happened to be a proponent of the waterfall project and lean management methods. The new CAE aimed at making the Scrum work process leaner, which is why – after a transition phase of one year – he eventually changed the IA Scrum work processes back to a regular IA approach with a Kanban board in 2018.

4.2. Agile method, audit planning, and innovation

In the Scrum approach, especially the definition of work packages proofed to be difficult. A too fine-grained planning of Scrum tasks consumes a lot of preparation time and is felt by some auditors as pressure. Due to the interdependencies outside of IA's control, it often turns out to be in vain. Agile audit gets more transparent but often not much quicker when the auditee and data access do not work in an agile way.

One and a half years after FICO's IA had fully implemented Scrum, the new CAE abolished the regular team meetings, the role of a Scrum Master and self-organization of the audit team. Instead, there were biweekly regular team meetings without an agile rule setup. A conventional Kanban board as a general to-do list, a special to-do-list for the next two weeks as well as columns with "doing" and "done" were retained. The process became leaner but also less agile as fast changes were no longer done and team members did no longer bring in new requests in an agile way.

During the Scrum approach, IA had still kept the traditional annual planning process where the AC decides on a yearly plan. This was a trade-off made to develop IA Scrum in an incubator mode without AC involvement. The new CAE arranged with the AC to introduce a half-yearly planning. As a consequence, the audit plan was executed closer to its initial risk assessment. Also, according to the regular audit approach, internal auditors were no longer multi-tasking in several audits but worked at one audit at a time. Audit planning became more rigid as the audits had to be finished punctually twice a year instead of once a year. Given the fixed end dates and less flexibility of a one-auditor-one-audit approach, agility inside individual time-boxed audit projects became more difficult because many auditees were rather inflexible and favoured a planned inflexible audit approach whereas agile auditing would have required quick access and quickly scheduled interviews during the time-boxed audits.

Regardless of the audit approach, where an audit is broken down into tasks there is the risk to intellectualize the audit work – it is already difficult to formulate a good task but it takes an enormous planning effort and has doubtful chances for success to plan the ideal backlog first and then implement it as it is.

FICO's IA team had always spent a lot of time for innovation. The introduction of Scrum has supported this innovative spirit because in an IA Function Scrum innovation was treated as a normal task and there was no difference between innovative tasks and regular work tasks. Both types of tasks were included in the normal work process, which was very helpful. The team managed to develop an agile mindset which led to more discussions and innovation debates compared to before the introduction of Scrum. This mindset stayed also after the restitution of a regular work process and was nourished by a constant inner urge to be agile and to stay innovative, no matter if agile was lived or not in the work process.

4.3. Organization of teamwork

In the Scrum and the conventional Kanban approach, the decision what the end result must be is taken top-down. The CAE is the place, irrespective of the approach, where the full responsibility remains.

Before FICO's IA changed to Scrum, the individual auditors had limited contact with each other. Once the annual audit plan was decided, the projects were distributed by the CAE and if no urgent question or resistance came up, the auditor could execute the whole allocated audit project without any contact to the team or the CAE. This was satisfying for individual experts and granted them a lot of freedom. Teamwork, transparency and sharing knowledge were limited.

When FICO's IA changed to Scrum, a self-organized team gained the freedom of implementation and could freely decide who does what task and how. The individual auditors had their specializations which played a large role on the choice of tasks each one made. Each auditor worked together with other auditors and according to the circumstances there were mixed and changing teams within a single audit. Auditors were multi-tasking in several audits and tasks of other IA processes such as education, management or quality improvement. Most audit projects were completely unique green field approaches, derived solely out of the IA team's risk assessment. Every second week, the IA team critically discussed its active projects and decided if action should be taken and if the initial goals were still justified.

When FICO's IA changed back to a conventional Kanban work process, the auditors could pronounce their work preferences in a meeting but the CAE decided over the distribution of labour. With a lean approach in mind, the new CAE strived for a strong standardization of the audit process. Templates with process and content checklists were introduced that had to be closely followed in each audit, with any deviation to be explained in detail. One team member was appointed as quality controller to make sure the templates were filled in and the individual steps were all kept in every audit project. It stayed in the discretion of the individual auditor to add additional content, however due to the time-boxed setup working off the checklists had the priority. Fulfilling the audit plan became the priority whereas reaching unique value added used to be the priority before.

The Scrum Master's usual role is to take away impediments so that the development team can concentrate on their work. Most impediments in IA stem from sources external to the IA function, which is why the possibilities of a Scrum Master as regular IA team member are limited. If the team members are not content with the work approach, the Scrum Master frequently receives negative feedback and is in a double role in between the CAE and the team. After the FICO's IA changed back to a conventional Kanban work process, the Scrum Master role was abolished.

4.4. Communication and customer focus

For FICO's IA team, the customer focus remained constant irrespective of the work approach because it is linked to the proactiveness of every individual auditor. The relation to auditees was coined by interviews and feedback questions, no matter if the audit approach was agile or not.

With Scrum, the communication became more structured and daily communication routines were formalized. The team members knew that they will see each other in and around the next daily Scrum meeting so they tended to use the formal time to exchange instead of spontaneous office visits. Inside the audit team, discussions were very intensive, before, during and after Scrum. The intensive exchanges in formal Scrum meetings made especially sense when every team member felt as real part of the project. In the IA Function Scrum, the team often talked every day about very different topics. In such a situation, the limited mutual influence of team members on each other turns the exchange less vital. In contrast, in an environment where one task influences the other and where there is real collaboration, feedback from colleagues is more interesting and the formal meetings allow to share topical knowledge and not only to gain insight into the work of the team in terms of organizational information about where a colleague is and what he does.

Before Scrum, FICO's IA had already replaced their formal IA report with a database of findings and recommendation and kept formal presentations to a minimum, therefore Scrum did not have a large impact on reporting. However, the IA team had decided to balance the speed of quick reports with the need to wait until interrelated findings can be linked, which may appear during different phases of the audit. In addition, having too frequent reports carries the risk of confusion and a loss of time due to avoidable discussions with auditees.

5. Conclusion and Discussions

This case-study is the first research project to examine the introduction of an IA Function Scrum in an IA function. In addition, it is the first case-study about an IA function which has returned back to a regular work approach after having implemented an agile framework. The data is highly contextual and specific to the

individual case of an IA team that used to be already fast-paced and innovative before implementing agile frameworks. It indicates how sets of context variables influenced the agile change of FICO's IA function. Thanks to the rich contextual descriptions, a comparison of context variables will allow to infer general conclusions for IA change processes in other environments.

The within-case analysis has identified the setup of the change process, the choice of the agile method and agile planning process, and the organization of teamwork and related communication processes as relevant influencers of agile change. It shows that the collaborative involvement of the whole IA team has facilitated the implementation of Scrum. The implementation process was supported by the motivating dedication of the CAE as well as by an agile workshop led by an external coach and the included certification of the whole IA team. After the initial enthusiasm became less, the new work processes were backed by the strong routines of the Scrum approach. FICO's IA team has repeatedly adapted these routines to their specific needs and has thereby applied the principle of trial and error to the implementation process. Scrum has increased the transparency over IA work processes and it has strengthened knowledge sharing and agility in the IA team. It turned out challenging in terms of finding the right task size and striking a balance between fast reporting and considering interdependencies of findings. The strong structure of Scrum has created its own inefficiencies, thereby paving the way to its abolition in favour of a leaner approach. FICO's leaner approach was successfully rolled out in a strictly top-down manner and has replaced Scrum. It has deteriorated the collaborative and communicative practices established by Scrum. However, it has consistently preserved the agile mindset of team members and the team's innovative drive.

The most decisive factor for the implementation of Scrum and for its replacement by a leaner approach were individual preferences of the CAEs and their ability to overcome resistance in the team. The collaborative implementation of Scrum was well aligned to its collaborative nature and allowed to spark enthusiasm and commitment in the IA team. Over time, this drive ceded to a more bureaucratic application of the strong structural processes of Scrum. Agile work processes tended to become tedious and time consuming routines. The top-down implementation of a leaner approach counteracted a collaborative spirit and did not cause open resistance but tended to create emotional withdrawal and a work-to-rule spirit. After the restitution of less-agile work processes, a strengthened agile mindset and innovative drive remained unchanged. This shows that agility is more than a question of designing work processes but affects organizations primarily as a mindset shared by individuals and teams.

FICO's agile audit case calls for more research into how different agile audit work processes succeed in different organizational settings. Specifically, it will be interesting to see how IA can keep up the momentum of agile work processes without getting stuck in agile structures and bureaucracy. Based on a variety of empirically grounded cases, multi-case analysis will allow a cross-case analysis emancipated from individual preferences. This will ultimately lead to the discovery of options for practitioners who plan to change their IA teams towards more agile work processes.

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THE ELASTICITY OF EXPORTING THE MINING & QUARRYING PRODUCTS TO FOREIGN EXCHANGE RATE CHANGES

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Abstract

Elasticity examining the exporting the products to foreign exchange rates, has been subject to so many studies. Exports are expected to increase in the case of the depreciation of the domestic currency in the economies where exports and imports are sensitive to foreign exchange rate. While foreign currency appreciation increases the profitability of the firms also increases because their costs are in domestic currency. This paper investigates how exchange rate changes affect mining & quarrying exports in Turkey. In this paper we aim to identify the elasticity of mining & quarrying exports to dollar exchange rate changes. Mining & quarrying whose development are mostly dependent on nature sector exports which is predominantly sensitive to the dollar exchange rate, was tried to be analysed by using the least squares method. Data representing the exchange rate for monthly average dollar-selling prices between the years of 2005-2017, obtained from the data system of the TCMB (The Central Bank of the Republic of Turkey) is used. In addition this, export data denominated in dollars for mining & quarrying products for the same period, were also obtained from the TUIK (Turkish Statistical Institute). Data obtained from those for 156 periods were analysed through the SPSS statistical packaged software program. As a result, mining & quarry exports are sensitive to the dollar exchange rate and a 1% increase in dollar exchange rate increases mining & quarrying exports by approximately $ 8,8 million. Besides this result, a one percent (1%) standard deviation increase in dollar exchange rate leads to a 0.65 standard deviation increase in exports of mining & quarrying products. These findings are consistent with the literature on elasticity to foreign exchange rate changes.

Keywords: Elasticity, exporting, foreign exchange rate, mining and quarrying products

1.Introduction

Competitively, valued exchange rates are often seen as crucial to promote exports (Freund and Pierola, 2012; Eichengreen and Gupta, 2013). However, in the aftermath of the Global Crisis, some episodes of large depreciations appeared to have had little impact on exports (e.g. Japan). This has led some researchers to question the effectiveness of lower exchange rates (Financial Times, 2015).

The exchange rate is often discussed in macroeconomics because of its impact on the economy as a whole. Fluctuations in the exchange rate have large influences on wages, interest rates, prices, production levels, and employment. These variables have a large impact on people's everyday life and the standard of living.

The exchange rate and its ultimate effects on trade, national income, and welfare of a nation are of importance for policymakers. The size on the effects of changes in exchange rates is critical information for trade and exchange rate policymakers (Demirden and Pastine, 1995).

Economists have during a long period of time put emphasize on the relation between exchange rates and the trade balance. Since the middle of the twentieth century, there has been development in macroeconomic analysis that shows results on this issue. For an open economy, the reaction of the exchange rate fluctuations on the trade balance is important to understand because of the possibility to target the trade balance to get the optimal national income. Devaluation under a fixed exchange rate regime is typically expected to eliminate persistent trade balance deficits. A devaluation of the currency will decrease prices of the home country's exports abroad and increase the price of imports at home, inducing export quantity to rise and import quantity to decrease, thereby influencing the trade balance positively. The impact of the exchange rates can be different in the long-run compared to the short-run due to the slow adjustment of the trade quantity to the new exchange rate level. A theory that explains this relationship and makes it easier to predict the outcome of devaluation or a depreciation of the exchange rate for policymakers is the theory of the J-curve. According to the J-curve theory, after a real depreciation or devaluation the trade balance is expected to deteriorate at first due to increased import value in

terms of domestic currency due to sticky prices. Subsequently, over time the volume of export will increase and the volume of import will decrease when adjusting for the new exchange rate and the trade balance will then improve (Anderson and Styf, 2010).

Today, mining & quarrying sector is one of the emerging industries of Turkey. The Turkish natural stone sector is one of the most important economic sectors because it exports around $ 2 billion annually to 160 countries. The sector, which is among the top 5 countries in natural stone trade in the world, has grown about 100 times in the last thirty years and is ranked first in mine exports with a share of 50% (Altındag et al., 2017). In this paper, the elasticity of exporting the mining & quarrying products was tried to be measured against the exchange rate changes.

2.Literature Review and Theoretical Framework

2.1. The Relationship between Foreign Exchange Rate and Export

The sensitivity, or rather lack of, of prices to exchange rate movements has been well documented by Goldberg and Knetter (1997) and Campa and Goldberg (2005 and 2008) who provide estimates of the pass-through of exchange rates into import prices. There is also evidence indicating a decline in exchange rate pass-through to import prices in the U.S. On the quantity side, the elasticity of aggregate exports to real exchange rate movements is typically found to be low in industrialized countries, a bit below unity for example in Hooper, Johnson, and Marquez (2000) and above unity but rarely above 2 in others studies. In international real business cycle models, the elasticity used for simulations is typically between 0.5 and 2 (Berman et al., 2009).

While there is no evidence that an appreciation in the importing country would substantially increase imports for processing, there is both theoretical and empirical evidence indicating that exchange rate volatility between supply chain countries would deter processing trade. This effect arises because the service link cost for production blocks separated by national borders is an increasing function of risk and uncertainty, and exchange rate volatility increases risk and uncertainty. In a recent survey of Japanese MNCs, Ito et al. (2008) found that exchange rate stability between Asian currencies is essential for the uninterrupted flow of parts and components within regional production networks. Interestingly, exchange rate volatility may not be as harmful to production networks centered on the US. Turkcan and Keskinel (2009) examined the impact of exchange rate volatility on fragmentation in the US auto parts industry. Using DOLS estimation over the 1996–2008 period, they reported that exchange rate volatility has a positive but insignificant effect on US auto industry exports. Future research should investigate whether exchange rate volatility has different effects on production networks centered in East Asia and those centered in the US (Thorbecke, 2011).

The top four exporters in 2011 were China, USA, Germany, and Japan. China, USA and Japan have all been criticized for trying to depreciate their currencies to increase net exports (Beattie et al., 2012). How do exchange rates affect the exports of mining & quarrying products in Turkey?

The exchange rate is expressed as the rate of exchange of the two countries' money. While the exchange rate is determined at the point where the foreign exchange supply and the foreign exchange demand are balanced by a classical approach, it is influenced in two ways by the decisions of international economic decision-makers, especially central banks.

One of the major problems that developing countries face in their growth process is the current account deficit. While imports, which are increasing due to economic growth in developing countries, cause a decrease in foreign exchange stabilities; economic managers, especially the central bank, prefer to apply the most favorable exchange policy for their countries. While the spot exchange rate level may affect other economic variables in the economy, the two-way causality relationship between exchange rate and foreign trade has been emphasized in many studies (Karacor and Gercekler, 2011).

The relationship between the value of domestic money and foreign trade is examined with the help of the Marshall-Lerner condition. According to this condition, if the sum of the sensitivity of imports and exports to exchange rate is more than one, the exchange of value of domestic money against foreign currencies affects the foreign trade of the country. If the condition occurs, the depreciation of the domestic currency will make the price of the country's goods relatively cheap and will lead to an increase in exports. The relationship between exports and the exchange rate has been studied by many economists in the world and Turkey. In these studies,

many methods have been used, from Regression models to VAR models, from Co-integration tests to Conditional variance models.

Several studies have been done within this subject on how exchange rates affect the export and foreign trade. Different researchers have different ways to assess the impacts of exchange rate. Yurtoglu (2017) investigated export elasticities. She used the Granger Causality Test as her theoretical foundation. She reported that while there is a long-run relationship between real exchange rate and exports, no short-term relationship was found. Barısık and Demircioglu (2006) also investigated export elasticities for export. They used the full convertibility model for their theoretical foundation. They found that there is a weak relationship between exchange rate and exports. Arize (1994) employed the co-integration test to estimate foreign trade elasticities. He reported that there has been a long-term relationship in the same way determined between the Real Exchange Rate and Foreign Trade. A literature table on the work done on the subject in Turkey and in the world is given below:

Table 1. Summary of Literature

Researcher	**Model**	**Results**
Yurtoglu, Y., (2017)	Granger Causality Test	While there is a long-run relationship between real exchange rate and exports, no short-term relationship was found.
Karacor, Z., Gerceker, M., (2011)	Vector Autoregressive Model	Two-way causality relation between real exchange rate and foreign trade volume was determined.
Aktaş, C., (2010)	Vector Autoregressive Model	There is no relation between real exchange rate and foreign trade.
Altıntaş, H., Öz, B., (2010)	Vector Autoregressive Model	There is no negative correlation between exchange rate volatility and exports.
Barısık, S., Demircioglu, E., (2006)	Full Convertibility	There is a weak relationship between exchange rate and exports.
Gul, E., Ekinci, A., (2006)	Co-integration Test	Co-integration was detected between the real exchange rate and exports.
Yılmaz, O., Kaya, V., (2007)	Vector Autoregressive Model	A change in the real exchange rate has no statistically significant effect on foreign trade.
Arize, A., (1994)	Co-integration Test	There has been a long-term relationship in the same way determined between the Real Exchange Rate and Foreign Trade.
Akhtar, M.A., & Hilton, R.S., (1984)	Regression Model	There is a negative relationship between the exchange rate and the balance of foreign trade.
Zhe, W., (2005)	Co-integration Test	There is a permanent relation between real exchange rate and balance of foreign trade.
Lee. K., & Saucier, P., (2003)	ARCH-GARCH Method	There is a negative relationship between the nominal exchange rate and the balance of foreign trade.

2.2. Export of Mining and Quarrying Products

Turkey is a developing open economy with about 80.8 million inhabitants (TUIK, 2017), GDP Growth rate 11.1% (TUIK, 2017) and annual per capita income at current market prices equal to $14,117 in 2016 (World Bank, 2016), and it is surviving in an unstable region.

Exports and imports of goods and services are significant sectors in Turkish economy. When we look at Turkey's exports on a sectoral basis, the mining sector's contribution to the national economy compared to the previous year showed the highest increase (23.8%). According to data from 2017, the share of Turkey's exports constitute the main Industry group (77.4%), Agriculture (13.5) and Mining (3.1%), respectively (TIM, 2018).

Table 2. Turkey's Sectoral Export Figures

Sector	Amount (1000$) 2016	Amount (1000$) 2017	Variation (%)	Share (%)
Agriculture	20.211.119	21.235.089	5,1	13,5
Industry	107.600.041	121.392.773	12,8	77,4
Mining	*3.787.244*	*4.688.011*	*23,8*	*3,1*
Total	**131.598.404**	**147.315.873**	**11,9**	**94**
Exemption from Registration of Exporters' Associations	10.471.157	9.466.385	-9,6	6,0
T OTAL (TIM+TUIK*)	**142.069.560**	**156.782.257**	**10,4**	**100,0**

** First month for January – December period TUIK, Last month TIM number were used*

The share of the mining and quarrying sector in the gross domestic product in Turkey has declined relatively nominal by years. The gross domestic product ratio of the sector, which was 1.09 in 2012, declined to 0.82 by the year 2016 (http://www.mta.gov.tr/v3.0/bilgi-merkezi/maden-dis-ticaret, 30.01.2018).

Table 3. Share of Mining & Quarrying in GDP by Years

Years	Mining & Quarrying (TL)	GDP (TL)	Mining & Quarrying / GDP (%)
2016	21.369.179.272	2.608.525.749.333	0.82
2015	19.255.080.173	2.338.647.493.683	0.82
2014	19.409.823.725	2.044.465.875.822	0.95
2013	19.419.988.447	1.809.713.086.703	1.07
2012	17.117.464.397	1.569.672.114.915	1.09

The natural stone and mining export figures of Turkey in the last 10 years are given in Table 1. When these data are examined, it has been seen that the share of natural stone exports in total mining exports is between 43-49%. The rate of exports of natural stone in mining exports was the lowest (43.7%) in the year 2017, the highest (48.9%) in the year 2015. In 2013, mining exports reached the highest level with $5,034,886,000. Natural stone export amount realized in the same year is $2,222,387,000 (IMIB, 2017).

Table 4. Distribution of Turkey's Mining & Natural Stone Exports by Years

Years	Natural Stone Export (*1000$) (A)	Mining Export (*1000$) (B)	(A/B) * 100 (%)
2017	2.048.049	4.688.240	43,7
2016	1.815.599	3.787.505	47,7
2015	1.906.251	3.895.258	48,9
2014	2.128.230	4.641.566	45,9
2013	2.222.387	5.034.886	44,1

3. Research Method

3.1. Sample and Data Collection

In this paper, data representing the exchange rate for monthly average dollar-selling prices between the years of 2005-2017, obtained from the data system of the Central Bank is used. In addition this, export data denominated in dollars for mining & quarrying products for the same period, were also obtained from the Turkey Statistical Institute. Data obtained from those for 156 periods were analysed through the SPSS statistical packet program.

3.2. Analyses

At the beginning of the analyses, a linear model was established in which the logarithm of the independent variable is the dollar exchange rate and the dependent variable is the mining & quarry export data, by using the least squares method.

4. Findings

In this paper, weighted least squares method (WLSM) is conducted to test the elasticity of exporting the mining and quarrying products to foreign exchange rate changes.

In accordance with the analyses results, research model is being shaped as it has been shown at Figure 1 below:

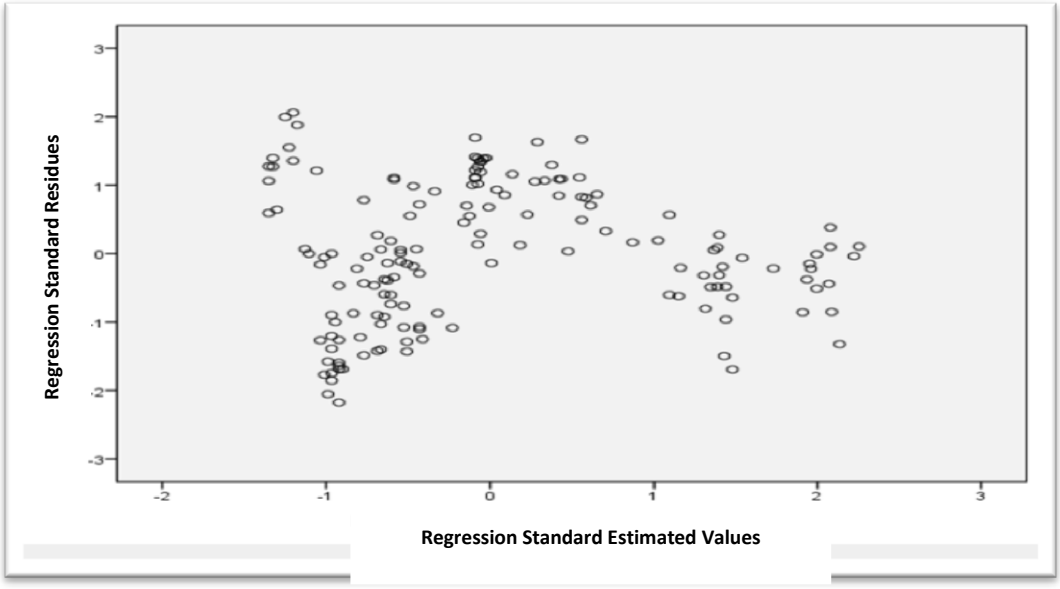


Fig 01. Scattering Diagram for Model Residuals

Although there is a positive relationship between the exchange rate and export data in accordance with the general theoretical model, the perfusion of the residues showing too much scatter seen in Figure 1 reveals the problem of varying variance. One of the important assumptions of the least squares method is the unchanging variance status. According to this assumption, the variance of the error terms must remain constant against the changes of independent variables (Tarı, 2008: 173). If the variances change, our model coefficients and coefficients tests will lose their meaning. In literature, weighted least squares method is recommended for the correction when the varying variance problem is encountered (Tarı, 2008: 187). In the weighted least squares method, where the error variance is not known, it is assumed that the dependent variable is proportional to the square of the expected value.

In this paper to obtain the weighting factor residuals are estimated initially by using least squares method, then these residuals are made a dependent variable and the expected values of the dependent variable are estimated.

Table 5. Model Results with Residuals as Dependent Variables

Independent Variables	F Value	F Sig.	T Value	T Sig.	β	Standardized β

Log dollar exchange rate	23.094	.000	13.617	.000	-2,709,070	-.361

When the model results that residuals are dependent variables, are examined T Sig. value for independent variables and F Sig. value for model integrity is less than ,05. Therefore these results are statistically significant. Expected values of model result are estimated, these values (by taking 1/square of the expected value) were used to obtain the weighting coefficient. With this coefficient, a new model without changing variance problem is estimated by re-using the weighted least squares method.

Table 6. Weighted Least Squares Coefficients Results

Independent Variables	T Value	T Sig.	β	Standardized β
Log dollar exchange rate	25.378	.000	8,814,570.434	.656

In Table 2 by using weighted least squares method a new model is estimated in which the independent variable is the dollar exchange rate, and the dependent variable is the exports. Due to T distribution probability value, lower than .05, the beta value was statistically significant. In other words, one percent (1%) increase in dollar exchange rate increases the export of mining and quarrying products by nearly 8,8 million dollars. In addition, a one percent (1%) standard deviation increase in dollar exchange rate leads to a 0.65 standard deviation increase in exports of mining & quarrying products.

Table 7. Weighted Least Squares Model Results

Independent Variables	F Value	F Sig.	Adjusted R^2	Durbin Watson	Estimated Standard Error
Log dollar exchange rate	116.265	.000	.426	.65	1.183

Table 3 shows the basic statistical results of the model obtained using the weighted least squares method. According to these results, the model is meaningful as a whole because F test probability value is less than .05. The adjusted R2 value is .426. This value indicates that 42% of the changes in exports of mining and quarrying products can be explained by the dollar rate. The small amount of the standard error in the model also shows the realism of the model.

Table 8. Weighted Least Squares Methods Basic Statistical Results of Residuals

Independent Variables	N	Skewness	Kurtosis	Mean	Variance
Log dollar exchange rate	156	-.219	-.829	-3.4020	3.79

One of the important assumptions of the least squares method is the normal distribution of model residuals. The normal distribution of model residues was investigated with the help of values of Kurtosis and Skewness. When the values of Kurtosis and Skewness given in Table 4 are examined, it seems to be in the range of normal accepted values (±1.5) (Tabachnick & Fidell, 2013).

5. Conclusion and Discussions

Exports are expected to increase in the case of the depreciation of the domestic currency in the economies where exports and imports are sensitive to foreign exchange rate. While foreign currency appreciation increases the profitability of the firms also increases because their costs are in domestic currency. As a result, firms that prefer to maintain the same profitability can achieve an international competitive advantage by lowering their product/service prices. While there are many policies such as R&D, innovation, export incentives in the increase of exports, the reason why the most debated relationship is foreign exchange policy is that the depreciation of domestic currency in a controlled way starting with China in the world is successful in increasing the exports. By this way, China's exports in 2017 reached 2.3 trillion dollars.

In this paper, mining & quarrying whose development are mostly dependent on nature sector exports which is predominantly sensitive to the dollar exchange rate, was tried to be analysed by using the least squares method. As a result, mining and quarry exports are sensitive to the dollar exchange rate and a 1% increase in dollar exchange rate increases mining & quarrying exports by approximately $ 8,8 million. When the central bank data is examined, the dollar exchange rate, which was 1.36 TL in January 2005, has been reached to 3.80 TL at the end of February 2018. The fact that dollar exchange rate increased by 2.8 times in 13 years shows that the

exchange policy applied in the country or by the result of the world finance conjuncture is in favour of the mining and quarrying sector. The sector should support these developments with their own work and target more market share. Although there are so many studies examining the elasticity to foreign exchange rate in literature; the elasticity of the mining & quarrying sector exports to dollar exchange rate is examined and revealed for the first time through that study, which differentiates this study from others.

However, this study is conducted on mining & quarrying sector of Turkey; findings might not be transferable to all sectors. Thus, it is recommended that further researches can be conducted on other sectors and, also in different foreign exchange rates for the generalizability of findings.

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ACCOUNTING QUALITY IN ALBANIA (INTERNATIONAL ACCOUNTING STANDARD ENTITIES)

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Abstract

The information is one of the most important parts of our life. Every time we have to take a decision, we look for information in different ways. The same thing happens with the economic unit too. Every time managers have to take a decision, the first thing they do is controlling the accounting information. In order the decision to be correct, the accounting information of the financial statement should be qualitative. The main purpose of this paper is to see how was the evolution of the quality of accounting information in Albania after the implementation of international accounting standards in different economic units. To fulfil this purpose we reviewed a wide literature that link with the accounting quality and the factors that influence it. This paper bases in published financial data of 22 economic units during nine years of activity from 2006 – 2014, taken from the National Business Centre web page and from the web pages of these units, despite they are incomplete. To process the above data we use Barth model, which is the appropriate model for our information. From data processing, we conclude that the accounting quality, measured by earnings management, improved during the years. Finally, we list some conclusions and recommendations to improve the quality of accounting information in the future.

Keywords: Accounting information, financial report, international accounting standards, quality

1.Introduction

The economy globalization increases during the last years. This fact increased the need for a real and clear information about their position and performance. To compare this information between different types of units is essential that financial information has the same format. Accounting standards assure this format.

From 2008 and after, Albania is a country that uses two types of standards, national and international accounting standards, to register the activities that happen in an economic unit. The small and medium enterprises and NGO-s use national accounting standards while the others use international accounting standards. Here we mention listed and public interest companies, financial companies and other companies that fulfil in the same time two criteria: they have sales about 10 million € and their employees number is over 100 for the last two years.

Despite the format, the standards emphasize the real situation of a company in their financial statements. This links with the quality of financial information. In Albania, we use standards for eleven years, so we need to evaluate the quality of accounting after their implementation.

Many foreign scientists evaluate accounting information quality based on databases of economic units before and after the standards implementation. They define the factors that influence the quality of accounting information and financial reporting like earning management, timely loss recognition and cost of capital. In the same way, Albanians tried to evaluate it too.

Foreign studies and Albanian studies too, mention that big companies and financial units has higher quality of reporting than the others. This is a result of their activities and their auditing reports.

2.Literature Review and Theoretical Framework

Many different researchers has defined the accounting information quality beginning from the implementation of IAS voluntary or mandatory. They gave their definitions about accounting quality and the factors that influenced it.

One of the most complete definition is that of Dechow and Schrand (2004): "Accounting information quality is the scale in which the accounting information reflects current operating performance, it will be a good indicator of future operating performance and it will accurately annuitize intrinsic value of the company".

According Penman (2003), they define accounting information quality from shareholders interest and their right evaluation. It is based in the use of information from shareholders and the unit's perspective in the future. He linked the accounting information quality with the earnings quality. He said that earnings quality is an important characteristic of financial reporting as the shareholders buy their future earnings. The definition earnings quality has different interpretations from different researchers but one of the best is that: earnings quality linked with the connection of net cash flow from the operations with the financial indicator LNEG that is the ratio between net incomes with total assets.

According Lang and others (2003), they compare the accounting information quality between listed companies in USA stock exchange and unlisted companies. They studied 413 listed and unlisted companies from different countries in this stock exchange during the years 1990 – 2001. To evaluate the accounting information quality they studied these variables: earning management, timely loss recognition and the link between market prices and book values for shares. They discovered that listed companies indicated low earnings management, short timely loss recognition and more compliance between market prices and book values for shares than unlisted companies did. Therefore, they present high quality characteristics.

According Sreedhar Bharath and others (2004), they link accounting information quality with loan cost that banks determine for their clients. They end up that it was a negative connection between accounting quality and loan cost, that mean that as high the quality of accounting information as low the loan cost.

Mary Barth is one of the researchers that studied more than others did the quality of accounting information and IAS (IFRS).

In one of her studies with others (2006), she determined that implementation of IAS (IFRS) is accompanied with high accounting information quality and low cost of capital. They studied 1885 observations in 319 companies from 21 different countries that implemented IAS from 1994. They studied years 1990 – 2003 (published from World scope); four of them were before IAS adoption and other post adoption. During their study they defined that post adoption period had higher quality of accounting information and lower timely loss recognition and more compliance between market prices and book values for shares and lower cost of capital than implementation of GAAP.

In September 2007, the same researchers applied the same model in 1896 observations of 327 companies from 21 countries that implemented IAS (IFRS). Period and variables were the same as above. They finally define that companies with IAS adoption have higher accounting information quality than the companies without IAS. This was a result of interaction of financial reporting characteristics as IAS, their interpretation, their obligation of implementation and law cases. As they involved in their study the effect of economic environment intervention, they were not sure that the accounting quality was from the intervention or from IAS adoption. Finally, they conclude that accounting information quality was higher in post adoption IAS period.

In another study of November 2007, the researchers conclude that the accounting information quality was higher in IAS companies than in GAAP companies. The model applied in other 2212 companies from 24 countries during the period 1995 – 2006. They compared some IAS companies in different countries in world with some IAS companies in different countries in USA and some GAAP companies in different countries in USA. They conclude that the IAS companies in world differ from IAS companies in USA from regulations and law cases. They conclude that accounting information quality was higher in IAS companies in USA than in IAS companies from other countries of the world. They conclude that IAS companies in USA did not have many changes in their quality in pre and post adoption period. Finally, they conclude that the accounting information quality in IAS companies of USA is higher than that of GAAP companies.

According Beatty and others (2007), they studied the effect of confidential information and monitoring in accounting information quality in investment decisions. They studied 2251 companies that bought debt securities from the state or other institutions. From these 886 companies bought debt securities from the state, 1836 from private institutions and 471 from joint ventures state – private institutions. They conclude that accounting information quality effects the investments in debt securities from private institutions. They conclude that funding source effects investment decisions and the role of banks in decreasing disagreements.

According Morais and Curto (2008), they applied Barth model in 34 Portuguese listed companies to evaluate accounting information quality before and after IAS implementation. They studied these companies during 10 years of their activity 1995 – 2005, where 1995 – 2004 was before IAS period and 2004 – 2005 was the period after IAS. They conclude that the companies has lower their earnings management evaluation compliance during IAS period. They explain this with the low number of observations in the period after IAS implementation (72 observations) and with the short time after IAS implementation (only one year).

According Paiva and Lourenço (2009), they studied accounting quality in listed companies in Great Britain and France. To evaluate this at the beginning they used Dechow model, which based on the short-term assets and liabilities quality. They divided them in to discrete and indiscrete elements. The first link with the earnings management and the second with the company's performance. As higher the discrete elements of short-term assets and liabilities, higher the earnings management so lower the accounting quality. However, from the other part they saw that discrete elements of short – term assets and liabilities were effected from other factors from business environment such as the size of company, financial leverage, increasing incomes, auditing etc. After this, they decided to apply Barth model that included these factors. After applying Barth model, they conclude that accounting quality is higher in big and listed companies in France and Great Britain. The companies with higher ratio of debt had lower accounting quality than others. In addition, auditing from four big companies did not play any role in accounting quality of these companies.

According Hillary (2009), he concluded that the value of companies with high accounting quality is more stable than the value of companies with low accounting quality. He studied the connection between accounting information quality and liquidity indicator, turn and price variation in ten days during the years 1981 – 2006, in which catastrophic market events happened (immediate decline of prices). He studied the connection between accounting information quality and return on equity. He conclude that companies with high accounting quality had a return rate more stable during catastrophic days. The indicators that he used to evaluate accounting quality were total of short – term assets and liabilities during the year, net income, and net cash flow from operating activities, depreciation expenses and total average assets during the year.

According Dechow and others (2010), beginning from the Statement of Financial Accounting Concepts no 1 in GAAP they defined the accounting quality saying that: Higher quality earnings provide more information about the features of a firm's financial performance that are relevant to a specific decision made by a decision maker. They studied the concepts of earnings quality examining more than 300 papers of this field.

According Hribar and others (2010), they studied the evaluation of accounting information quality with auditing fee. They concluded that as low the accounting information quality the higher the auditing fees for it. They compared this with the connection between the number of police and the rate of crimes in economy.

According Schiller and Vegt (2010), they studied the connection of accounting information quality with interim reporting. During the years 1923 – 1973, listed companies in New York stock exchange had interim reporting for 3 months. After this period, they had interim reporting for six months. They studied accounting information quality in two dimensions: its credibility and information just in time. When they saw that if these two dimensions were positive they said that interim reporting is improved, if not they did not say the same thing for interim reporting.

According Jackson (2011), he studied that a financial reporting of high quality lead to a right evidence of product prices in the future. According him accounting information quality is specific for all the users of financial statements because they use it for different purposes. He used three approximations to evaluate accounting information quality: (1) the probability of material errors of accounting, (2) the quality of deferred accounting and (3) hammered earnings. He concluded that higher the quality of deferred accounting and hammered earnings higher the accounting information quality. The opposite happened with the probability of material errors of accounting so the lower it, the higher the quality of the accounting information.

According Ma and Martin (2012), they studied that the accounting information quality effects capital costs, debt costs, the choice between public or private debt and the loans offered by loans syndicate. They concluded a negative connection between accounting information quality of big clients with the money level of the suppliers.

According Christensen and others (2015), they applied Barth model in German companies. They studied 310 companies, divided in 177 that did not adopt IAS until 2005 and 133 that voluntarily adopt IAS from1998. They studied these companies in the period 1993 – 2006. They concluded that the earnings management lowered in

the companies which voluntary adopted IAS, so the accounting information quality increased. The opposite happened with the other companies. The earnings management increased after the adoption, so the accounting information quality decreased. According authors this was effect of three factors: the variables change with the time, statistical observations were a few and the time was short. (Only two years) So they concluded that not always the adoption of IAS lead in an increased quality of accounting information. It depends in the incentive of the accountants to approve or not the new IAS, despite their quality.

According Yurt and Ergun (2015), they studied the adoption of IAS and the accounting quality in Turkey. They studied 19 listed companies in the Istanbul stock exchange. This study included 133 observations during the years 2005 – 2011. Using Barth model they saw that accounting information quality was low despite IAS implementation. This effect was result of the high level of liabilities that companies use to finance their activities. They recommend that all companies in Turkey use IAS in their financial statements to avoid the information asymmetry and its effects in the economy.

According Legenzova (2016), she studied the accounting quality in Lithuania. She realized interviews with experts to evaluate the accounting quality in Lithuania. She concluded that the quality of accounting information is poor and the EU has to do much work to improve the accounting of the small and medium entities because they have importance for the development of European economy.

3.Research Method

3.1.Sample and Data Collection

Our sample consist of 22 entities that operate in Albania and use IAS/IFRS to prepare their financial statement. It is a random sample. We take the financial statement of these companies from our National Centre of Business and from their websites. Depending in their activity, these companies divided into four groups: 13 banks, 3 microcredit unions, 4 assurance companies and two other companies that accomplish the two above criteria.

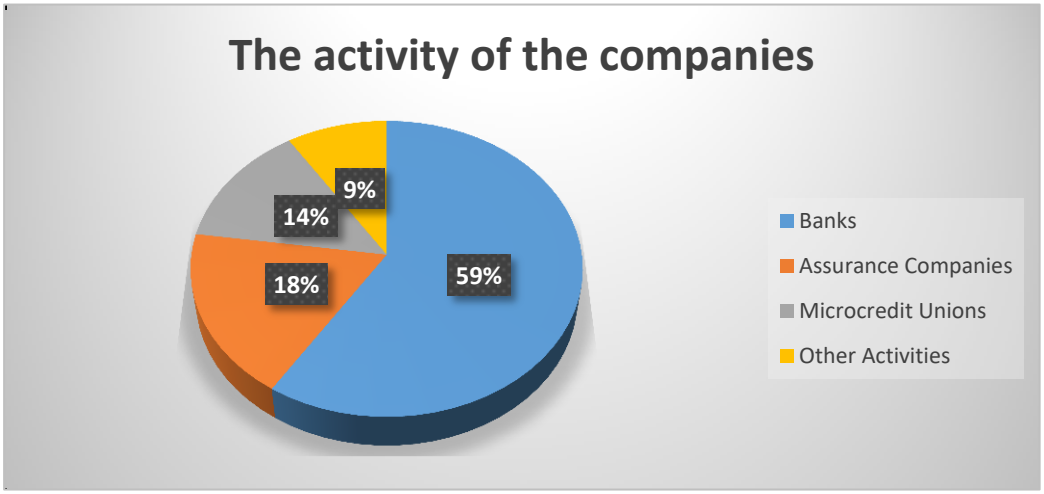


Figure 01: The activity of the companies

For these sample companies we have 121 observations during the years 2006 – 2014, because we have some missing data during years. We delete the outlier data and we hold data that are in the interval [-200%; 200%], because they worsened the regression.

3.2.Analyses

As the review of the literature gives us different methods to evaluate the accounting information quality, we choose to apply in Albania, Barth model, as it is more suitable for the companies that operate here. We choose to evaluate the quality based on the earnings management. The purpose of this paper is to give answer to the research question below:

Is there earning management in the financial statements prepared from the accountants after the IAS implementation?

If there is earnings management in the financial statements, we conclude that the accounting information quality is low, if there is not we conclude that the accounting information quality is high.

The first measure of earnings management relies on the variability of the change in net income scaled by total assets, ΔNI (Lang and others, 2006). The second measure of earnings management relies on the ratio of the variability of the change in net income, ΔNI, to the variability of the change in operating cash flows ΔCF. The third measure relies on the connection between accruals and operating cash flows. (Barth and others, 2008).

According the above information, we raise three hypotheses that link with research question.

We foresee that a higher accounting information quality comes from a lower earning management. Therefore, the first hypothesis is as below:

H1: The implementation of IAS/IFRS links with a high variability of change in net income.

The second hypothesis on earning management relies on the ratio of the variability of the change in net income with the variability of the change in operating cash flows. We foresee that a higher accounting information quality comes from a higher ratio. Moreover, the second hypothesis is as below:

H2: The implementation of IAS/IFRS brings a higher ratio between the variability of change in net income to the variability of change in cash flows.

The third hypothesis on earning management relies in the correlation between accruals and operating cash flows. We foresee that a weak correlation between them leads to a high accounting information quality. Moreover, the third hypothesis is as below:

H3: The implementation of IAS/IFRS relies on a low management of accruals from the company.

We implement these three hypotheses in 22 companies that uses IAS/IFRS in Albania during the period 2006 - 2014.

After we create the hypotheses, we follow these steps to complete the database analysis:

1. We evaluate four models of regression: the variability of the change in net income, the variability of the change in operating cash flows, accruals and operating cash flows.
2. After this, we took the residuals of every model of regression.
3. Then we use FISHER and ANOVA analysis to analyze the residuals of the regressions. We use FISHER analysis to compare the accounting information quality before and after the standards. While we use ANOVA analysis to evaluate the variance of the residuals.
4. Then we approve or reject the hypotheses.

We use Gretl programme and Excel Megastat to analyze the data.

4.Findings

To analyze the link between dependent and independent variable we use the multiple linear regression analysis with ordinary least squares model.

Beginning from Barth model, we define the dependent and independent variable for every hypothesis. Then we use the correlation matrix to see if there is auto correlation between the variables. Then we prepare the equations of multiple regression. To evaluate the variance of independent variable we evaluate the variance of the residuals of every regression. We use ANOVA analysis to evaluate the hypothesis.

Let us begin with the first hypothesis. We prepare the first equation of the multiple linear regression where the dependent variable is the variability of the change in net income scaled by total assets, ΔNI, meanwhile independent variables are size, growth, financial leverage, change of total liabilities, turn of assets and operating cash flow. Other independent variables such as issue, exchange, listing and close are not object of our regression, because we do not have a stock exchange in Albania where we can take these data. The indicator variable of audit is not in this regression because one of four big audit companies audit all the companies that we consider. The independent variable of size will be the natural logarithm of total assets, because we do not have a stock exchange to evaluate the market value of the equity. From the matrix of the correlation between independent

variables, we see that we do not have problems of correlation between them, because the coefficients are out of the interval [-0.7; 0.7]. (Below in the appendices we have the tables of the summary statistics for all the variables and the correlation matrix for independent variables).

The multiple regression is as follows:

$$\Delta NI_{it} = \alpha_0 + \alpha_1 SIZE_{it} + \alpha_2 GROWTH_{it} + \alpha_3 LEV_{it} + \alpha_4 \Delta DISSUE_{it} + \alpha_5 TURN_{it} + \alpha_6 CF_{it} + \mathcal{E}_{it}$$

Where:

ΔNI = the change in annual earnings, where earnings is scaled by end of year total assets

SIZE = natural logarithm of end of year of total assets

GROWTH = percentage change in sales

LEV = end of year total liabilities divided by end of year equity book value

ΔDISSUE = percentage change in total liabilities

TURN = sales divided by end of year total assets

CF = annual net cash flow from operating activities divided by end of year total assets

After the evaluation of linear regression the results tell us that the model is statistically significant (p = 0.000) but the independent variables like TURN and CF are not statistically significant. After that, we do another time the evaluation of linear regression and we see that it was statistically significant with ((F (2,118) = 16.32, p = 0.000) and adjusted R^2 is 20.3%. The significant variables in the final regression model are SIZE (p = 0.0061) and ΔDISSUE (p = 0.0048). Below is the final linear regression model:

$$\mathbf{\Delta NI = -0.04 + 0.12 SIZE_{it} + 0.13 \Delta DISSUE_{it} + \mathcal{E}_{it}}$$

As we see from the linear regression these variables has positive relation with ΔNI and the adjusted R^2 is low. This means that the independent variables justify 20.3% of the dependent one. This means that other variables indicate the change in net income such as: fiscal and trade law, economic environment etc. Otherwise this does not worsen analyse quality because we are interested in the variance of the residuals of the regression and not in regression especially. We see this in the original model, because Barth does not mention the adjusted R^2 nowhere.

The variability of ΔNI is the cross sectional variance of residuals of the IAS data companies. Therefore, we proceed with evaluating of the variance of the residuals of the regression that is the same with the variance of the change of net income. To do this, we know that IAS entities use them from 2005 and later. Therefore, we use ANOVA analysis and we have two hypotheses:

$H_{0,1:}$ *During the years the average of the residuals don't change*

$H_{a,1}$*: During the years the average of the residuals change*

Below is ANOVA table (table 1). From the table we see that F > Fcrit, so 2.83 > 2.09 and p < α, so 0.009 < 0.01. This means that we refused H_0 and approved H_a. Finally, it means that during the years in the financial statements we do not have earnings management. Therefore, the accounting quality during the implementation of IAS/IFRS is improved.

Our second hypothesis is based on the ratio of the variability of the change in net income, ΔNI, to the variability of the change of operating cash flow ΔCF. The first variance is ready from the first equation. Now we have to evaluate the same equation for ΔCF. We prepare the equation of the multiple linear regression where the dependent variable is the variability of the change of operating cash flow, ΔCF, meanwhile independent variables are size, growth, financial leverage, change of total liabilities, turn of assets and operating cash flow. From the matrix of the correlation between independent variables, we see that we do not have problems of correlation between them, because the coefficients are out of the interval [-0.7; 0.7].

The multiple regression is as follows:

$$\Delta CFI_{it} = \alpha_0 + \alpha_1 SIZE_{it} + \alpha_2 GROWTH_{it} + \alpha_3 LEV_{it} + \alpha_4 \Delta DISSUE_{it} + \alpha_5 TURN_{it} + \alpha_6 CF_{it} + \mathcal{E}_{it}$$

After the evaluation of linear regression the results tell us that the model is statistically significant (p = 0.000), but the variables TURN and CF are not statistically significant. After that, we do another time the evaluation of linear regression and we see that it was statistically significant with ((F (2,118) = 15.41, p = 0.000) and adjusted R^2 is 19.4%. The significant variables in the final regression model are SIZE (p = 0.0008) and ΔDISSUE (p = 0.0000). Below is the final linear regression model:

$$\mathbf{\Delta CF = 4.28 - 10.8SIZE_{it} - 14.8\Delta DISSUE_{it} + \mathcal{E}_{it}}$$

As we see from the linear regression these variables has negative relation with ΔCF and the adjusted R^2 is low. This means that the companies realize sales with clients and not in cash. The same for the negative link of ΔCF with ΔDISSUE. The low adjusted R^2 means that the independent variables justify 19.4% of the dependent one. This means that other variables indicate the change in net income such as fiscal and trade law, economic environment etc. Otherwise this does not worsen analyse quality because we are interested in the variance of the residuals of the regression and not in regression especially. We see this in the original model, because Barth does not mention the adjusted R^2 nowhere.

The variability of ΔCF is the cross sectional variance of residuals of the IAS data companies. Therefore, we evaluate the variance of the residuals of the regression that is the same with the variance of the change in operating cash flow. Then we measure the ratio of the variance of ΔNI with ΔCF. In this case, we know that the ratio will be available for panel data, where we have data for both. We use ANOVA analysis to measure the variance of the ratio. Therefore, we have two other hypothesis:

$H_{0,3}$: *During the years the average of the residuals don't change*

$H_{a,3}$: *During the years the average of the residuals change*

Below is ANOVA table (table 2). From the table we see that F < Fcrit, so 0.85 > 2.09 and p < α, so 0.009 < 0.01. This means that we approved H_0 and refused H_a. Finally, it means that during the years in the financial statements we have earnings management. Therefore, the accounting quality during the implementation of IAS/IFRS worsened. It means that our accounting professionals use short-term assets and liabilities to manage their earnings.

Finally, we see our third hypothesis. Here we have to evaluate if in the companies we have low management of accruals after IAS/IFRS implementation. This means to see the correlation between accruals with operating cash flows. To measure this correlation we use Speraman coefficient.

Now we prepare the equation of the multiple linear regression where the dependent variable in the first case is accruals, meanwhile the dependent variable in the second case is operating cash flow. The independent variables are the same for two cases; size, growth, financial leverage, change of total liabilities and turn of assets. From the matrix of the correlation between independent variables, we see that we do not have problems of correlation between them, because the coefficients are out of the interval [-0.7; 0.7].

The multiple regressions are as follows:

$$ACC_{it} = \alpha_0 + \alpha_1 SIZE_{it} + \alpha_2 GROWTH_{it} + \alpha_3 LEV_{it} + \alpha_4 \Delta DISSUE_{it} + \alpha_5 TURN_{it} + \mathcal{E}_{it}$$

$$CF_{it} = \alpha_0 + \alpha_1 SIZE_{it} + \alpha_2 GROWTH_{it} + \alpha_3 LEV_{it} + \alpha_4 \Delta DISSUE_{it} + \alpha_5 TURN_{it} + \mathcal{E}_{it}$$

After the evaluation of the first linear regression the results tell us that the model is statistically significant (p = 0.000) but independent variables like SIZE and LEV are not statistically significant. After that, we do another time the evaluation of linear regression and we see that it was statistically significant with ((F (3,117) = 7.67, p = 0.003) and adjusted R^2 is 14%. The significant variables in the final regression model are ΔDISSUE (p = 0.0001) and TURN (p = 0.0253). Below is the final linear regression model:

$$\mathbf{ACC = 0.11 - 0.12\Delta DISSUE_{it} - 0.07TURN_{it} + \mathcal{E}_{it}}$$

As we see from the linear regression these variables has negative relation with ACC and the adjusted R^2 is low. The low adjusted R^2 means that the independent variables justify 14% of the dependent one. This means that other variables indicate the change in net income such as fiscal and trade law, economic environment etc. Otherwise this does not worsen analyse quality because we are interested in the variance of the residuals of the regression and not in regression especially. We see this in the original model, because Barth does not mention the adjusted R^2 nowhere.

Then we evaluate the second linear regression. After the evaluation of the second linear regression the results tell us that the model is marginally significant (p = 0.053), but the independent variables like SIZE, ΔDISSUE and TURN are not statistically significant. After that, we do another time the evaluation of linear regression and we see that it was marginally significant with ((F (2.114) = 4.13, p = 0.018) and adjusted R^2 is 5%. The marginally significant variables in the final regression model are GROWTH (p = 0.0222) and LEV (p = 0.0331). Below is the final linear regression model:

$$\mathbf{CF = -1.14 \times 10^{10} - 5.63 \times 10^{10}\ GROWTH_{it} + 3 \times 10^{9}\ LEV_{it} + \varepsilon_{it}}$$

As we see from the linear regression, GROWTH has negative relation with CF, LEV has a positive one, and the adjusted R2 is low. The low adjusted R2 means that the independent variables justify 5% of the dependent one, but this does not worsen our analyses.

Then we evaluate the residuals of every equation and we use Spearman coefficient to evaluate the correlation between the residuals of these two equations. (Below in the table 3 you can find correlation matrix). From data processing, we see that this coefficient is -0.334, which means that between accruals and operating cash flows exists a weak negative correlation. (Figure 2) Therefore, it means that in the financial statements does not exist earning management so the accounting information quality is high.

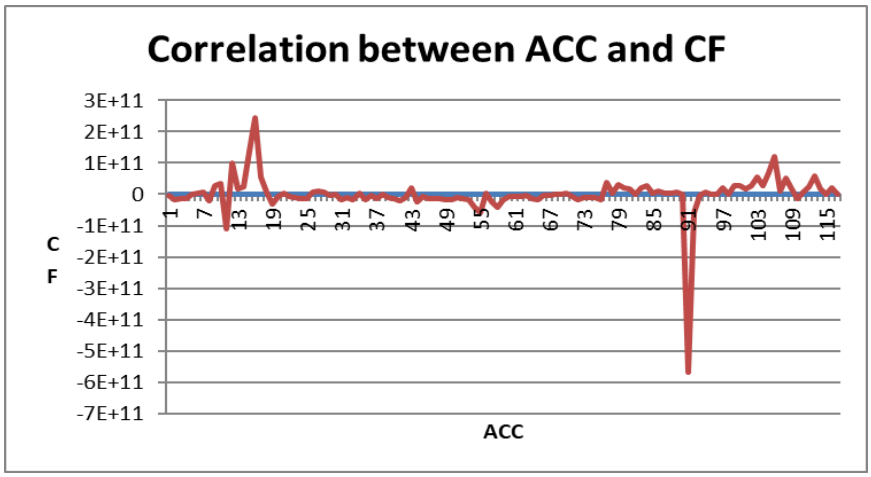


Figure 02. Correlation between ACC and CF

Finally, we conclude that the accounting information quality after the implementation of IAS/IFRS is high, because the first and the third hypothesis approved. The second rejected. We explain this with the small number of observations.

Table 01. Hypotheses Summary

Hypotheses	Approved Basic hypotheses/ Alternative hypotheses	Conclusions
First Hypothesis	Approved Alternative Hypothesis: *The implementation of IAS/IFRS links with a high variability of change in net income.*	This means that in the financial statements prepared by IAS entities does not have earnings management, so the accounting quality is high.
Second Hypothesis	Approved Basic Hypothesis: *The implementation of IAS/IFRS brings a lower ratio between the variability of change in net income to the variability of change in cash flows.*	This means that in the financial statements prepared by IAS entities, managers use accruals to manage earnings so the accounting quality is low.

Third Hypothesis	Approved Alternative Hypotheses: *The implementation of IAS/IFRS relies on a low management of accruals from the company.*	This means that in the financial statements prepared by IAS entities, managers do not use accruals to manage earnings so the accounting quality is high.

5.Conclusion and Discussions

As we see from our paper, the full definition for accounting quality is "Accounting information quality is the scale in which the accounting information reflects current operating performance, it will be a good indicator of future operating performance and it will accurately annuitize intrinsic value of the company".

We studied the accounting information quality of 22 entities that use IAS/IFRS in Albania. This is a small number of companies, but it is about 17% of all entities that use these standards. We see that the accounting quality, measured by earnings management, improved during the years. In our paper, we use only quantitative methods to measure accounting quality, but we can say that qualitative methods will be effective too. We will use them in the other studies of this field.

Finally, we hope to do another study of accounting quality for all Balkan Countries, so we can compare Albania with other countries of the same level.

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Appendices:

Table 1. Anova Analyses H_1

Source of the variance	*Sum of squares*	*df*	*MS*	*F*	*P – value*	*F-crit*
Between groups	0.215705	7	0.030815	2.831093	0.009438985	2.093913
Within groups	1.197296	110	0.010885			
Total	1.413001	117				

Table 2. Anova Analyses H_2

Source of the variance	*Sum of squares*	*df*	*MS*	*F*	*P – value*	*F-crit*
Between groups	0.011605	7	0.001658	0.851814024	0.5471	2.093913
Within group	0.214093	110	0.001946			
Total	0.225699	117				

Table 3. Correlation matrix

	ACC	CF
ACC	1.00	
CF	-0.334	1.00

117 SAMPLE SIZE

±0.182 critical value 0.05 two-tail

±0.237 critical value 0.01 two-tail

LEADING FOR INNOVATION

GENDER INEQUALITY AT WORK IN TURKEY: AN ANALYSIS OF SELECTED PERIODICAL PUBLICATIONS BETWEEN 2007-2017

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Abstract

While gender inequality at both organizations and societies is one of the prevalent problems all around the world, distinct issues related to this problem come forward based on countries. Therefore, in this study, we aimed to find most salient dimensions of gender equality at work in organizations in Turkey because of the complexities in Turkish political and social life. With accordance to our aim, we examined some leading newspapers during years period 2007-2017 to reveal the outstanding issues which are mentioned by business environment on gender equality. The newspapers are Hürriyet, Sabah, Cumhuriyet and the business magazine is Capital Turkey. We applied thematic analysis which is a qualitative method used for the analysis of large qualitative data sets. The analysis resulted in four themes called participation, underrepresentation, gender bias, work-family conflict. Despite many efforts which are said to taken by companies and government the participation of women to work life in Turkey remains as a major problem for Turkey regarding gender equality. Also, underrepresentation of women at upper echelons in Turkey is seen as another major issue on gender equality by Turkish businesses. Besides these equally important issues, bias and work family conflict also emerged as critical issues for gender equality at work in Turkey.

Keywords: Gender, inequality, media, Turkey

1.Introduction

Burgeoning interest among governments, researchers, international organizations such as European Union, United Nations and non-governmental institutions in gender inequality at work exists all around the world and in Turkey. As international initiatives, Women Empowerment Principles (WEP) and sustainability goals including "ending gender inequality" by UN and as national initiatives, a "comply or explain" code is applied by Capital Markets Board of Turkey (CMB), the "Social Gender Equality in Work Life Award", "Equality at Work Platform" can be seen as fundamental endeavors to provide gender equality at workplaces. However, it seems gender inequality at work persist for organizations operated in Turkey context according to the data revealed by World Bank **(**World Bank, 2017**)**.

The term of gender was used with a different meaning from the term of sex which embraces the role of woman and man. The perception of gender emphasizes that the problem is not the sex of woman or man, since roles that are attributed to man and woman constitute problems (Beşpınar and Topal, 2017; Aybars, Copeland and Tsarouhas, 2018). Applying the term gender as a concept without implying biological or physical traits have been widespread among sociologists and psychologists, it has been subject to organizational studies since 1970s (McCarthy and Moon, 2015).

With the growing number of women at workplaces, countries have begun to improve their own policies in order to reduce gender inequality in these settings. For instance, in U.S. gender bias has been declined with the creation of Equal Employment Opportunity Commission and Civil Rights Act (Tolbert and Castilla, 2017).

2.Literature Review and Theoretical Framework

Most of the countries all around the world struggle with the existence of gender inequality at the workplaces as a prevalent problem (İsmail and Nakkache, 2015). Both scholars and policy-makers are interested in gender equality with an intense agenda (Huffman et al, 2017). Since, the participation of women in labor market display a great increase during the 1970s and 1980s in many countries (Nyman et al, 2018). Although the situation may have improved in recent years, studies still point to the fact that men receive better rewards at work in terms of income, status, promotion and development opportunities among others all around the world (İsmail and Nakkache, 2015).

During the 1990s, Convention on Elimination of all Forms of Discrimination against Women (CEDAW) as international organization showed up in the scene and by thus, gender equality become more visible in Turkey. Besides this, General Directorate for the Status and Problems of Women (KSSGM) as a national actor is founded as an obligation of CEDAW adaptation period in 1990.

After being the official candidate for EU in 1999, Turkey started negotiations over main topics including gender equality. Since then, Turkey the adoption of new Civil Code (2001); constitutional amendment in 2004 and the new Labor Law (2009) are motivated by EU directives over gender equality (Dedeoğlu, 2012). Moreover, during the reconciliation period, new organizations such as Ministry of the Woman and Family, Woman's Status General Management, Women's Shelters, Woman Rights related NGOs were founded in the direction of movement's demands. These institutions became different interlocutors in order to speak about women's problems and to solve these problems. It has been observed some minor changes in daily language and especially media's sexist language thanks to the endeavors over time in Turkey. Usages of different expressions and sexist terms like girl, female, lady was decreased in course of time. In 2000's, in modern organizations particularly in business world, woman-man equality practices have started to spread. Furthermore, quotas without legal foundations to increase the number of women and priorities for women in recruitment were used as tools for legitimation (Karahan and Özdemirci, 2017). However, it seems, these reforms do not beyond a checklist to comply EU standards or even pretend (Dedeoğlu, 2012).

In Turkey, there is no "hard law" which has a legal foundation as seen in US or EU member states in order to promote gender equality at work. However, some legislations regarding gender equality exist and also Turkish Constitution assure that women and men are equal and have equal rights (Ozkanlı and White, 2008). Moreover, a "comply or explain" code is applied by Capital Markets Board of Turkey (CMB) that offers the percentage of women on boardrooms ought to be 25%. The reason why hard laws cannot be applied in Turkey is that soft instruments were preferred in areas of gender equality where it was difficult to reach agreement among stakeholders due to the cultural embeddedness of the issue (Aybars et al, 2018). Gender inequality is deeply entrenched in Turkey's socio-economic and political structure (Aybars and Tsarouhas, 2010).

National-level gender ideologies plays a crucial role over the course of period since these ideologies shape institutional and cultural practices (Dedeoğlu, 2012). Some international organizations such as European Union (EU), World Bank (WB) and United Nations (UN) have encouraged even forced to adopt policies to increase women's employment (Alnıaçık et al., 2017).

Among the international initiatives, one of the most important global initiatives of the private sector, targeting women's empowerment to ensure that they are able to take part in economic life in all sectors and at all levels, is the Women's Empowerment Principles (WEPs) platform that initiated in 2010. According to this platform, the private sector plays a significant role in increasing the economic vitality of women and ensuring gender equality in business life. WEPs have been a joint venture of the UN Global Compact and the UN Women in an effort to help companies fulfill their responsibilities. The WEPs platform, created in partnership with the United Nations Global Compact (UN Global Compact) and United Nations Gender Equality and Women's Empowerment Unit (UN Women) in 2010, is a private sector; provide important points to consider in order to ensure gender equality in the workplace, in the markets and in the community at large.

"Equality at Work Platform" was founded in June 2012 in Istanbul under the name of "Turkey Gender Parity Task Force" in cooperation with Ministry of Family and Social Policies of Turkey and the World Economic Forum. The "Turkey Gender Equality Task Force" turned into "Equality at Work Platform" with a press launch in Istanbul on 15 January 2013. Furthermore, the government added a goal to increase the participation of women in their working life for the vision of 2023.

There's a developing sense of conservation in terms of gender equality in Turkey, thanks to the progressing re-traditionalization of gender roles in our country over the course of final two decades (Coşar and Yeğenoğlu, 2011). To date, there may be a considerable amount of research on gender equality at work in developed countries; however, there have been very few in the Middle East region (İsmail and Nakkache, 2015). In Turkey, there is relatively little research at focusing this topic (Aybars et al, 2018) although some scholars offer Turkish context as a vital setting to research continuity and change in gender issues (Yamak et al, 2016).

Allegedly, these wide array of efforts aim to promote gender equality at workplaces in Turkey. However, it seems gender inequality at work remains a reality for organizations operated in Turkey context and based on this

reality, main purpose of the study to explore issues come to the forth on gender equality at work in Turkey? To do realize this aim, this study examined some leading newspapers during 2007-2017 the years Turkey context experience a social and political transformation. The reason why the data gather from newspapers is as following; the mentioned considerable efforts are announced via media outlets. With this way, we aimed to demonstrate main issues which are mentioned by business environment on gender equality.

3. Research Method

In order to explore main gender related issues, distinct materials from distinct sources have been gathered. As an outside data source, news from four distinctive newspapers were planned to collect. The newspapers are Hürriyet, Sabah, Birgün, Cumhuriyet and the business magazine is Capital Turkey. However, while searching the key words inside "Birgün", it is recognized that both the quantity and content of articles related to the key words are not enough to include into the study. Therefore, "Birgün" is excluded from the study. The reason why these newspapers are chosen is that all of them represents different political ideologies and reflect in the news. Hürriyet, Sabah, Cumhuriyet are thought to be proponents of centrist liberalism, centrist-conservative right, socialist-radical left views, respectively. Capital Turkey is chosen since it represents the business world. All of these newspapers and magazine had electronically indexed and archived news articles. Therefore, thanks to this situation, we are allowed to collect all articles containing key words.

While reading the articles from all sources, we excluded some of them since they do not contain any initiative on gender equality at work that we seek. We also removed articles primarily relating to countries outside the Turkey, since we were studying gender and work in organizations operating in Turkey.

The time-range is specified as between 2007-2017 since some international organizations such as European Union, United Nations and G20 with initiatives, funds and at least discourses regarding gender equality. During the past decade that we scrutinize, the efforts Turkey attempted are dependent on densely EU funding (Alnıaçık et al, 2017).

Between 2007-2017, there were 157 articles on media outlets on gender equality at work. Articles related to equality at home or any other fields of social life are considered as immaterial and omitted while getting news from sources. At first the articles including key words skimmed through in order to understand the level of relatedness to the subject matter.

We applied thematic analysis which is a qualitative method used for the analysis of large qualitative data sets (Creswell, 2008). Braun and Clarke (2006) argue that thematic analysis offers an accessible and theoretically flexible approach to analyzing qualitative data. Theoretically flexible means that it can be applied across a range of theoretical and epistemological approaches.

Table 01. Data utilized in the study

	News and Media Coverage (2007-2017)
Examined Periodical Publications	Hurriyet, Sabah, Cumhuriyet, Capital
Description of data	News stories and public opinion expressions reflecting the perceptions and attitudes gender equality
Type of information provided	Issues taking into consideration on gender inequality at work in Turkey by distinctive actors
Limitations of the data	Biases and partiality of media coverage, opinionated

Since we collected the data, we gained some prior knowledge about it by doing so. However, after gathering the data all together, we read through articles from all these three distinctive sources until no further sub-themes emerged. As a result of this reading process, we manage to identify sub-themes regarding key words "women", "work", "management-manger", and "gender" over the course of chosen time. In our database, the very first emerged sub-themes are included discrimination, stereotype, participation of women into workforce, roles of women outside the workplaces, undeclared working underrepresentation at all levels. These sub-themes have assessed and aggregated into four themes called gender bias, work-family conflict, participation and

underrepresentation. These are themes that organizations, national and international NGOs, governmental bodies, employer organizations, consultancy firms put their agendas mostly for gender equality at work.

The sub-theme of "underrepresentation" portrays women as at some management level to some extent but still unable to reach upper echelons. Moreover, most of the statements the relationship between number of women as decision makers and economic improvement both in the company and so in the country. First-order codes of sub-theme "underrepresentation" include statistics on the representation of women at top management and boardrooms, pipeline problems and unequal promotion.

The sub-theme of "bias" portrays the stereotype, unequal opportunities, discrimination based on sex, and sexual harassment as major problems hindering women's advancement at work. Assuming them as first order codes of "bias" sub-theme, others are related to differential treatment based on sex and discrimination.

"Work-family conflict" sub-theme refers to non-work roles of women such as child or elderly care and other responsibilities at home. The main problem thwarting women from participation and advancement at work is seen as the quandary of women between work and other social roles attributed to them in particular.

Under the "participation" sub-theme, first order codes are not being at the workforce, statistics about low-participation and unregistered work. Within the sub-theme of "participation" some statements are also related to "work-family" and/or "bias" sub-themes especially because of the statements that mention both inequality or work-life balance and participation. Therefore, the statements that only mention about inequalities and not related to participation of women at the workforce are placed under bias. However, the statements both mention about low-representation of women resulted by inequalities and issues over work-life balance have placed under all "bias" and "underrepresentation" and work-family conflict sub-themes. For instance; as reported in Hürriyet:

> *Women and Democracy Association mentions that "among the reasons why women's employment is seen in limited rates, especially in underdeveloped countries, there are many factors such as lack of education, gender-based division of labor, improper working conditions and non-observance of work-life balance."(Hürriyet, 16.03.2016)*

Above-mentioned excerpt is situated under subtheme "participation" since it asserts women's employment is in limited rates, "bias" subtheme because it depicts the gender-based division of labor and it is related to differential treatment based on sex. Lastly the same excerpt declares the work-life balance as well and so it is placed under work-family conflict. Therefore, it would not be wrong to say the similar situation is also valid for other sub-themes.

Each signature or participation or promise to commitment for any international and/or national initiatives is regarded as practice for once for each organization. For example; Koç Group signed WEPs principles in 2015 and although this has been mentioned too many times since that day, only one of them taken into consideration as practice. All these initiatives have each own aim and by keeping in mind they generate practices to comply with their aims. Among the seven distinctive aims of WEPs, the related ones to this study is declining underrepresentation and bias. Another international initiative called HeforShe aims to boost the number of men who struggle for women's rights and focused on the biases such as stereotypes that women confront. Both WEPs and HeforShe movement are endorsed by UN Gender Equality and Women Empowerment department. As for national initiatives, the most attracted one is Gender Equality at Work and the reason behind this entity is to increase representation and participation of women at work and also minimize biases and work-family conflict. These aims play a crucial role to determine the way how such practices are put under which sub-themes.

All articles read thoroughly and while reading the articles issues around women, gender and work are determined. Each article from all sources was assigned 0 or 1 for each of the four sub-themes. If an article received any of the first-order codes associated with a given sub-theme, the article was assigned 1 for that sub-theme; otherwise, it was assigned 0 for that sub-theme.

4. Findings

To determine main issues on gender equality at work in Turkey, we count sub-themes and their results collected in the table 2. According to the results, participation is the main problematic for Turkey on gender equality and also there are many statements about bias and underrepresentation sub-themes. Because, some articles may include more than one sub-themes articles numbers and total sub-themes numbers are not equal.

Table 02. Number of sub-themes: Media coverage (2007-2017)

	Under-representation	**Work-Family Conflict**	**Bias**	**Participation**
Hürriyet (29)	25	22	22	31
Sabah (40)	26	7	13	18
Cumhuriyet (70)	20	9	18	19
Capital (18)	9	6	12	12
Total Number of Articles (157)	80	44	65	80

5. Conclusion and Discussions

Inequality is an issue for nearly all societies for a long time and nowadays it is thought one of the most inevitable problems (Nishii, Shemla, Khattab and Paluch, 2016). These inequalities may base on religion, race, sex or age. Among these inequalities, we focused on gender inequality at work and revealed that gender inequality persist to be a major problem in work places and so in society.

This study aimed to answer the question that which issues are thought as major problems for Turkey society and especially for work environment and companies. In order to find a cogent answer to this question, we examined four different media coverage in a given time and we tried to understand main arguments that are discussed. As a result, some main problems seem to emerged. For instance, despite many efforts which are said to taken by companies and government the participation of women to work life in Turkey remains as a major problem for Turkey regarding gender equality. In qualitative studies, results not only show current relations of given arguments but also it can imply answers that go beyond. Therefore, future studies may try to find possible explanations for this emerged dilemma between endeavors and results of participation of women to work life in Turkey.

Turkey, as developing country, has inherent contextual differences (Özkanlı and Özbilgin, 2001). For instance, participation of women into workplaces may not be seen as a major problem by developed industrial countries. Thus, contextual effects of country may not be well documented because of biases of national media coverages. Future studies may try to find a way to demonstrate contextual differences of Turkey and its effects on ongoing gender inequality at work. Also, underrepresentation of women at work in Turkey is seen as another major issue on gender equality by Turkish businesses. The study showed that numerous efforts and discussions made by companies to understand and to abate unequal representation of women. However, it is clear that despite all of these endeavors and understanding, underrepresentation became an ongoing problem for women still in Turkey. As a result, it can be assumed endeavors exist to increase women at upper echelons, but intended results seem to be away. Therefore, future studies may explore possible solutions and practices which can augment the current unwanted situation. Other themes, bias and work family conflict also emerged critical for women at work in Turkey. Especially, bias against women is mentioned many times in media coverages. Also, nearly all articles and companies mention about some basic practices to provide work-family balance for women. However, these basic approaches without a broader consideration of bias did not create an intended outcome as a whole (Kossek, Su and Wu, 2017).

Lastly, some limitations have to be mentioned for this study to suggest possible future studies. In this study, there was a time limit and also a limitation for selected material and media coverages. Therefore, future studies may research internal data of companies and also may add magazines of companies which can reflect an inside perspective of companies in business world to rich articles to examine (Hooghe, Jacobs, and Claes, 2015).

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Appendix

Examples of sub-themes

Themes/Sub-Themes	Examples
Underrepresentation Women are not at the work-force Women aren't in leadership positions Women are not in pipeline Statistics about under-representation at all levels and participation at work-force	Turcas Petrol, with the slogan "More Women in the Executive Committees for Decision Quality", aims to strengthen the position of women on the board of directors with the project called "Independent Women Directors".(Sabah, 16.11.2013) Eczacıbaşı Group, which initiated the Women Leadership Development Program, provides the opportunity for women managers and employees to share their experiences by bringing together the role models.(Hürriyet, 06.03.2017)
Work-family conflict Non-work roles Work-life balance	The lifestyle, emotions and responsibilities of women as part of their non-business responsibilities and sometimes as mothers can lead to changes in career plans or may cause short-term opportunities to escape. (Capital, 01.05.2017) Women who have a problem in reconciling home and work life finish their working life in a short time or cannot reveal their full potential towards a career. The woman, who has to cope with obligations such as child, elderly and patient care, is experiencing difficulties due to the lack of sufficient number of social support institutions such as day care centers and day care centers. (Cumhuriyet, 05.02.2009)
Bias Differential treatment based on sex Excluding women in some industries Equal opportunities Unequal payment Discrimination	33 percent of the women participating in the research believe that mobbing or discrimination exist. 33 percent of women in the service sector says that they deserve better salaries and 47 percent of women mentioned they do not have equal opportunities with men in Turkey. (Sabah, 17.02.2016) We as AVİVASA do not include any statements in our job advertisements that could lead to gender discrimination. If there are women and men with equal qualifications, we are trying to choose a female candidate. (Sabah, 07.03.2016,)
Participation	Women and Democracy Association mentions that "among the reasons why women's employment is seen in limited rates, especially in underdeveloped countries, there are many factors such as lack of education, gender-based division of labor, improper working conditions and non-observance of work-life balance."(Hürriyet, 16.03.2016)

VIRTUAL REALITY TECHNOLOGY FOR DEVELOPING INTERCULTURAL LEADERSHIP COMPETENCE: A RESEARCH PROPOSAL

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Abstract

Increased globalization requires employees to develop not just technical competencies in their specific disciplines but also intercultural leadership competence, which includes a range of cognitive, affective, and behavioural skills leading to effective and appropriate communication with culturally different others. To date, Virtual Reality (VR) and Augmented Reality (AR) have demonstrated potential in their effectiveness for achieving technical learning outcomes by providing an immersive, safe learning environment that is both engaging and personalized. Yet, while learning environments such as VR and AR have created significant interest with much promise to revolutionize learning environments, the adoption of these technologies in non-technical areas is limited. Most approaches to teaching non-technical skills such as intercultural knowledge and competence do not leverage these recent educational advancements but still depend heavily on older technologies based on one-way passive learning environments, including videos and web-based platforms. Therefore, interdisciplinary comparative research in leadership development is needed to examine the effectiveness of existing and emerging learning environments (e.g., AR, VR) on cognitive (knowledge), affective (attitudes) and behavioral (skills) aspects of intercultural competence. In addition, we have identified important methodological gaps in the realm of research in leadership development field that require the field to move beyond self-report approaches by utilizing biometric data. We propose a research project to assess leadership development in an innovative research design that triangulates data from traditional quantitative pre-posttesting with qualitative analysis of learner reflections as well as with data from non-invasive biometric devices.

Keywords: Intercultural competence, leadership development, virtual reality

1.Introduction

Increased globalization requires that employees effectively navigate across cultures and borders to be competitive in international and global environments (Sorrell, 2016; Deloitte, 2017). In recent decades, the low cost of international communication and our ability to automate processes across the globe have pushed the business world to become truly global. As a result, employers increasingly seek workers who can not only accomplish the technical and procedural tasks assigned to them but also appropriately and effectively communicate with individuals across cultural boundaries so that they can coordinate, collaborate, and communicate with employees and clients both locally and across the globe (Banks et al., 2015). Increased globalization in business and trade has led to changes in the skills needed for success in terms of communication and leadership in diverse contexts – what we refer to throughout this proposal as intercultural leadership competence (ILC). The foundations of ILC is intercultural competence, which is the ability to communicate effectively and appropriately in intercultural situations based on one's intercultural knowledge, skills, and attitudes (Deardorff, 2004). Developing intercultural competence results in an improved understanding of other worldviews and the ability to manage thoughts, emotions, change, and ambiguity in order to effectively build bridges across cultural diversity in organizational settings (Zotzmann, 2015). Although vital in our society today, employees often fail to develop such skills. For example, only 18% of employers believe that graduates are well prepared to work with people from different backgrounds (Hart Research Associates, 2015).

Traditionally, employees have received training and education in intercultural leadership through academic study abroad, co-curricular programs, and coursework in the college or international assignments and travel in the workplace. However, each method has key weaknesses. For example, study abroad programs—arrangements in which students complete part of their degree program through educational activities outside the United States—require significant financial and logistical investments. Additionally, co-curricular programs, activities, and learning experiences that complement what students are learning in school do not present a systematic, targeted

learning approach as they are based on voluntary participation. Coursework, which usually includes a number of major, minor, or elective courses that provide content around intercultural areas, typically focuses on cognitive learning, not necessarily behavioral or attitudinal development. Moreover, as with co-curricular opportunities, students can often self-select out of coursework, and those who most need intercultural learning are less likely to willingly engage in such experiences. Workplace training activities typically do not focus on an ILC approach as they either focus on leadership development in general or diversity in particular. Essentially, a key challenge of developing ILC is finding a balance between substantial economic and logistical constraints and demonstrable outcomes of effective student learning based on evidence-based best practices such as experiential and reflective learning, safe learning environment, and individualized feedback on student performance.

A potential solution that may strike this balance is the use of technology-assisted instructional approaches such as video, virtual reality (VR), and augmented reality (AR). Historically, common techniques utilized in intercultural learning have included "group discussion, lectures, case scenarios, clinical experiences, cultural immersion, and presentation by ethnic minority speaker" (Long, 2012, p. 104). While video-based learning has been widely used in higher education and workplace training, it has often been criticized for its passive learning environment with little or no emphasis for learner interactivity (Borgo et al., 2012; Tuong et al., 2014). More recently, with the advent of immersive online learning environments such as augmented reality games, virtual military environments, and immersive second language learning environments, these newer learning aids have demonstrated capacity for technical and social skill development (Pana et al., 2006; Monahan et al., 2008; Rutledge, et al., 2008). Based on these advancements, these emerging learning technologies present strong potential to serve as effective learning approaches for promoting all three domains of intercultural competence development including knowledge (cognition), attitudes (affect) and skills (behaviors). Given their demonstrated effectiveness with more technical skills, VR and AR should prove helpful in student mastery of specific key competencies including many that have been linked as important to intercultural competence (Deardorff, 2006): empathy, openness and curiosity. However, comparative evidence of the effectiveness of these different approaches to intercultural competency development learning based on robust research is lacking. Further, there is a gap in the literature on how, and to what extent, ILC development occurs in the new learning technologies of VR and AR relative to the more traditional approach of videos. We seek to understand how the development of intercultural competency transfers from one learning domain to another. In light of this gap we are concerned with the limited research designs that have been used to document intercultural learning in general and competency development in particular. Missing from the literature is a holistic learning approach that moves beyond the cognitive domain to consider affective and psychomotor learning as well (Enger & Lajimodiere, 2011). Likewise, most studies of intercultural curricular effectiveness do not take advantage of technological solutions to measure phenomena; rather, existing work relies heavily on more anecdotal evidence such as time on task and self-report scales as proxies for engagement in learning rather than biological indicators of engagement (Villani, et al., 2012). The goal of this proposal research is to compare the effectiveness of these three technology-assisted media (video-based, virtual reality, and augmented reality) for developing intercultural competence. By utilizing data triangulation through robust research methods in quantitative, qualitative, and biometrics, we aim to further advance pedagogical practices while also potentially providing new insights into theoretical underpinnings for the science of learning.

1.1.The Project

In response to the problems outlined above, we propose to study the impact of three technology-assisted interventions on STEM students' learning and compare the effectiveness of these approaches – that is, video-based, VR-based, and AR-based simulations – for ILC development. In this uncharted context, we propose to assess individual learning with the triangulation of data from multiple methods (e.g., validated quantitative inventories of intercultural sensitivity, empathy, openness, curiosity, motivation, and holistic measures of learning across multiple domains) as well as with data from non-invasive devices that monitor involuntary biological indicators of emotional arousal (e.g., galvanic skin response/electrodermal activity to measure physiological responses in the electrical resistance of the skin caused by emotional stress, eye tracking to measure visual attentiveness, electromyography to measure muscular electrical activity from the surface of the skin, electrocardiography to measure emotional arousal by recording heart rate as well as heart rate variability, and facial emotion recognition to measure head position and facial micro-expressions). In order to accomplish the proposal goals, we target the following objectives and employ the listed research approaches:

Objective #1: To compare the effectiveness of three technology-assisted learning approaches (video, VR, and AR) for intercultural competence development, we will create and implement three learning simulations and analyze the learning outcomes of each approach with a mixed methods design.

Objective #2: To explore potentially-new theoretical insights related to learning science, we will assess the extent to which each of the three learning environments under investigation encourages learner engagement.

Objective #3: To build on research methods in learning science, we will integrate biometric data collection with self-report instruments and qualitative analysis of student reflections in our comparison of media.

Addressing the need we have identified for effective, engaging, safe, and scalable learning approaches to developing intercultural competence, the outcomes of this research propsoal will include (a) potentially significant findings in advancing learning science through documentation of complex interactions that occur between learner attributes and learning environments, (b) a vital understanding of the potential of each of the three technology-assisted learning medium for facilitating intercultural competency among STEM learners, and (c) findings from innovative uses of biometrics in the assessment of learning collected through this effort.

2. Literature Review and Theoretical Framework

Scholarly literature from several disciplines, including learning science, technology-assisted learning technologies, and intercultural competence provides a solid theoretical basis for this project. We review in this section literature relevant to the design and assessment of learning technologies.

2.1. Learning Science

Understanding the benefits, challenges, and implications of using differing forms of instruction requires a recognition of and reliance on research related to learning science. We identified several key components, theories, and aspects of learning which directly relate to our project and the accompanying rationale.

2.1.1. Experiential Learning

Understanding how VBL, VRL, and ARL environments may impact student learning fits well within the realm of experiential learning. Experiential learning is rooted in modern learning theories, which have often pointed to constructivist conceptualizations of learning (Lave & Wagner, 1991; Driscoll, 2005). We posit that a highly relevant theory of learning for AR and VR applications, which falls within the constructivist tradition, is the Experiential Learning Theory (ELT) (Kolb, 1984; Kolb et al., 2001). ELT sees learning as "the process whereby knowledge is created through the transformation of experience" (Kolb, 1984, p. 41). The ELT model considers two related modes of grasping experience, concrete experience and abstract conceptualization, and two related modes of transforming experience, reflective observation and active experimentation. Each of these modes relates directly to AR/VR as learners engage in their own experience-making. Dalgarno and Lee (2010) specifically highlighted experiential learning as one of the core affordances of VR, and ELT has been a common framework used in the design of learning games and simulations (Gredler, 1996; Kiili, 2005).

2.1.2. Motivation to Learn

Another core element linked with our proposed research into different learning approaches is an appreciation for student motivation to learn. Stipek (1993) highlighted to connection between motivation to learn and actual learning; Stipek was joined by Pintrich et al. (1993) who demonstrated that the goals learners pursue, as well as the effort they expend towards reaching those goals, all play into the overall learning achieved by any individual. Further, Keller (2008) identified 5 principles for effectively motivating student learning: 1) learner curiosity is aroused by identifying knowledge gaps, 2) motivation is promoted when targeted learning is meaningful to learner's goals, 3) when learners believe that they can successfully learn, 4) when "learners anticipate and experience satisfying outcomes to a learning task" (p. 177), and, 5) when learners employ self-regulated learning strategies. An understanding of student motivation is critical as efforts are made into identifying the strengths and weaknesses of the identified approaches in this work. Closely related to learner motivation is the work around self-efficacy which connects motivation with an individual's judgment of his or her capability to perform actions to realize specific goals (Bandura, 1977). Self-efficacy has shown validity in "influencing such key indices of academic motivation as choice of activities, level of effort, persistence, and emotional reactions" (Zimmerman, 2000, p. 86). Understanding key components of the learning approaches identified as well as both

the motivation, and in turn the self-efficacy, of learners is critical in this work around identifying best-practices in learning.

2.1.3. Learning Engagement

We draw connections between our proposed work and engagement - learning technologies can not only motivate learners but also engage them, providing them an experience that captures their attention (Bannon, 2005; Quinn, 2005). O'Brien and Toms (2008) synthesized aesthetic, play, and flow theories to define a model of engagement. They described engagement as being comprised of ten attributes: aesthetic, affect, focused attention, challenge, control, feedback, interest, motivation, novelty, and perceived time (O'Brien & Toms, 2008). Attempts to measure engagement have typically focused on self-reported measures, performance indicators as correlates of engagement, and biometric measures (O'Brien & Toms, 2010). Our work is rooted in this understanding of learner engagement and the impact of this engagement on their own learning.

2.2. Technology-Assisted Learning Environments

With the advent of technology, learning environments are becoming increasingly technology centric. Although rapid technological advances are often adopted, the implementation and utilization of these new approaches to learning can be slow due to logistical and resource limitations. In addition, the nature of an educational environment, may equate with advances in research also lagging behind the technological innovations. We theorize that the greater immersive nature of VRL and the greater interactive qualities of ARL will enhance learner engagement and thus foster greater achievement of learning outcomes, but more exploratory research is necessary to understand better the relationships between these phenomena and to predict accurately which medium best enhances intercultural competency learning.

Video-based Learning (VBL). The popularity of video-based learning through platforms such as Khan Academy, Lynda, YouTube, and edX has resulted in millions of learning experiences in recent years (Brooks et al., 2011). As widespread adoption of technology has multiplied so has research into video-based learning, learner engagement with video-based learning platforms, and integration of video-based learning into existing structures and courses (Giannakos, 2013). Yousef et al., (2014) conducted a meta-analysis of research related to video-based learning from 2003-2013 and, despite conflicting results, concluded several pertinent points: VBL has the potential to improve learning outcomes, results in higher levels of satisfaction compared to settings without video, and is most-often connected with a more passive teacher-centered approach as opposed to utilizing student-centered learning. Building off previous work into VBL, recent work in the VBL sphere has sought to further improve upon benefits recognized in static VBL settings through interactive VBL applications. For example, Kolas (2015) identified videos which include hyperlinks, interactive 3D-objects, interactive maps, and embedded quizzes as VBL applications which are interactive for students. The use of interactive VBL has demonstrated potential for increasing student engagement (Zhang et al., 2006) but has also been less favorably looked upon by many educators who deem it passive and not engaging (Kolas, 2015).

2.2.1. Virtual Reality-based Learning (VRL)

Virtual Reality (VR) technologies that utilize electronic eyewear to immerse an individual in a computer-simulated environment is considered an emerging tool for providing immersive, engaging and autonomous learning environments for both academic and professional purposes. Recent technological advances have increased the resolution and dramatically reduced the cost of deploying VR material. In fact, the findings of a recent survey on the use of digital technologies to drive digital business transformation indicated that of the 29% of organizations which are using or piloting immersive learning technologies, 40% reported that the tool exceeded their expectations, while 60% reported that the technology performed as expected (Cearley et al., 2017). Two decades ago, VR had to be played on a desktop computer or on custom-built proprietary headsets, however, commercially available VR headsets today are the most commonly used approach to deliver VR material, because they provide the greatest sense of immersion as they replace the real world with the virtual one through complete visual occlusion (see Figure 1). These advances mean that VR has rapidly become an inexpensive and viable learning tool in fields such as engineering, medicine, chemistry, and other hard sciences (Clark et al., 2016; Freitas et al., 2006). Similarly, previous studies on VR interventions for intercultural skills have either focused on better second language acquisition (Thorne et al., 2009) or have examined military recruits and personnel, who presumably would have had much more rigor prior intercultural training (Caligiuri et al., 2011). Relatedly, while it has been proposed that VR holds great promise for developing empathy, empirical

evidence supporting the claim is virtually non-existent outside of healthcare settings (e.g., Wijma et al., 2018). Although VRL offers the prospect of exponentially increasing the scale of implementation and present the advantages of a safe learning environment for engaging in potentially uncomfortable social interactions, VR as an immersive learning tool needs to be tested for its potential, capacity, and extent in contributing to the achievement of specific learning outcomes related to the development of intercultural competence (Hickman & Akdere, 2017; Diehl & Prins, 2008).

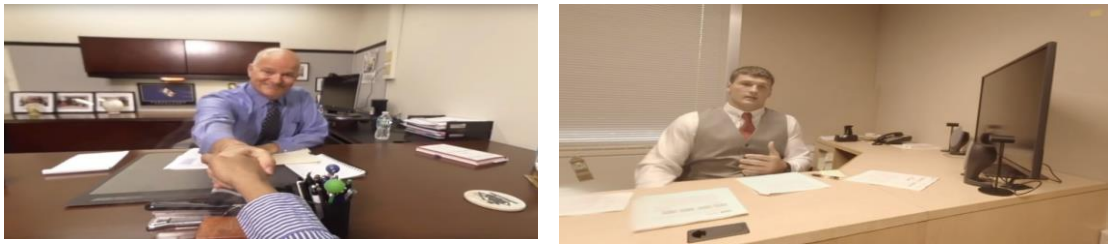


Figure 03. Samples from VRL simulations.

2.2.2. Augmented Reality-based Learning (ARL)

ARL draws its origins from the mid-twentieth-century in cinematography (Carmigniani, et al., 2010), and, with the development of computer technologies more generally, has seen steady rises in usage and implementation (Krevelen & Poelman, 2010). In 2007, AR was identified as one of the top 10 emerging

technologies (Jonietz, 2007), and, according to some researchers, is set to become one of the fundamental

user interface paradigms of humankind (Kroeker, 2010). AR is usually defined following the VirtualityContinuum (Milgram & Kishino, 1994), where it resides closer to real-life than pure virtual reality (VR) and, as such, combines aspects, and objects, of both the virtual and real world (see Figure 2) (Azuma,

1997). AR can be understood as a real-world view that is augmented and enhanced by virtual, computer generated, information (Carmigniani et al., 2011; Klopfer & Squire, 2008), allowing users to have a realtime interaction with virtual creations in 3D space (Wu et al., 2013; Krevelen & Poelman, 2010). In other words, AR does not replace the real world as VR is purported to do, but, in a way, supplements it through building a "mixed-reality" model (Bower et al., 2014; Chang, Morreale, & Medicherla, 2010). In terms of devices and user-interaction, AR is mainly facilitated through two main display types: monitor-based and see-through; presently, these largely include Head Mounted Displays and Handheld Display devices (Kesim & Ozarslan, 2012; Klopfer & Squire, 2008). AR uses different technology that can range from basic hardware, such as video camera, for capturing live images, storage space for virtual objects, a processor powerful enough to build a 3D simulation in real-time, and an interface for interactions with objects—both virtual and real—as well as more complex hardware that includes GPS, WiFi connection, image recognition, and more (Bower et al., 2014).



Figure 04. Samples from ARL simulations.

Given that this technology allows users to engage with and experience phenomena otherwise not possible (Klopfer & Squire, 2008), AR has had many applications over the last decades, from such fields as manufacturing (Caudell & Mizell, 1992) and medicine (Bajura et al., 1992), to sports and military (Azuma et al., 2001). In recent years, special interest has developed around leveraging AR in educational contexts (Kesim & Ozarslan, 2012; Radu, 2014) because it can benefit learners along a number of dimensions, including learning

spatial structure and function, memory retention, language learning, improved collaboration, increased motivation and physical task performance (Radu, 2014). Dede (2009), for example, points out that the immersive side of AR can be leveraged to enhance learning through *multiple perspectives*, and through *situated experience*, both important opportunities in the learning process. More specifically, AR has been explored as a tool in technology education, since the ability to create 3D images is especially important in design technology and engineering (Thornton et al., 2012). Further, AR positively affects the motivation of students in STEM education (Restivo et. al, 2014; Yoon et al., 2012), especially mathematics (Estapa & Nadolny, 2015). While most of these studies analyze the students' perspectives, there have also been applications of AR technology that aid in instructors' formative assessment of students (Holstein et al., 2018; Holstein et al., 2017), that facilitate interaction between students and teachers (Peña-Ríos et al., 2012), and that teach industrial maintenance and assembly tasks in workplace training (Gavish et al., 2015).

2.3. Intercultural Competence

Intercultural competence is the ability to communicate effectively and appropriately in intercultural situations based on one's intercultural knowledge, skills, and attitudes (Deardorff, 2004). Developing intercultural competency leads to improved understandings of other worldviews and the ability to manage thoughts, emotions, change, and ambiguity in order to effectively build bridges across cultural diversity. Thus, intercultural competence is considered vital for individual success when working with culturally diverse coworkers, suppliers, and clients (Lévy-Leboyer, 2007). Many contemporary scholars view intercultural competence within a developmental framework – that is, as a set of related competencies which it is possible to improve over time and as a result of experience, and not merely a collection of static personality traits (Hammer, 2015). In other words, intercultural competence is imminently learnable. Myriad definitions of intercultural competence exist in scholarly literature, with some emphasizing the role of language and localized cultural knowledge and others focusing on globally transferable components such as positive attitudes towards cultural difference and cultural discovery skills (Acheson & Schneider-Bean, 2019). Most scholars, however, agree that intercultural competence is comprised by some combination of attitudes/affect, knowledge/cognition, and skills/behavior (Spitzberg & Changnon, 2009).

Despite the complexity and variation that has characterized scholarly treatment of intercultural competence operationalization, there exists a long history of intercultural competence assessment. The construct is measurable both holistically and by focusing on its specific components (Fantini, 2009). Assessment of intercultural competence does not always take the form of self-report quantitative measures. The American Association of Colleges and Universities led the creation of a series of rubrics for qualitative assessment in higher education known as the Valid Assessment of Learning in Undergraduate Education (VALUE) rubrics (AAC&U, 2010). Among these rubrics is one for Intercultural Knowledge and Competency, which delineates six components of the construct for assessment: the knowledge components of cultural self-awareness and cultural worldview frameworks, the skills of empathy and verbal/non-verbal communication skills, and the attitudes of curiosity and openness. We drew our learning outcomes of openness, curiosity and empathy for the current project from this rubric and paired them with validated measures (described in more detail in the sections below). The most important theoretical framework for our current project, though, is Deardorff's (2006) Pyramid model of intercultural competence, because this model allows us to organize the components of intercultural competence into a hierarchy and understand their order of acquisition. The theoretical model provides justification for our choices of learning outcomes as foundational prerequisites for higher order skills and as culture-general components that are transferable from one cultural context to others.

2.3.1. Openness

Intercultural openness is widely recognized as an important component of intercultural competency. For example, in the AAC&U's (2010) VALUE rubric for Intercultural Knowledge and Competence, the attitude of openness involves both willingness to interact with culturally different others and the capacity to suspend judgment and consider alternate interpretations during those interactions. Many other models of intercultural competency, including Deardorff's (2006) Pyramid model, highlights the importance of openness. In fact, Deardorff's model places openness at the base of the pyramid, implying that development of intercultural competency cannot continue without this foundational attitude. As such a well-recognized and foundational aspect of intercultural competence, openness is therefore a suitable focus for the interventions in this study. One

demonstrably valid instrument (16 self-report Likert-scale items) used to measure openness is the Attitudinal and Behavioral Openness Scale (Caligiuri et al., 2000).

2.3.2. Curiosity

The attitude of curiosity, characterized by the willingness to and habit of asking complex questions about aspects of culture that lie below the surface (not easily accessible to cultural outsiders), is considered an important component of intercultural competence (AAC&U, 2010). Along with openness, curiosity forms the attitudinal foundation for the development of intercultural competence (Deardorff, 2006). Specifically, curiosity enables the development both cultural self-awareness and awareness of others' the cultural norms, values, and beliefs that undergird the more visible aspects of culture, including cultural artifacts and patterns of behavior. One instrument that has been validated for use in studies exploring the role of curiosity in motivation and learning (Kashdanet al., 2009) is the Curiosity and Exploration Inventory (10 self-report Likert-scale items).

2.3.3. Empathy

Empathy is a complex skill that involves understanding the experiences, perspectives, and emotions of others (AAC&U, 2010). Intercultural empathy is especially challenging because cultural differences function as barriers to understanding others. Deardorff (2006) places it toward the top of the pyramid model because the performance of this skill often requires positive attitudes such as openness as well as a certain threshold of cultural knowledge. An instrument that was developed to measure empathic responses across ethnic and racial differences is the Scale of Ethnocultural Empathy (30 self-report Likert-scale items). This instrument encompasses 4 factors: empathic feeling and expression, empathic perspective-taking, acceptance of cultural differences, and empathic awareness (Wang et al., 2003).

2.4. A Biometric Profile of Social Competence

Biometrics is defined as the use of distinctive, measurable physical characteristics to describe individuals, which can generally be divided into two groups: those that serve as identifiers of the body (such as fingerprints and retina scanning), and those that pertain to psychophysiological measures of human behavior and psychological state such as eye tracking, facial expression analysis, galvanic skin responses and electroencephalography (Jain & Ross, 2008). In the latter case, biometric tools attempt to classify an individual's visual attentive process and emotional expression in terms of emotional arousal (intensity) as well as emotional valence (positive versus negative hedonic affect); Barrett, 2006; Kron et al., 2015; Russell 1980). Often, a biometric tool (see Figure 3) will provide information on one dimension more than another; galvanic skin responses (GSR) and electrocardiography (ECG), for example, are often used as measures of arousal but not valence (Torres et al., 2013; De Santos et al., 2011; Berntson et al., 1997; Boucsein 1999), while facial Electromyography (EMG) and Facial Emotion Recognition (FER) can provide valenced information but are less likely to provide an accurate measure of intensity, although intensity can contribute to the correct identification of an expression (Balconi et al., 2014). Thus, the use of multiple sensors in a multimodal approach is necessary to provide the most comprehensive profile of an individual's psychophysiological reaction to stimuli (Balcony et al., 2014; De Santos et al., 2011). Within the context of social interaction, a limitation of conventional self-report methods is that one's feelings, attitudes and reactions may not be articulated to their fullest extent. This may be due to social desirability bias, language barriers, cultural norms, or inaccurate recall of emotional events. Here, biometrics is best used in conjunction with conventional self-report methods, as physiological responses to stimuli are involuntary and beyond conscious control. Thus, biometrics can provide valuable information as to the emotional and attentive state of the respondent in real-time, without the limitations of language or bias.

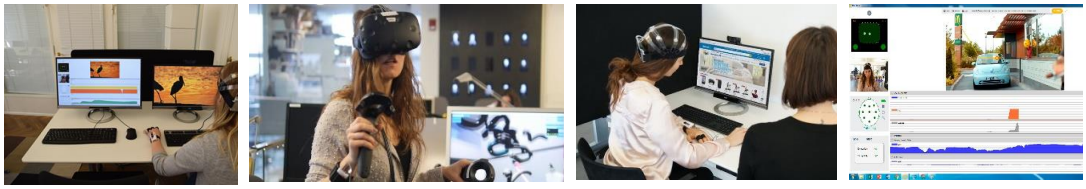


Figure 05. Biometric software platform in use.

3. Research Method

The proposed study will be designed as a quasi-experiment to test the effectiveness of technology-assisted learning environments in intercultural development through VBL, VRL, and ARL, each with similar intervention content. Therefore, there will be three treatment groups, each comprised of at least 50 participants. Our independent variables will include demographic variables (gender, race/ethnicity, and language) and personal attributes (motivation to learn, pre-existing levels of intercultural competence—openness, curiosity, and empathy--obtained through pretesting with self-report instruments). Qualitative and biometric data will also be collected and analyzed in triangulation with the quantitative data to present as complete and nuanced a picture of the complex learning processes.

All three sets of simulations in this study will feature similar content, varying primarily in medium of instruction (VBL, VRL, and ARL). The simulation series will immerse learners in an international business case where they develop intercultural knowledge and competence. Within the simulations, learners are responsible for securing a business deal with a Latin American distribution company. In these technology-assisted learning simulations, the participants will complete the simulations on their own, in a safe and replicable learning environment. Importantly, all three technology approaches to teaching and learning being studied in this project differ from each other in the level of interactivity and authenticity provided by the medium, particularly for the VRL and ARL. This is accomplished by immersing learners, giving them first-hand experience of being in an international business setting and providing them with opportunities to interact with their environment in the form of speech and behavior choices to which characters within the simulations react and respond. Additionally, learner choices during the simulation change the future outcomes (i.e., a range of successes or total failure to secure the business deal). In response to stimuli within the simulation, learners choose from a set of behavioral responses that will be designed in consultation with intercultural education, business, and learning science experts to ensure that the choices represent the likely responses from individuals at varying levels of intercultural competence and business acumen.

4. Conclusion and Discussions

By exploring innovative learning environments for more effective teaching of ILC to STEM students, this research proposal has multiple and far-reaching impacts on industry, scholarship, and society at large. Improved skills and attitudes such as openness and empathy have great potential to positively impact the capacity of intercultural teams in the workplace to leverage their differences for creative problem-solving and innovation, rather than being stymied by an inability to interact successfully with culturally different individuals and groups.

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THE CONSEQUENCES OF TOXIC LEADERSHIP ON FOCI OF COMMITMENT: AN EMPIRICAL STUDY ON THE EMPLOYEES OF BANKING SECTOR

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Abstract

Development of followers' commitment to organization is a critical element for a productive leadership and follower relationship. While the focus on positive leadership styles still dominate leadership research, an increasing number of studies investigate different forms of negative leadership behaviors. This study investigates the relationship between toxic leadership and organizational commitment from several foci –commitment to organization, commitment to supervisor, and commitment to co-workers- to develop a better understanding for negative aspects of leadership in banking industry. Based on a sample of 277 employees of banking industry, using SmartPLS 3.0 structural equation modelling approach, the findings provide empirical evidence regarding significant and negative associations between toxic leadership and all the foci of commitment. Moreover, the findings highlight that the impact of toxic leadership behaviors on commitment to supervisor is stronger than the associations of toxic leadership with other foci of commitment. Theoretical and managerial implications are discussed in the conclusion part.

Keywords: Foci of commitment, organizational commitment, toxic leadership.

1.Introduction

Organizational commitment has drawn significant attention from academics and practitioners for decades. The antecedents of organizational commitment attract similar attention either (Yang et al., 2011). Without a doubt, promising leaders within organizations have committed followers. It is not unexpected. So theorists who claim a specific approach to leadership (e.g., charismatic, transformational, ethical, visionary) generally involve leadership as a potential precursor of organizational commitment (Bass & Riggio, 2005; Jackson et al., 2013). Most leaders are competent, experienced, and ethical in their behaviors, but leaders who are self-serving, arrogant, incompetent also exist. So the emphasis on positive leadership is still prevalent in management and organizational behavior studies; while a recent stream of research recognizes that there is also a dark side to leadership, such as destructive, narcist, and toxic leaders (Schyns and Schilling, 2013). Indeed competitive and harsh business environments witness an increase in dysfunctional, destructive and toxic behaviors by those in positions of power and influence which requires more studies regarding the individual and organizational outcomes (Mehta and Maheshwari, 2013)

Revealing the effects of toxic leadership on organizational commitment is the primary focus of this paper. We examine organizational commitment from several foci–commitment to organization, commitment to supervisor, and commitment to co-workers- to develop a better understanding as there is scant research available on negative aspects of leadership (Mehta and Maheshwari, 2013). This paper is arranged in four parts. Following this section, the dark side of the leadership is discussed, and the features and the dimensions of toxic leadership are defined. Next, we describe the methodology applied to explore the relationships among toxic leadership and organizational. Based on data conducted on 277 employees of the banking industry, we test the relationships among toxic leadership and organizational commitment. Finally, the conclusions are set out, along with some recommendations for future research.

2. Literature Review and Theoretical Framework

2.1. Toxic Leadership

Leadership is an important subject that has been studied more by many researchers for many years (Horner,1997). There are many definitions regarding leadership within the literature, but generally, a leader and

the followers takes place the common description (Barnes and Kriger, 1986). Acorrding to Byars (1987), leadership is the capability of affecting the ideas and attitudes of the organizational members. Although leadership has been a focal topic of Organizational Behavior (OB) discipline since the inception of the field, only recently have researchers begun to directly explore the dark side of the leadership (Pelletier, 2010; Schmidt, 2008).

Some of the leaders can manage their subordinates in a positive and effective manner and offer advantageous opportunities that can be beneficial for the organization, while others present "Toxic" characteristics, which is already defined as "Toxic Leadership" (Lipman-Blumen, 2006). Kusy and Holloway (2009) refer to the toxic leader as the "tip of the toxic iceberg". They suggest that the lasting human and financial costs of toxic leadership are "below the waterline" as toxic leaders do the most damage to organizations (Aubrey, 2012).

Toxic leader's destructive behaviors and characteristics can make individuals, groups, organizations, communities seriously and permanently damaged (Kellerman, 2004). In order to be entitled as a toxic leader, the leader should show his/her toxic effect in a way that would affect the organization, not just a particular employee (Reed 2004). Toxic, poisonous leaders are the leaders who lead and harm the employees, the business environment, and the organizational climate. It is necessary to differentiate the toxic leader from the boss or manager who is bad and oppressive. Toxic leaders are spreading this poison with an excessive control mechanism (Karen 2003). Toxic leaders are inwardly motivated, inherently destructive, and violate the legitimate interests of the organization.

Especially in the US, toxic leadership studies are mostly addressed in the military and health sectors (Paunonen et al.,2006, Reed, 2004). We can see that toxic leadership has negative effects on both individual and organizational outputs, such as organizational commitment, organizational climate, organizational motivation, organizational culture (Lipman-Blumenn, 2006; Erickson et al.,2007; Einarsen et al.,2007).

2.2. Commitment

The concept of commitment was first examined by Whyte in 1956 and subsequently developed by many researchers (Mowday, 1998). According to Scholl, organizational commitment is defined as ongoing actions and the power to be kept in balance as a result of providing the expected or equal conditions for any reason (Scholl, 1981). Allen and Meyer explain organizational commitment as the behavior that enables employees to maintain working in the same workplace as a permanent member of the organization by transforming the relationship of employees with the organization into commitment (Meyer and Allen, 1997). If there is organizational commitment in a workplace, it is difficult for employees to quit. Hereby, this situation makes a positive contribution to the workplace by reducing the costs of the workplace. Furthermore, individuals with high commitment, exhibit devoted behaviors about their work (Meyer and Allen, 2004).

Allen and Meyer's approach to organizational commitment focuses on three dimensions. These are affective, continuance, and normative commitment. According to Meyer and Allen (1997), the relationship of an employee with his organization can accommodate different levels of these three dimensions. Meyer and Allen's hypothesis suggests that each of these three dimensions is the result of different experiences, and these experiences may have different effects on business behaviors. Affective commitment includes personal, structural, and work-related characteristics as well as work experiences. Via such a commitment, the employees assimilate all values within the organization and agree to be a part of the business. The organization members who have emotional ties to their organizations wish to continue their membership relationship with their organizations and believe in the goals of the organization. Continuance Commitment is a commitment that results from employees' past experiences in organizations (Becker, 1960). In this commitment, employees are concerned that they will lose their sense of labor, money, title, and recognition when they quit (Powell and Meyer, 2004). Employees consider that the continuity of their employment in the organization is mandatory because of the benefits that the employees have obtained, and the alternative gains are low and difficult (Meyer & Allen, 1991). Normative commitment is a compulsory commitment. This commitment is based on convincing employees that they are obliged to stay in their organizations by believing that they have certain obligations to their organizations. An individual who feels a moral imperative can remain in the same organization for a long time, believing that he is doing the right thing and believing that commitment to the organization is loyalty and virtue (Allen and Meyer, 1990).

As a result of many studies conducted in the field of organizational commitment, solutions to the some of complexities that arise for many years have been explained by Becker (1992) with Foci and Bases of Commitment (Becker, 1992). After this explanation, the researches about commitment are done mostly about the foci of commitments such as commitment to the senior management, supervisor, colleagues, and customers (Clugston et al. 2000; Redman and Snape, 2005). The importance of the commitment to the organization, supervisor, and colleagues and the differentiation between them is discussed in many studies (Clugston et al. 2000; Vandenberghe, 2004, Wasti & Can, 2007). As a result, it has been evaluated that employees develop different commitments to their relatively remote organizations, their representatives and closer supervisors and colleagues (Becker and Billings, 1993; Bishop and Scott, 2000): 1-)Affective Commitment to Organization, 2-Normative Commitment to Organization, 3-Affective Commitment to The Supervisor, 4-Normative Commitment to The Supervisor, 5-Affective Commitment to Colleagues and 5-Normative Commitment to Colleagues

It is considered that utilizing other non-organizational commitment foci and measuring affective and normative commitments within these contexts would provide more accurate and effective results in measuring organizational commitment (Wasti & Can, 2007).

2.3. The Effects of Toxic Leadership on Organizational Commitment

With respect to negative leadership behaviors, studies have shown abusive leadership is negatively related to commitment (Rayner and Cooper, 1997; Tepper, 2000; Burris, Detert, & Chiaburu, 2008). Weaver and Yancy (2010) found that destructive leadership is inversely related to workers' affective commitment and positively related with the workers' intent to leave their organization. Mehta and Maheshwari' (2013) analysis reveals strong negative correlation between various factors of toxic leadership and variables of organizational commitment. Due to having negativity in the environment tend to negatively impact employee performance (Padilla, Hogan & Kaiser, 2007). Extensive research has found that psychological conditions such as stress, depression, and anxiety experienced by employees can affect organizations through performance and productivity declines. For instance, Harris, Kacmar, & Zivnuska's (2007) study shows that abusive leadership is associated with a decrease in employee work performance.

Under toxic leaders, employees have essentially two options: obey or leave. Those who prefer to remain in the organization keep their hopes that stiuation might be changed. Some of them might respond by being only partly there. In other words, their commitment to their work and their connection with the company can be tentative. Arguably, commitment to an organization that allows destructive leadership should be low as followers might think that the organization fails to protect them (Burris, Detert, & Chiaburu, 2008; Schyns & Schilling, 2013). Thus the employees may decrease their loyalty to the organization. On the other hand, research has shown that just as employees develop affective attachments to the organization, they also may feel committed to their supervisors either (Becker & Billings, 1993; Clugston et al., 2000; Siders et al., 2001).

The main argument of this study is that there is a negative relationship between toxic leadership and organizational commitment as suggested in many studies. However, this study focuses on how commitment affects the commitment to the organization, co-workers, and supervisor. In this manner, we assumed toxic behaviors have negative effect on each type of commitment.

- H1: Toxic leadership is related negatively with commitment to organization.
- H2: Toxic leadership is related negatively with commitment to co-workers.
- H3: Toxic leadership is related negatively with commitment to supervisor

3. Research Method

3.1. Measures, Sample and Data Collection

The latent constructs were assessed using multi-item measures on a five-point Likert scale ranging from 'strongly disagree' (1) to 'strongly agree' (5) from prior studies. Short explanations of each measure are as follows. Toxic leadership as a five dimensional second order construct composed of abusive supervision, authoritarian leadership, narcissism, self-promotion, and unpredictability was measured with a scale consisting of 30 questions adapted from Schmidt (2008). In order to measure the organizational commitment foci of commitment scale developed by Wasti & Can (2008). Wast and Can distinguish both among different forms

(affective and normative) and different foci (organization, supervisor, coworkers) of commitment. Due to the focus of this paper we only used affective form of commitment. So we have a three dimensional organizational affective commitment scale with 5 questions for each dimension.

The purpose of this paper is to describe and analyze the mutual relationships among toxic leadership perceptions, and organizational commitment. We decided to conduct our research on the employees of banking industry as the target pressures and performance expectations seem to be extremely high in this sector. Moreover downsizing practices and massive failures in the banking industry have created fear and uncertainty which result with extremely high intention to leave and turnover rates (Cabral, 2004; Agbude et al.,2017). Accordingly we assume that this kind of work environment is convenient for toxic leaders to emerge.

In order to empirically investigate the hypotheses, employees of seven banks -three private and four public- located in Kocaeli were surveyed. . 6832 employees working in banks were recorded on the documents of The Banks Association of Turkey (https://verisistemi.tbb.org.tr). 600 among those 6832 we selected as the target group by random sampling technique. First the selected 600 employees were contacted by telephone and the aim of the study was explained to them. Of the 600 employees contacted, 331 agreed to participate in our study. Out of the 331employees that agreed to participate, 299 employees completed the survey. After careful examination, all the incomplete returns with the missing data were discarded, leaving 277 responses for analysis. The findings are based on data from a convenience sample of which 277 of the participants were male (51%). 87% of participants held university diplomas or higher degrees; 53% of the participants were working in public banks.

3.2. Validity and Reliability

To more vigorously test the proposed model (see Fig. 01), partial least squares structural equation modelling (PLS-SEM) was employed with SmartPLS 3.0 statistical program.

To assess the psychometric properties of the measurement instruments, we estimated a null model with no structural relationships. We evaluated reliability by means of composite scale reliability (CR), Cronbach's alpha, and average variance extracted (AVE). After dropping the problematic three items for all measures the PLS-based CR and Cronbach's alpha are well above the cut-off value of .70, and AVE exceeds the .50 cut-off value. As suggested by Fornell and Larcker (1981), the AVE for each construct was greater than the squared latent factor correlations between pairs of constructs (see Table 01).

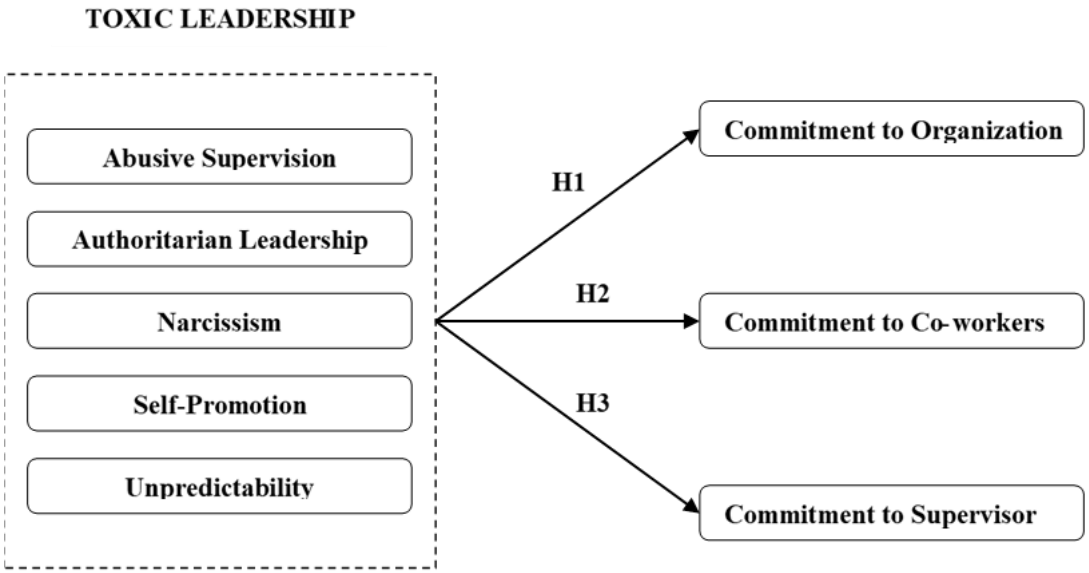


Figure 01. Theoretical Model

Before conducting any path analyses we conducted a second order factor analyse for the five components of toxic leadership; the results demonstrate that the five dimensions demonstrate loading between 0.87-0.93. So it is

proper to take the toxic leadership as a composite variable instead of a five dimensional one. A composite toxic leadership variable will enable us to see the total effects of toxic leadership on affective foci of commitment.

Table 01. Discriminant Validity and Reliability Indicators

Variables	U	CC	AS	SP	N	CS	CO	AL
U	0,736							
CC	0,497	0,826						
AS	-0,495	-0,349	0,795					
SP	-0,444	-0,255	0,692	0,88				
N	-0,345	-0,215	0,7	0,79	0,872			
CS	-0,431	-0,26	0,72	0,77	0,692	0,85		
CO	0,496	0,471	-0,371	-0,304	-0,233	-0,32	0,784	
AL	-0,411	-0,303	0,84	0,813	0,722	0,749	-0,297	0,809
CR	**0,852**	**0,915**	**0,923**	**0,945**	**0,927**	**0,948**	**0,887**	**0,918**
AVE	**0,542**	**0,682**	**0,633**	**0,775**	**0,76**	**0,723**	**0,615**	**0,655**
α	**0,783**	**0,885**	**0,902**	**0,927**	**0,894**	**0,936**	**0,847**	**0,89**

Note: AS = Abusive Supervision, AL = Authoritarian Leadership, N = Narcissism, SP = Self-Promotion, U= Unpredictability, CC:Commitment to Coworkers, CS: Commitment to Supervisor, CO: Commitment to Organization, CR = Composite Reliability, AVE = Average Variance Extracted, α = Cronbach's Alpha

4. Findings

The PLS approach (Ringle et al., 2005) and the bootstrapping re-sampling method were employed by computing the SmartPLS 3.0 software program to test the hypothesis and predictive power of the proposed model (see Figure 01). T-statistics were calculated for all coefficients, based on their stability across the sub-samples, in order to determine the links that were statistically significant. The path coefficients and their associated t-values demonstrated the direction and impact of each hypothesized relationship. The findings demonstrated that toxic leadership is negatively and significantly associated with commitment to organization (β = -.33; $p < .01$), commitment to supervisors (β = -.31; $p < .01$), and commitment to coworkers (β = -.49; $p < .01$) supporting H1, H2 and H3.

Table 02. Results of Hypotesis

Relationships			Path Coefficient (β)	Hypotheses	Results
TL	→	CO	-0,329**	H1	Supported
TL	→	CC	-0,312**	H2	Supported
TL	→	CS	-0,492**	H3	Supported

Note: TL= Toxic Leadership, CC:Commitment to Coworkers, CS: Commitment to Supervisor, CO: Commitment to Organization, CR = Composite Reliability, AVE = Average Variance Extracted, α = Cronbach's Alpha

The R2 statistic values of the endogenous constructs were used to assess model fit (Chin 1998; Tenenhaus et al., 2005). Table 03 shows R2 as the fit measures of the structural model. According to the results, commitment to organization (R2 = .15), and commitment to coworkers (R2 = .14) had medium level efects sizes while commitment to supervisors (R2 = .27), had large effect size.

Table 03. Structural Model

Fit Measures	Endogenous Constructs	R^2

R^2	**CS**	0,27
	CO	0,15
	CC	0,14

5. Conclusion and Discussions

It clearly is essential to understand the consequences of toxic leadership in the workplace. In this study, we tried to find out whether the subordinates of toxic leaders have a lower affective commitment to their organization in terms of commitment to organization, commitment to co-workers, and commitment to supervisor. We find it does. Particularly this study has three main contributions

First, the findings of the study demonstrated that toxic leadership scale, which is developed in Western countries, are appropriate for an emerging economy and eastern country, Turkey. Measures demonstrated high validity and reliability, and model results were similar to the empirical studies completed in developed and western states.

Second, this study investigated the influence of toxic leadership on affective commitment from several foci – commitment to organization, commitment to supervisor, and commitment to coworkers-. The findings confirm statistically significant and negative associations between toxic leadership and all the foci of commitment.. In other words, the abusive, narcissistic, unstable, selfish, and selfish behaviors of leaders probably result in subordinates developing negative work attitudes. Their commitment to organization, co-workers, and supervisors all together decrease. The negative feelings are reflected on all foci of commitment, not just the supervisor, which means higher negative consequences for both individual and organizational levels, just like intention to leave, counterproductive work behaviors, and decrease in productivity.

Third, the findings show that the impact of toxic leadership behaviors on commitment to supervisor is stronger than the associations of toxic leadership with other foci of commitment. This implies that even though the negative consequences of toxic leadership are reflected in the all foci of commitment, the main focus is on supervisors, in other terms, the leaders. Subordinates consciously direct their negative feelings to their managers.

The findings of this study cannot be taken as definite evidence because several limitations to the study results deserve commentary. First, this study is conducted on the employees of banking industry. Second, these results reported here emerge from a local area –Kocaeli-. Results may differ for employees of banking industry located on different areas that are operating in different cultural, environmental, and political conditions. Third, there was not an industrial separation while evaluating data; results may differ for various industries. Despite these limitations, this study provides essential results from theoretical and practical perspectives. This study indicates that toxic leadership is an important antecedent of affective commitment from several foci, and the negative effect of toxic leadership on commitment to supervisor is stronger than the other foci. .Future studies may find it fruitful to enlarge the model by including new concepts like counterproductive behaviors, psychological well being, and political behaviors.

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EXAMINING OF THE EFFECTS OF INTRAORGANIZATIONAL KNOWLEDGE SHARING, ORGANIZATIONAL MEMORY AND RESOURCE COMPLEMENTARITY ON ORGANIZATIONAL INNOVATION IN COMPANIES IN THE SERVICE SECTOR

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Abstract

The importance of information sharing is increasing day by day for organizations. Particularly in providing organizational memory, healthy information sharing among internal stakeholders is taken into consideration by management. Knowledge sharing and strong organizational memory can be regarded as two important factors underlying innovation. If these relationships are achieved, organizations gain an important advantage in achieving the goals and targets. The aim of this research is to investigate the relationship between internal memory, organizational memory, resource competence and organizational innovation variables in logistics companies in the service sector in Istanbul. Also, it is aimed to investigate the effects of independent and mediation variables on dependent variable within the scope of the research model. The questionnaires were collected from administrative staff working in service firms. The reason for collecting questionnaires from administrative staff is that they have experience in internal knowledge sharing and organizational innovation. SPSS 25 (Statistical Package for Social Sciences) program was used to analyze the data obtained from the sample population with the survey application. Factor and reliability, mean of variables loaded on each factor, correlation and regression analyzes were done. Sobel test was also done for mediation effect. As a result of the research, the effect of intraorganizational knowledge sharing on organizational innovation has gained importance. The variable effects of organizational memory and resource complementarity tool were meaningless. However, the independent variable effect of both variables has a significant and positive effect on organizational innovation.

Keywords: Innovation, intraorganizational knowledge sharing, organizational innovativeness, organizational memory, resource complementarity

1. Introduction

Knowledge sharing is one of the most important elements of knowledge management. The fact that knowledge is the only business entity that increases as it is used and shared, and that it is much more important besides tangible business assets, has given special importance to knowledge sharing (Dinçmen, 2010). Generally, knowledge sharing is the information communication of people within a group. This group can consist of members working in an enterprise. It consists of interaction between a workplace or friends, between a minimum of two or more individuals. The main purpose of this is to actively use the available information to improve the performance of the group (Alavi & Leidner, 2001). In this way, organizational innovation is also positively affected by the change and development in the organization. The main objective in ensuring organizational innovation is to meet the expectations of the organization to respond to the needs and needs of customers. Knowledge sharing takes place at different levels between individuals and departments in each enterprise in different ways. In the sharing of knowledge, the stakeholder accepting the knowledge must be voluntary. In other words, knowledge exchange is an exchange of knowledge by consensus among individuals without any coercion between the stakeholders (Yeniçeri & Demirel, 2007). On the other hand, the concept of organizational memory has been discussed for more than a quarter of a century and there is uncertainty about its definition (Ackerman, 1996). The concept has been tried to be explained from the individual memory and some researchers have used the concept only as a metaphor, while others have suggested that organizations have the ability to think. In addition to, although it is examined in terms of content from the point of view of organizational memory storage (Walsh & Ungson, 1991), it has started to be considered as a system in the following years (Stein & Zwass, 1995). The reflection of the knowledge that organizations have on their competencies and experiences is identified with the concept of organizations' memory. Organizational memory can be mentioned when organizations can reflect the knowledge and experience gained from the past with their memory in a positive

way to their performance. It is important for organizations to use resources and to complete their resources in the most effective way in order to be successful in their industry. The importance of internal knowledge sharing also emerges on the completion of resources and their positive reflection on innovation. In the research conducted by Walsh and Ungson in 1991, they stated that the information stored in the process from the establishment of the organization to the present day is important for making decisions about the organization (Walsh & Ungson, 1991). According to Argyris and Schön, organizational memory is a map of the organization's past. The knowledge that constitutes organizational memory is scattered in individuals' minds, files, documents or computer memories, and this dispersed knowledge should be organized and translated into a whole picture for use in business activities and learning (Argyris & Schoen, 1978). Within the scope of the research model, the relationships between Intraorganizational knowledge sharing, Resource Complementarity, Organizational memory and Organizational innovativeness variables are examined.

2. Literature Review

2.1. Intraorganizational Knowledge Sharing

A knowledge-based perspective emphasizes information as a critical resource that designates the competitive advantage of firms. In order to make competitive advantages, a firm must advance a dynamic capability to integrate information into its areas of expertise; to maintain competitive advantages, a firm should attain to keep safe its private information from the eminent domain and imitation of rivals (Liu & Liang, 2015). Alliances can also be a way to learn and internalize new skills, especially for those who are implicit, collective and buried. The core competences are not sold in an open market. These features of the organization can be learned from the stakeholders, and this information can be internalized and made more valuable. Thus, learning from an alliance partner can be widely exploited to a large extent to other activities and businesses outside the scope of the alliance (Doz & Hamel, 1998). Knowledge-based focus on strategy research and knowledge and ways to improve it have become an important strategic issue. In strategic alliances, sharing information between partners is an effective way to create existing knowledge by an alliance firm and expand the knowledge base of partner firms and develop new knowledge at relatively lower cost (Jiang et al., 2016). The confusion of the business environment has made organizations' knowledge a major source of competitive advantage. In order to meet the expectations and wishes of the consumers, organizations must constantly acquire new information and use this information very well within the organization. Otherwise, it will be very difficult to achieve the sustainability of the enterprises if the demands of the consumers are not met. Successful information exchange within the organization plays a key role in gaining competitive advantage. The function of the internal information sharing, which plays an important role in the success of the organizations against their rivals, in the realization of the objectives and targets pushes the organizations to dominate this field. Therefore, internal information sharing has a significant effect on organizational memory and organizational innovation (Van Wijk et al., 2008). The research model examines the effects of intraorganizational knowledge sharing on resource complementarity, organizational memory and organizational innovativeness.

2.2. Resource Complementarity

Resources are anything that can be thought of as the strengths or weaknesses of an enterprise, or are tangible and abstract entities that are partly connected to the enterprise (Wernerfelt, 1984). Resources are inputs that participate in the production process. Resources are tangible and intangible assets that an enterprise uses to develop and implement strategies. Resources are also valuable to the extent they create value (Huang et al., 2015). In other words, resources are valuable to the extent that they reduce costs or differentiate the product. On the other hand, Scarcity means that a resource is not commonly found in competing businesses (Barney, 1991). In other words, scarcity is that the supply of a resource is less than the demand of that resource. On the other side, Non-substitution means that a resource cannot be replaced with a different resource that can easily create the same effects (Bowman & Ambrosini, 2003). In other words, if a strategy can be implemented with any of two different sources, these resources are substitutes for each other. Complementary resources are not the same, but they concurrently complement each other at the same time. Organizations need to use and develop their resources very well in order to gain competitive advantage over competitors, while at the same time avoiding the reactions of competitors and providing unimitable and unique products / services. Another important point for organizations is the acquisition of new skills with the resources they provide, and opportunities for continuous development. In the given theoretical context, the following hypotheses have been developed;

H2: Intraorganizational knowledge sharing has an impact on resource complementarity

H7: There is a mediation variable effect of resource complementarity on the relationship between intraorganizational knowledge sharing and organizational innovativeness.

2.3. Organizational Memory

Organizational learning can be defined as the process of developing organizations' ability to learn and information, in order to protect and add power to competitiveness of enterprises in knowledge based economic system. Organizational learning is a widely used concept covering the experience. In organizational learning, group learning is essential. Learning through individual work in the industrial society education model has been replaced by teamwork in the informatics society education model. It is important to give importance to organizational learning in enterprises, to emerge information, to make more use of fields of organizational theory, industrial economics, business, management, quality and innovation, but is also the focus of many different disciplines. The most distinctive feature of organizational learning is to propose new ways of thinking in solving complex problems. Organizational learning shows a development line in various aspects. The focal point of the process of adapting and sustaining life is the organizational learning type advocated by Senge (Senge, 1997). Within this context, Organizational memory plays a major role in organizational learning. The greatest change for organizations is related to the analysis of information and the creation of organizational memory that can be used easily (Lee et al., 2017). Organizational memory is defined as the place where it is stored for future use, consisting of numerical data and pictures, experiences as knowledge, critical events, stories and details of strategic concepts. In the given theoretical context, the following hypotheses have been developed;

H1: Intraorganizational knowledge sharing has an impact on organizational memory.

H6: There is a mediation variable effect of organizational memory on the relationship between intraorganizational knowledge sharing and organizational innovativeness.

2.4. Organizational Innovativeness

The conscious or unconscious adoption of the organizations within a social system can lead to a relative advantage. Beyond creating organizational innovation, products and services, it refers to new models of management such as business models, management techniques and management strategies, and organizational structures and total quality management. Wang and Ahmed (2004) define organizational innovation as a new product or open a new market by combining innovative behavior and strategic orientation. For example, an innovation that is very useful in an administrative sense to an organization may not provide an additional contribution to the existing situation or structure of another organization. Individual information shared within the organization is organizational knowledge over time and this constitutes the source of organizational innovation. In addition, executives play an important role in the adoption of organizational innovation, such as resource allocation (Azar & Ciabuschi, 2017). On the other hand, it will be important in terms of organizations that have started to benefit from innovation or the fact that the predominant organizations in the center of the system adopt innovation from other organizations before, and constitute a plan model for other actors who adopt the innovation. Accordingly, innovation will be first adopted by the leading actors in the system, and then the pressures of the leading actors in different directions will cause the other actors in the system to adopt innovation and there will be a significant increase in the number of organizations that adopt them in the process. It is important how innovation is defined and perceived by organizations in order to expand and discuss such a discussion in the theoretical context. Innovation is seen as a strategy that responds to changes in customer demand, competitiveness and technological skills (Abdallah et al., 2019). Many researchers in the field of strategy and marketing are convinced that a company's innovation is connected with superior performance, as it is the best way to achieve competitive advantage and recommence competitive advantages. According to this perspective, more innovative companies are more: in a timely, creative, new way of introducing new goods or services, and sooner in changing existing offers to supply superior assets to customers. Imitating rivals' innovations or tender sources of competitive advantages can occasionally have the same effect on allied superior performance, as being innovative. Imitation neutralizes competitors' advantages and knowledge distinctives, and lowers their dependent performance (Olavarrieta & Friedmann, 2008). Drucker (2012) emphasizes that the importance of innovation and emphasizes the neglect of organizational research. Studies on how innovation is spread in most of the studies on organizational innovation (Rogers, 1995). Organizational sense of innovation is explained as the ability of the organization to accept different ideas and to adopt an organizational atmosphere

that is open to innovation and encourages thinking by creating brainstorming among employees. In the given theoretical context, the following hypotheses have been developed;

H3: Intraorganizational knowledge sharing has an impact on organizational innovativeness.

H4: Organizational memory has an impact on organizational innovativeness.

H5: Resource complementarity has an impact on organizational innovativeness.

2.5. Research Framework

In this research, data were analyzed to determine the relationship between statistical concepts due to a quantitative approach. We use the argument or the independent variables to judge the effect on the dependent variable in a quantitative research test (Thomas et al., 2015). As a result of the explanations mentioned, directions and hypotheses are stated in the relationship between variables within the research model (figure 01).

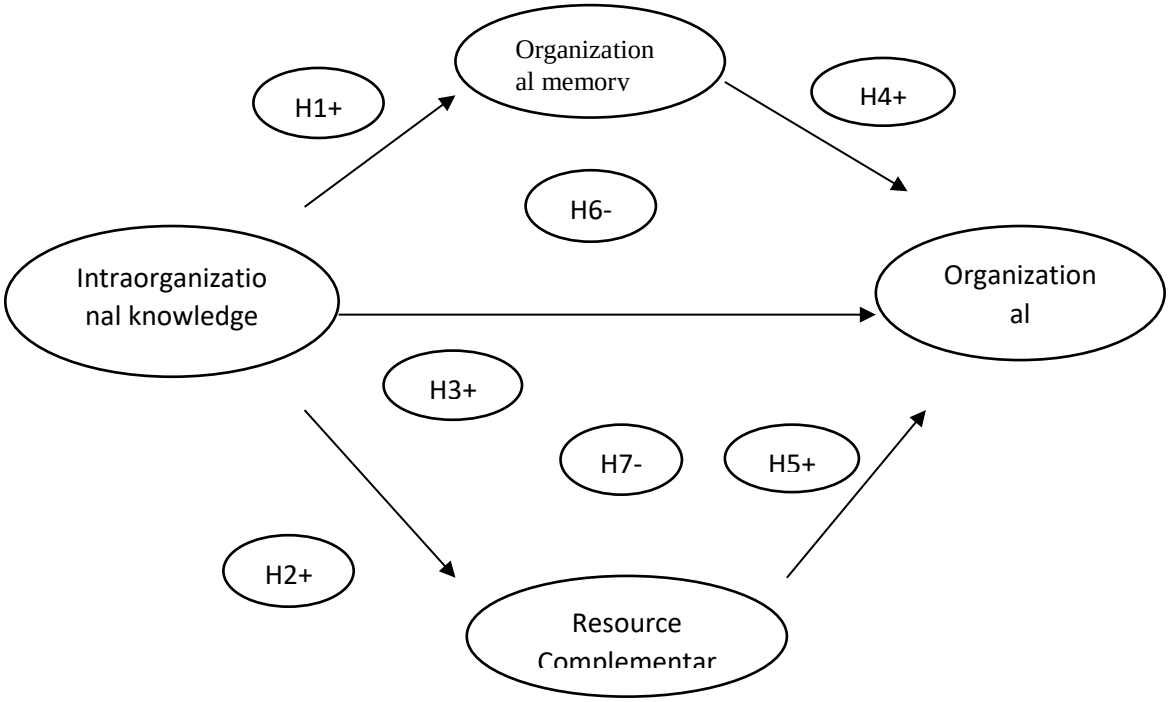


Figure 01. Research model

3. Methodology

The aim of this research is to investigate the relationship between internal memory, organizational memory, resource competence and organizational innovation variables in logistics companies in Istanbul. At the same time, it is aimed to investigate the effects of independent and mediation variables on dependent variable within the scope of the research model. The questionnaires were collected from administrative staff working in service firms. SPSS 25 (Statistical Package for Social Sciences) program was used to analyze the data obtained from the sample population with the survey application Factor and reliability, mean of variables loaded on each factor, correlation and regression analyzes were done. Sobel test was also performed for mediation effect.

3.1. Research Goal

The main purpose of this research is to obtain meaningful scientific results by obtaining data on variables from logistics companies in Istanbul and examining these data with scientific research methods. The question of this research is how the effects of internal information sharing on employees' usage of resources and organizational memory and organizational innovation are shaped.

3.2. Measurement Tools (Scales)

The questionnaire consists of four variables. In the first part of the questionnaire, demographic information and job-related information of the individuals are given. In the second part of the questionnaire, there are questions by representing 4 variables. Organizational memory scale was obtained from the scales in the studies conducted by Yeung et al. (1999), Yu et al. (2013). The Organizational innovativeness scale was utilized by Hult et al. (2003). Interorganizational knowledge sharing scale; Calantone et al. (2002), Hult and Ferrell (1997) was obtained from the scale developed by. The Resource Complementarity Scale was developed by using the studies conducted in Lambe et al. (2002), Srivastava et al. (2017). A 5-point Likert scale was used, ranging from "strongly disagree" to "strongly agree".

3.3. Sampling

Surveys were collected from the administrative staff working at the headquarters of logistics companies in Istanbul. It has been applied to 324 white collar employees working in different departments of the companies. 216 (73%) males and 108 (27%) females answered the questionnaire.Also, 118 (37%) of the participants were in the 17-27 age group; 159 (49.7%) are in the 28-40 age group. The number of managers over the age of 41 was 47 (13.3%). While 40 (12%) were college graduates, 240 (74%) were university graduates; 44 (14%) have masters degree. On the other hand, the level of achievement of the goals determined by the employees individually; 34 participants stated that they achieved their targets as “Very Low”, 57 participants stated that they were “Low”, 137 participants stated that they were “Medium”, 126 participants stated that they were “High”, 46 participants stated that they were “Very High”.

3.4. Analysis

Validity is the extent to which the desired property is measured accurately (Büyüköztürk, 2009). Although there are different types of validity in the literature, the scope and construct validity of the study were investigated. Scope validity relates to the extent to which the items of the scale were successful in measuring the totality of defined behaviors that were to be measured (Büyüköztürk, 2011). The construct validity of the scale is related to the extent to which the concept (structure) is actually measured. Factor analysis and hypothesis testing are two commonly used methods to examine construct validity (Büyüköztürk, 2011). Furthermore, factor analysis was used to test the construct validity. One of the criteria for the suitability of the data structure for factor analysis is the results of the KaiserMeyer-Olkin (KMO) test. Kaiser-Meyer-Olkin is a test based on the comparison of the magnitude of the observed correlation coefficients with the partial correlation coefficients. Kaiser-Meyer-Olkin value indicates the predictability of each variable in the scale by other variables. The fact that the Kaiser-Meyer-Olkin test result is less than 0.50 means that factor analysis cannot be continued. The ranges of values that will occur as a result of the test; It is interpreted as poor between 0.50 and 0.60, weak between 0.60 and 0.70, moderate between 0.70 and 0.80, good between 0.80 and 0.90, and excellent above 0.90 (Çokluk et al., 2012). The Bartlett test examines the probability that there are high-rate correlations between at least some of the variables in the correlation matrix. The high correlation between the variables indicates the suitability of the data set for factor analysis (Kalaycı, 2009). As a result of the explanations stated, it is seen that the validity of the scales is above 0.50 (table 01).

Table 01. Rotated component matrix[a]

Rotated Component Matrix[a]				
	Component			
	1	2	3	4
OM3. We have a reference knowledge base to deal with the recurring problems the organization is experiencing.	.866			
OM2. We have the knowledge base for reference when analyzing the needs of our customers.	.846			
OM1. Institutionalized routines are widely shared among employees.	.813			
OI1. We respond faster than competitors in terms of organizational		.828		

innovation.				
OI2. We are quick to offer innovative products or services.		.809		
OI3. Innovation is encouraged among employees.		.757		
IKS3. Information is shared between the departments in the activities of the organization.			.800	
IKS4. Administrative board constantly emphasizes the importance of sharing information in our company.			.784	
IKS5. Experiences are shared among the employees in the organization.			.771	
IKS1. The employees analyze the information they have learned and share it among the departments.			.641	
IKS2. Organizational management extensively provides in-house trainings to enable employees to share information effectively.			.603	
REC4. The resources of the organization are used correctly according to the characteristics of the products and / or services.				.882
REC3. The resources of the organization are considered valuable for the employees.				.850
REC2. The organization's resources are important in achieving performance gains				.808
REC1. Resources play an important role in achieving the objectives of the organization.				.558
Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalization.				
a. Rotation converged in 5 iterations.				

OM: Organizational memory, OI: Organizational innovativeness, IKS: Intraorganizational knowledge sharing, REC: Resource Complementarity

Reliability Analysis; reliability and validity of the scales should be investigated in order to give meaningful results to the scales used in the survey technique, reliability and validity of the scales should be investigated (Karasar, 2009). Reliability is the consistency between independent measurements of the same thing. With the reliability analysis, it is aimed to determine the variables that do not share the common value to be measured with the scale and to increase the internal consistency of the scale by excluding these variables (Özen et al., 2006). As a result of the explanations stated, the reliability of the variables is higher than 0.70 (table 02).

Table 02. Reliability

Variables	Number of Questions	Cronbach Alfa (α) Values
Intraorganizational Knowledge Sharing	5	.816
Organizational Memory	3	.884
Resource Complementarity	4	.853
Organizational Innovativeness	3	.804

Correlation Analysis; the correlation test provides an examination of the structure and amount of the relationship between the variables. (Çokluk et al., 2012: 50). The aim of the correlation test is; to determine in which direction the dependent variable (Y) changes when the independent variable (X) changes (Kalaycı, 2009: 115). The strength of a relationship is indicated by the amount of the relationship between the two variables, and

this value is expressed as the correlation coefficient. Correlation coefficients (r) are between -1 and +1. If the correlation coefficient is 0, it means that there is no relationship between the variables, the correlation coefficient is +1.00 positive linear relationship, and the correlation coefficient -1.00 means that there is a negative linear relationship. Regardless of the sign of the correlation coefficient, the value being below 0.30 indicates a low, the value being between 0.30 and 0.69 indicates a medium, and a value of 0.70 and above indicates a high level of relationship (Köklü et al., 2007). The statistical significance of the correlation requires hypothesis testing (Çokluk et al., 2012: 52). As a result of these explanations, the relations are explained in the correlation table (table 03).

Table 03. Correlations

Correlations					
		Intraorganizational knowledge sharing	Organizational memory	Resource Complementarity	Organizational innovativeness
Intraorganizational knowledge sharing	Pearson Correlation	1	.241**	.340**	.586**
	Sig. (2-tailed)		0.000	0.000	0.000
	N	324	324	324	324
Organizational memory	Pearson Correlation	.241**	1	.779**	.152**
	Sig. (2-tailed)	0.000		0.000	0.005
	N	324	324	324	324
Resource Complementarity	Pearson Correlation	.340**	.779**	1	.181**
	Sig. (2-tailed)	0.000	0.000		0.001
	N	324	324	324	324
Organizational innovativeness	Pearson Correlation	.586**	.152**	.181**	1
	Sig. (2-tailed)	0.000	0.005	0.001	
	N	324	324	324	324
**. Correlation is significant at the 0.01 level (2-tailed).					

As a result of correlation analysis, the relationships between the variables were significant and positive. It can be explained that internal information sharing, organizational memory, resource complementarity, organizational innovativeness variables affect positively. As a result of the significant relationship between the variables, regression analysis was performed to test the hypotheses mentioned in the research model (table 04).

Table 04. Regression analysis results of impact of independent variables (iv) on dependent variables (DV)

IV	DV	Standard β	Sig.	Adjusted R Square	F Value
Intraorganizational Knowledge Sharing	Organizational Memory	**.241*** **	**.000**	**.055**	**21.108**
Intraorganizational Knowledge Sharing	Resource Complementarity	**.340*** **	**.000**	**.113**	**44.740**
Intraorganizational Knowledge Sharing	Organizational Innovativeness	**.586*** **	**.000**	**.341**	**178.718**
Organizational Memory	Organizational Innovativeness	**.152***	**.005**	**.020**	**8.073**
Resource Complementarity	Organizational Innovativeness	**.181****	**.001**	**.030**	**11.645**

*: p<0.05 **:p<0.01 ***:p<0.001

The effect of independent variables on dependent variables was examined by regression analysis, and hypothesis results were stated as a result of these analyzes (Table 05).

Table 05. Hypothesis

Hypothesis	Supported / Not Supported	Significance Level (Sig.)
H1: Intraorganizational knowledge sharing has an impact on organizational memory within the organization.	**Supported**	***P<0.001***
H2: Intraorganizational knowledge sharing has an impact on resource complementarity within the organization.	**Supported**	***P<0.001***
H3: Intraorganizational knowledge sharing has an impact on organizational innovativenes filters within the organization.	**Supported**	***P<0.001***
H4: Organizational memory has an impact on organizational innovativeness within the organization.	**Supported**	***P<0.05***
H5: Resource complementarity has an impact on organizational innovativeness within the organization.	**Supported**	***P<0.01***

5 hypotheses are determined outside the effect of mediation variable are supported as a result of analysis. Regression analysis in which the mediator variable effect is tested is shown in table 06.

Table 06. The effect of the mediation variable

	IV	DV	Standard β	Sig.	Adjusted R Square	F Value
Regression	Intraorganizational Knowledge Sharing	Organizational Innovativeness	**.583*** **	**.000**	**.341**	**178.718**
	Organizational Memory (MV)		**.011**	**.803**	**.339**	**89.145**
Regression	Intraorganizational Knowledge Sharing	Organizational Innovativeness	**.593*** **	**.000**	**.341**	**178.718**
	Resource Complementarity		**-.020**	**.666**	**.340**	**89.239**

	(MV)					

*: p<0.05 **:p<0.01 ***:p<0.001

It was concluded that the effect of mediator variable was not effected by regression analysis and the effect between independent and dependent variable was meaningless. However, in order to check whether the effect of mediator variable is meaningless, sobel test was also performed (table 07). The Sobel test includes the ratio of the product of coefficient estimates a and b to the standard error of that product. Many formulas have been proposed to estimate this standard error; however, differences between them often have insignificant effects on test results (MacKinnon et al., 2002; Preacher & Hayes, 2004). The coefficient A denotes the path between the independent variable and the mediating variable, Sa denotes the standard error of this path (coefficient), the coefficient b denotes the path between the mediating variable and the dependent variable, Sb denotes the standard error of this path. As a result of the calculation, Z value of mediation effect is obtained. This value is used to assess that the mediating effect is not statistically significant using the probabilities corresponding to the standard normal distribution.

Table 07. Sobel test

Sobel/Aroian/Goodman Analysis; Determining whether the organizational memory mediation variable has an effect on the relationship between intraorganizational knowledge sharing and organizational innovativeness;							
Variables			**Input:**		**Test statistic:**	**Std. Error:**	**p-value:**
IV	Intraorganizational Knowledge Sharing	a	0.405	Sobel test:	0.24208862	0.01338353	0.8087115
MV	Organizational Memory	b	0.008	Aroian test:	0.2365833	0.01369496	0.81298008
		Sa	0.088	Goodman test:	0.24799706	0.01306467	0.80413668
DV	Organizational Innovativeness	Sb	0.033				
Since the p value was not less than <0.05 among the variables, there was no mediation variable effect.							
Sobel/Aroian/Goodman Analysis; Determining whether the resource complementarity variable has an effect on the relationship between intraorganizational knowledge sharing and organizational innovativeness;							
Variables			**Input:**		**Test statistic:**	**Std. Error:**	**p-value:**
IV	Intraorganizational Knowledge Sharing	a	0.510	Sobel test:	-0.42022624	0.01941811	0.67432019
MV	Resource Complementarity	b	-0.016	Aroian test:	-0.4156543	0.0196317	0.67766299
		Sa	0.076	Goodman test:	-0.42495244	0.01920215	0.67087135
DV	Organizational Innovativeness	Sb	0.038				

Since the p value was not less than <0.05 among the variables, there was no mediation variable effect.

As a result of the Sobel test, the mediator variable effect was tested to be insignificant and the hypothesis was supported in table 08.

Hypothesis results;

Table 08. Supported / unsupported research hypotheses

Hypotheses	**Supported / Not Supported**	**Significance Level (Sig.)**
H6: There is a mediation variable effect of organizational memory on the relationship between intraorganizational knowledge sharing and organizational innovativeness.	**Unsupported**	
H7: There is a mediation variable effect of resource complementarity on the relationship between intraorganizational knowledge sharing and organizational innovativeness.	**Unsupported**	

In the hypotheses where the mediator variable effect is tested, it is stated that there is no mediator variable effect and the established hypotheses are not supported. The reason that the organizational memory and resource complementarity variables do not have a mediation effect can be interpreted as the continuous use of new information is obsolete and does not remain in the organizational memory due to the continuous renewal of itself in a dynamic structure in the service sector. At the same time, Resource complementarity can be explained that the effect of the service sector on the basis of constant change in resources has disappeared.

4. Conclusion and Discussions

Organizations cannot truly absorb knowledge without knowledge sharing, in sharing information, it should be taken into consideration that the implicit knowledge of employees about experience and practice is at least as important as the technical information they can express clearly. Both formal tools such as information technologies and non-formal tools such as daily personal and group chat should be used for sharing. On the other hand, organizational culture should also be open to knowledge sharing. In order to share knowledge in a healthy way. The existence of reward and support mechanisms to encourage knowledge sharing facilitates knowledge sharing (Alavi & Leidner, 2001). One of the immediate benefits of knowledge sharing is the effective fulfillment of the task and the revelation of innovative aspects of employees. The opportunities of knowledge sharing provide a sustainable competitive advantage (Olavarrieta & Friedmann, 2008). As a result of the analyzes, it can be seen that internal information sharing affects variables positively. At the same time, organizational memory and resource complementarity variables affect organizational innovation positively. Keeping the knowledge of organizations in a strong memory also affects the innovations of the organization positively. However, resource complementarity, positive impact on organizational innovation, shows the importance and value of the resources of organizations. Knowledgeable companies can create more “value inden than their competitors by integrating and coordinating traditional resources and capabilities with new and interesting ways. On the other hand, Successful innovation studies of organizations show that organizational innovation is not only a commercial success, but also organizational innovation is adopted by the employees within the organization. When we look at the main objectives in providing organizational innovation; to reduce costs, to increase employee satisfaction and efficiency, to ensure the sustainability of innovation activities to be successful in the industry. At the same time, it should not be underestimated that organizational memory and internal information sharing affect organizational innovation positively. The concept of organizational memory is interesting in that it emphasizes that a community of individuals has a separate memory beyond the memories of individuals (Kılıç, 2007). Organizational memory is a process for the structure of information retention and reassessment activities and is represented at various levels at individual and organizational levels. Stored information has an impact on the future perception and decision-making levels of the organization, so it is important to have a structure open to development for the organization. From the organizational level, memory is a concept related to the transfer of

the knowledge accumulated by the organization to the future and incorporates the collective belief, behavior routines and physical storage units that vary in terms of content, spread, access and level Organizational memory reduces costs by transferring information from the past to the future, contributes to an effective decision-making process and provides an understanding of organizational life (Akgün et al., 2005). As a result of the analysis, we can explain the importance of both organizational memory and resource completion in terms of organizational innovation. However, we can assume that the loss of mediation of these variables may be due to the relationships between the employees because of the lack of their effects as mediation variables and the effective sharing of information for the organization. Resource complementarity and the absence of mediating variable effects of organizational memory may be a major resource for studies planned in this area. Because of the findings to be obtained as a result of the studies to be conducted in this field, it will be possible to reveal new concepts by making comparative analyzes and gain them into literature.

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TECHNOLOGY AND MEDIA INTEGRATOR COMPETENCY OF HR PROFESSIONALS

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Abstract

This paper explores the "Technology and Media Integrators" (TMI) competency of RBL HR Competency Model to make Human Resource (HR) professionals more effective in their jobs. Throughout the study, the followings are discussed respectively: HR competencies' importance in today's business context; RBL HR Competency Model; why TMI competency matters; what the current trends are in HR technology, business technology, and social media; considerations in the use of technology and social media; TMI competency's definition and its subdomains; Ulrich and his colleagues' research in 2016 and their findings related to TMI; and further research suggestions and managerial implications. Briefly, technology and social media should be considered by HR since they seem to be both a helper and a trouble for HR. The research on TMI competency shows that this competency has the most potential competitive advantage because it has the greatest impact on business success than any other competencies, but HR professionals were scored the lowest in this competency. That's why, in this paper, it is aimed to draw attention to the importance of this competency and to provide a better understanding of competency for further research and for managerial implications.

Keywords: HR competency model, HR technology, RBL group, social Media, technology and media integrator, Ulrich model

1.Introduction

In today's business world, the concept of competency is central to performance. Competency-based HR systems and programs are increasing day by day. Moreover, people are advised to invest in their competencies to manage career uncertainty in the rapidly changing and unpredicted business world. Competency is an employee's characteristic that has a cause-effect relationship with the employee's superior performance (Spencer and Spencer, 1993 as cited in Dede, 2007).

Professional competencies are more specific to the relevant profession. For example, the competencies of a nurse and the competencies of a human resources specialist may overlap in very few areas. For this reason, it is necessary to develop occupation-specific competencies instead of general competencies. In this study, Human Resources (HR) competencies are discussed due to the importance given to human resources in terms of the competitiveness of the organizations.

In the digital age, it is not only preferable but obligatory that HR professionals have a competency with respect to "technology". When HR competency models were compared, technology and social media usage competency was only included in RBL Model, with the name of "Technology and Media Integrator" (Ulrich, Kryscynski, Ulrich, & Brockbank, 2016). It is clear why this competency is not available in other models: Until a few years ago, it was unpredictable that technology would be so much reflected in business and HR practices. The technological transformation that remains a futuristic approach for many people is the main theme of almost every HR summit today. Newness of TMI competency results in that it is one of the lowest-rated competencies in HR competencies. On the contrary, it has a very high value to stakeholders. The basic condition of benefiting from this potential is to make sure that academicians and practitioners in the HR field understand the competency correctly. For that reason, the following section will try to base a conceptual background for the competency.

2.Literature Review and Theoretical Framework

2.1.Why is Human Resources Competency Important?

The Resource-Based Theory argues that the diversity and the different combinations of an organization's resources create competitiveness for the organization. Based on this arguement, the approach developed by Penrose, Wernerfelt, and Barney has suggested that human resources are the most important source of an organization in achieving a competitive advantage. Because sustainable competitive advantage resources must be valuable, rare, unique, inimitable, and supported by the organization and only human resources within all of the organization's resources meet these criteria (Armstrong, 2017).

The HR function is important in terms of creating, developing, evaluating and retaining the human resources of the organization in the most effective way. According to a study, HR activities increase the company's three-year financial results by 10% over its competitors (Ramlall, 2006). In another study, it was found that one-unit standard deviation in HR systems led to a change in the company's market share between 10% and 20% (Wright, Gardner, Moynihan, & Allen, 2005).

The HR function can be considered as an organization within itself under the name "HR department/unit". Following the Resource-Based Approach, the performance of the HR organization depends on the performance of the HR employees, who make up the HR department's human resources. In this context, HR competencies are necessary to hire HR professionals who may have high performance, to evaluate and manage their performance effectively and to keep their loyalty to the organization high. In a study, it was found that the competency of the HR professional has a 20% effect on the company results (Ulrich et al., 2009). As Losey (1999) says, organizations expect greater creativity and productivity from their employees than ever before, and their strategy to realize these expectations, is to have HR competencies to facilitate the achievement of these results.

Each company may face different challenges and may require different competencies because of differences in industries, strategies, and resources. However, researches show that 70% of competencies remain the same, especially at the executive level. Therefore, although general competency models are not recommended to be used exactly, they can be adapted to the structure of the company with small changes (Dede, 2007; Özçelik et al., 2018). Because of all these data and logical inferences, it is meaningful to study the professional competencies of HR professionals.

2.2.RBL Group HR Competency Model

A competency model is a framework that integrates the entire HR system of the organization, vertically with the strategies of the company and horizontally with other HR functions and practices. HR studies integrated with a competency model have a positive impact on the human resources of the organization (Guest & Conway, 2011; Ramlall, 2006 as cited in Rothwell & Wellins, 2004). From this point of view, the HR competency model provides an integrated approach to the HR processes that HR professionals go through and improves the quality of the HR function.

Although there are many HR Competency Models, "*RBL Model*" (as we will refer in this article) is distinguished from others by containing a competency related to technology usage (Ulrich, Kryscynski, Brockbank, & Ulrich, 2017). Therefore RBL Model is taken as the main model of this paper. Since 1987, Dave Ulrich and his colleagues conducted seven rounds of research on HR professionals' competencies, adding up to 90.000 surveys, from HR and non-HR participants, and from all over the world. Through these researches, they tried to answer the following questions:

- What are the competencies of HR professionals?
- How well do HR professionals exhibit the identified competencies?
- What competencies influence perceptions of individual effectiveness and business results?
- What personal competencies have the greatest impact on business performance and value created for stakeholders (Ulrich, Kryscynski, Ulrich, & Brockbank, 2016).

As a result of the last round of research, the research team reached a new model of HR competencies as shown below:

- **Strategic positioner:** Able to position a business to win in its market.

- **Credible activist:** Able to influence others and earns trust through results.
- **Paradox navigator:** Able to manage tensions of businesses.
- **Culture and change champion:** Able to manage change and design organizational culture.
- **Human capital curator:** Able to develop soft and technical talent and leaders and leverage human capital
- **Total rewards steward:** Able to manage employee well-being through financial and non-financial rewards.
- **Analytics designer and interpreter:** Able to get the right data and analyze data to improve decision making.
- **Compliance manager:** Able to manage the HR processes according to regulatory guidelines.
- **Technology and media integrator (TMI):** Able to use technology and social media to increase the performance of the whole organization (Storey, Ulrich, & Wright, 2019).

Out of these competencies, TMI will be the focus of this study because of its importance as a potential competitive advantage source for an organization.

2.3.Why do Technology and Social Media Matter for HR?

To understand TMI competency, it is necessary to answer the questions of "Why do technology and social media matter for HR?" and "What should HR professionals consider while using technology and social media?" This and the following section of the study try to answer these from a conceptual background.

Today's business environment, as defined with the term VUCA (volatile, uncertain, complex and ambiguous) shifts HR to agility, experimentation, both standardization and personalization, knowledge management, employee empowerment, and evidence-based management. To manage all these requirements, HR needs to leverage technology and all the modern tools at the very best. ERP (Electronic Resource Planning) systems such as SAP, Oracle, and Workday offer systems, services and applications for effectiveness and efficiency. Also, there are hundreds of local software for the same purpose. On the other side, social media creates and exchanges a large amount of data among a large number of people. From this perspective, technology is a very "nice to have" helper for HR (Ulrich et al., 2017).

From another perspective, technology can be called *"trouble"* because technology itself creates difficulty for HR. New technologies bring in new working styles and conditions, new demands of stakeholders, new competition areas, etc. Particularly, social media means an inevitable transparency of information on both HR and the company side, and employee side. Then, there comes an issue of effective technology and media usage, changing directly the way of doing business and changing HR dramatically.

To overcome this issue, HR needs, first of all, to catch up with the current technologies, this issue can be addressed from three perspectives: HR Technology, Business Technology, and Social Media.

HR Technology

Technology is defined as *"the practical application of knowledge especially in a particular area",* for example manufacturing technology and HR technology. Therefore, all the latest thinking, processes, methods and techniques can be considered as technology. However, in today's information technology age, technology is meant as "information technology (IT)" usually. For HR technology, it is understood as new tools based on software such as automated payroll, time and attendance systems, application tracking/recruitment software, e-learning, learning management systems, employee self-service systems and HR data storage and analytics tools. They can be categorized roughly as e-HRM (electronic human resource management). The researchers define e-HRM as "a way of implementing HR strategies, policies and practices in organizations through a conscious and directed support of and/or with the full use of Web-technology-based channels" (Schramm, 2006).

Even though HR stakeholders' expectations are rising, there is still an emphasis on cost reduction. In 2019, HR is expected to increase revenue by 5,7%, meanwhile, to decrease HR operating budgets by 0.2% less than last year and decrease HR headcount by 0.4%. Therefore, leveraging technology to improve HR performance is getting more importance (DiRomualdo, Girimonte, & Osle DiRomualdo, 2019).

Hackett Group's research in 2017, reveals that world-class HR organizations spend 25 percent less than typical HR organizations and operate with 30 percent fewer staff while achieving greater effectiveness. The researchers estimate that proper implementation of digital technologies can enable typical HR organizations to cut process costs by 21 percent, reaching process cost levels only slightly higher than world-class HR currently achieve. World-class HR organizations can use digital transformation to reduce their process costs by 22 percent.

Effective HR technology makes room for HR to develop their other competencies such as strategic positioner, change management, etc., therefore HR can create more value to stakeholders. HR technology can make HR processes standardized and can be managed by the line managers as well. So, an increasing number of non-HR parties of HR technologies are expected to change the profession in the upcoming years (Schramm, 2006).

The information-sharing tools increased transparency, scale, and scope of employee development, which helps HR to be a learning partner throughout the company. Digital tools help HR to measure performance and accordingly recognize and reward. That also brings out HR analytics and HR's strategic contribution (Ulrich et al., 2017).

Evidence-based management necessitates HR to analyze its data to make decisions about HR and the organization. However, to analyze HR data, HR must have accurate, complete and on-time data. And it is possible only by using information technologies (Schramm, 2006).

Surveys made to employees can be conducted through digital tools such as Google Forms and SurveyMonkey. Communication with employees, notification to them, and methods of resolving complaints can be conducted in organizations on web-based platforms. Managers can communicate rules, regulations, and instructions in the organization online to employees. With this system, accurate and comprehensive information required for the effective management of long-term disability or sickness programs and the compensation to be paid to employees can be provided more easily by monitoring and analyzing seniority status of employees, disciplinary penalties given to them, and complaints from employees. Moreover, the analysis and announcements provide significant gains in terms of occupational health and safety (Doğan, 2011).

Business Technology

The above technologies are the essential elements of HR technology from the time it started. But for an HR professional's technology competency, further understanding is necessary. HR is responsible for employee productivity and if there is a way to ensure efficiency, HR needs to be proactive in incorporating this new technology into the company. That means HR must have a technology mindset at all.

New tools also support new working styles such as working at home. For example, LiveOps is a platform where virtual and independent call agents work from their homes. That's a great solution for HR, having trouble finding the qualified call agent (Ulrich et al., 2017)

Technology is in many aspects of business; understanding the use of technology in all areas of the business and its relation to human resources helps HR professionals to understand workforce issues better. Furthermore, the implementation of technology provides new ways of collaborating, organizing, teamwork, and employee development. This leads to a more effective organizational and human capital (Schramm; 2006).

According to Hackett Group's 2019 Research, "Support enterprise digital transformation strategy, objectives and initiatives" is the most common HR improvement initiatives planned or ongoing in 2019, with 45% of survey participants. Because, although many HR supported corporate digital transformation, a gap in capabilities remains. That requires HR to know about not only in HR technologies but also in business technologies. HR should encourage these technologies with its change management, leadership development, and cultural works (DiRomualdo et al; 2019).

Social Media

Social media is "the forms of electronic communication (such as websites for social networking and microblogging) through which users create online communities to share information, ideas, personal messages, and other content (such as videos)". Examples of social media are: Facebook, Instagram, Twitter, LinkedIn, YouTube, Wikipedia, Vimeo, Flickr, Digg, Medium, Technoral, Reddit, Delicious, Diggo, Blinklist and simply, Epinions, Viewpoints, Yelp, GitHub, and Bitbucket (Updated the list in Vardarlıer, 2014).

Doğan (2011) summarizes the advantages of using social media in recruitment as follows: reduces operating costs, increases productivity of HR employees, improves employer image, reduces the application process in terms of candidates, and reaches better candidates in terms of quality and quantity.

Online games mirror the real behaviors of the players in daily life more closely. Perhaps, the most important example of this social virtual world is the Second Life application. For example, TMP WorldWide Advertising & Communications organizes recruitment events for its customers using the Second Life game. Through this application, companies promote their products and services, give their recruitment ads, strengthen employer brands. For example, French retail company Auchan, introduced its recruitment events in 30 cities in the advertising spaces of Second Life game. T-Mobile, eBay, and Verizon see these events as an important way to find creative and technology-bound candidates (Kaplan & Haenlein, 2010; M. Kaplan & Haenlein 2009 as cited in Vardarlıer, 2014).

For companies to have value congruence between the employee and the organization is very important. Company websites and social platforms are useful for giving information about organizational culture. Candidates search for employment information via the company website mostly. Candidates may prevent applying an organization in which their values do not fit in. Also, organizations try to reinforce their strong values and culture through internal and external communication, which social platforms make easier (McShane & Von Glinow, 2019; Nagendra, 2014).

Social media is good for employer branding too if managed right. Because they look for companies where they will be proud of working in, candidates check potential employers' social platforms before applying for a job. Candidates share their knowledge, perception or insight about the companies in Glassdoor, LinkedIn, and Google+ groups. HR should utilize and manage these platforms for better HR solutions (Ulrich et al., 2017).

Social platforms, as a collaboration tool, facilitates employee involvement in decision making. HR can get employees' ideas or knowledge through the company's social platform easily. Online discussion groups and forums can enable an employee to show his/her ability to many people, thereby HR can manage talent better within the company. Additionally, in personalization age, HR tries to create meaningful employee experiences. Technology supports HR's flexibility in its solutions by collecting personal needs and choices, valuing personal identity and uniqueness in the workplace. On the other side, there is a belonging issue at work. Via social platforms, HR can make people become a virtual, group, share ideas, stories, events, information, and recognition. In these virtual environment, one experience magnifies many people and deepens via technology (Ulrich et al., 2017). According to a research, social media is used extensively as an internal networking tool, creating a sense of togetherness and bonding the people with the same problems or ideas (Nagendra, 2014).

Last but not least, HR can gain a better understanding of the real customers of the company. Ulrich, Younger, Brockbank, and Ulrich (2012) state that HR should start from external customers of the company to understand the business context. Therefore, using social media effectively can provide valuable information about customers, enabling HR to operate "outside in".

2.4.Considerations in the Use of Technology and Social Media

It can be easily understood that HR technology can cut down the time and money costs of HR. But as an annotation, HR technology must not be taken as a legitimacy issue or leftover to the technology supplier. The cost of installation of the necessary infrastructure system, unexpected costs (ex: an extra software, IT employee), and non-user-friendly systems may turn a dream into a nightmare.

Moreover, technology and social media have some disadvantages which should be taken into account (Vardarlıer, 2014; Doğan, 2011; Schramm, 2006):

- In recruitment, the number of applications with no use increases due to the ease of the application process of the candidates, causing overtime spent by human resources. To solve this problem, Pegasus charged applicants with a small fee, for example.
- Due to the various characteristics of the applicant candidates, the fact that they are gathered around a particular feature (such as the majority being male or female, a particular region or a group) may result in unequal opportunities. For example, in the Amazon case, artificial intelligence recruited mostly males, depending upon past data.

- Training must not depend on e-learning, it should be blended with traditional methods. Because for many people traditional training provides a sense of belongingness to the organization and a better learning opportunity for many reasons.
- Electronic performance feedback tools can increase psychological distances between managers and subordinates.
- Employees may perceive the use of electronic performance management systems and social media profile controls as an act against their privacy and may try to sabotage them.
- Electronic evaluations may result in a mess of data and managers may feel pressured if they cannot use this data efficiently.
- Electronic performance evaluation, due to lack of personal observations, can focus only on some of the criteria and miss very valuable information about employees.
- The validity and reliability of the internet-based career assessment tools may be low because the candidate may be deceitful.
- Some stakeholders of HR may not have internet access enough or there may be a lack of interest. Therefore, HR can lose some opportunities for communication in HR processes.
- To increase technology usage, the company can offer devices and internet packages to the employees. In that case, HR should consider equity issues in employee benefits. Also, HR needs to be proactive in establishing and communicating policies regarding devices and internet.
- If there are not robust principles and procedures in the organization about social media usage, social media may cause loss of productivity stealing from the employee's shift; loss of reputation due to comments on social media and security risks that may arise due to deficits created by social networking sites
- Technology and social media make employees accessible every time. This may cause high pressure on employees.
- Sustainability is critical in technologies as well. Once stakeholders get used to a new tool, they want to utilize it always and seamlessly. Technical problems, low speed of internet, etc. can be time-consuming.
- If not managed properly, the organization may face legal sanctions based on the Personal Data Protection Law.

After reviewing the advantages and disadvantages, it should be accepted that technology and social media hinders more opportunities and possible advantages than the risks. The solution lies in managing the risks, leveraging technology and social media at its very best, keeping in mind the human touch of HR, and blending them with traditional HR methods to create more value to the stakeholders.

2.5.The Technology and Media Integrator Competency Results in the RBL's 2016 Work

Since 2002, the RBL Group includes technology competency, with the names of HR Technology, Operational Executor, Technology Proponent, and in the last model Technology and Media Integrator (Ulrich et al, 2016).

In the previous sections, technology and media were discussed. TMI competency includes also the "integration". The implication of the word "integration" is to utilize both technology and social media. It may be expanded to blend the traditional and modern media tools in HR processes as well.

Ulrich et al. (2017) founded that Technology and Media Integrator (TMI) is the second lowest-rated competency (following Total Rewards Steward), by each group of participants (external customers, investors, communities, regulators, line managers, and employees). TMI competency level does not change between genders either. These may be explained by TMI's being an emerging competency.

The finding that TMI is the second-lowest rating is valid in almost all locations, except for Turkey. In Turkey, it is ranked as the sixth highest competency. It may be wrong to say that Turkish HR professionals are better at TMI than their colleagues all over the world. Because in Turkey, Human Capital Curator and Culture and Change Champion competencies are rated less than other locations.

The other important finding of Ulrich et al. (2017) is that from the line managers' perspective, TMI competency affects individual HR professional's value to them negatively. This may indicate that HR professionals specialized in technology and social media are not in a close relationship with line managers or they are not in value-creator positions. However, when reconsidered the HR department with whole HR professionals, it turns out to be a positive effect on value creation. It can be understood as HR professionals together can make a higher impact on stakeholders' perceived value for themselves.

More importantly, in the same research, it is found that TMI is the third highest-rated competency (after Paradox Navigator and Strategic Positioner) to increase business unit performance. That means there is a very high, positive correlation between an HR department's TMI competency at all and business performance. So, technology and media integrator competency should have been improved collectively in the HR department.

Lastly, the research reveals that TMI competency is not homogeneous in terms of subdomains. HR professionals seem to be better at "integrates technology" but not that much good at "leverages social media". But as a competency at all, HR professionals must be competent enough in both.

3.Research Method

TMI is a new competency, it may be misunderstood by HR professionals. Therefore, we tried to explain the TMI competency in detail by providing additional and comprehensive information on the topic. Hence, in this paper, a descriptive research has been done, attempting to answer the following research questions with the literature review on the topic:

- What does TMI mean for HR Professionals? How does it matter for them?
- What are the components of TMI? Is there any difference from the RBL Model?
- What may be the further research areas related to TMI competency?
- What are the managerial implications of the RBL 2016 study for HR professionals?

As Snyder (2019) states, for newly emerging topics, the literature review requires a more creative collection of data. It is not expected to cover all articles ever published on the topic. It is better to combine perspectives and insights from different fields. In this paper, a new theoretical framework was not aimed but new insights have been tried to develop for more contribution to the field.

The literature review has been conducted on concepts, from wide to narrow. First of all, all HR competency models have been reviewed from numerous books, latest articles, conference papers, and websites, with the search words such as "HR competency", "human resource competency", and "HR professional". Going through the competency models, "technology", "media", and "social media" etc. have been scanned as a word and as a concept. The search is resulted in only the RBL Model. Therefore, the RBL Model has been used as a framework for this study.

In order to achieve the objectives of this paper, the possible components of TMI competency based on the RBL Model, have been investigated through another literature review on "HR technology", "business technology", and "social media". This work has broadened the understanding of the authors, which caused them to offer three subdomains instead of two (as is in the RBL Model) for the competency.

While researching the potential components, the authors realized that it is a must for HR professionals to know disadvantages of technology and social media as well. Because current studies were focused on to what extent these tools are utilized, there may be a warning flag need. As the authors, we tried to remind the need for balance and policies in leveraging technologies and social media.

As being the main framework for the related competency, Ulrich et al. (2017)'s latest findings are taken to the paper and discussed to give a better understanding of the competency. As Torraco (2005) states that a review article should give an idea of potential areas where new knowledge may be needed, we have shared our comments on further research and managerial implications to contribute to the academicians and practitioners in the HR field.

4.Findings

As the first finding, it must be noted that although the beginning of 2000s are the most fruitful years for HR competencies in terms of academic publications, academicians interest on the topic has decreased, as shown in Google Ngram search with the keyword "human resource competencies".

A specific competency related to technology and social media exists only in the RBL Model. This competency is named in 2016 study of the RBL Group. But within three years, only 19 results appear when "technology and media integration" is searched through Google Scholar. Moreover, when the publication is gone through, it is seen that many of them only mentioned the competency and gave its definition. This finding shows that TMI competency still needs great attention. HR professionals' agenda is full of digital issues, but academic researches on HR competencies do not match with this agenda enough.

TMI competency in the RBL Model has two subdomains: Leverages social media and integrates technology. Even though Ulrich et al. (2017) imply that HR should be a facilitator in business technology and technological transformation of the work, "business technology" could not find a place in subdomains. However, as seen in the literature review, it is an obligation for HR to be aware of the business technology, to ensure that the organization leverages business technology at its best and to evolve HR politics and processes according to the new working style's requirements.

5.Conclusion and Discussions

This paper investigated the TMI competency in the RBL Model. It addressed the competency in detail in order to provide a more conceptual understanding of the competency and encourage further thinking on future research and managerial implications.

5.1.Further Research

In the RBL findings, it has been proven that TMI competency has a potential competitive advantage Hence, TMI competency deserves both academic and professional attention more. Therefore, for further research, we may suggest HR professionals' technology and social media usage more both in conceptual and empirical works.

Further researches can detail TMI competency into how and which factor of business performance is affected by which subdomain of TMI competency. For example, do HR professionals with high social media skills increase the company's performance in attracting essential employees? Or is it just related to employee relations of the organization? Do HR technologies matter for employees? Does the level of HR technology usage make sense in profitability? etc.

For future studies, especially in order to improve TMI competency, it is important to know individual or organizational differences affecting the TMI competency level. For example, are there any differences between HR roles in terms of TMI competency level? Are there any differences related to formal education or does it depend on only the personal interest of the HR professional? etc. Accordingly, programs for TMI competency improvement can be developed.

What we found missing in the RBL Model was a specific subdomain for "business technology". Although it is implied in the RBL model, we may suggest a further research and accordingly a revision if needed. To increase the importance given, a new subdomain for the model may appear: "Facilitates digital (or technological) transformation of the organization".

5.2.Managerial Implications

It can be easily said that TMI competency's potential competitive advantage has not been realized so far. In order to utilize this potential competitive advantage, organizations, especially HR managers should be aware of opportunities of technology and social media. They need to create an HR talent pool with a technology mindset first of all and equip them with technical skills. Moreover, HR is responsible for developing individual and organizational capabilities. There needs an urgent action to improve work-related technology knowledge of HR professionals as well.

Beyond using technologies and social media, HR must be very proactive in foreseeing the side effects of them. HR has an essential role in defining the boundaries and procedures to protect the company. Only this way, HR can create the promised competitive advantage out of this competency. We may suggest that HR professionals keep in mind "establishing strategies, policies, and procedures in order to leverage technology and social media" as a behavioural indicator of this competency.

Based on the interesting finding of the RBL's 2016 study, organizational capability, concerning technology and social media, is more valuable than individuals' competencies. It implies that HR executives should improve TMI competencies of each HR employees and focus on its reflection in HR's organizational capability.

In conclusion, understanding and effectively using technology and media integrator competency is an integral part of the success of all HR professionals. This competency's importance will increase due to new technological developments and its effect on work life. Even though there are many reasons for technology and social media usage, to reduce costs and administrative burden of HR professionals is the main reason. This approach reshapes the HR profession, therefore the need for HR professionals changes also. Soon, HR job descriptions and job specifications will contain technology more and more. It is clear that HR professionals need to closely monitor developments in both HR and business technology and social media as well. There needs to be personal development and corporate development opportunities for HR professionals. Perhaps, the most significant reminder for HR is that they should be the pioneer in using technology and social media to facilitate transformation in their organizations.

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LEADERSHIP AND INNOVATION MANAGEMENT

DOES FAMILY SUPPORTIVE ORGANIZATIONAL PERCEPTION (FSOP) HAVE A MODERATOR ROLE ON THE RELATIONSHIP BETWEEN WORK FAMILY CONFLICT AND COUNTERPRODUCTIVE WORK BEHAVIOR?[1]

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Abstract

Due to the increasing competition conditions, changing family structures and employee expectations, the work-family conflict has become one of the problems that human resources specialists should pay attention to in terms of organizational efficiency in two decades. Although several studies have been going on about the effects of work-family conflict over the employees' work outcomes, the studies on the relation between work-family conflict and counterproductive work behavior are still scary. In this relationship, the effect of family-supportive behaviors of organizations is a quite new concept. The study examines the relationship between work-family conflict, CWB and family supportive organizational perceptions of employees. Based on the work-home resources model and the current literature, the study suggests that family-supportive organizational perceptions of employees moderate the relationship between WFC and CWB. This conceptual study tries to contribute to the work-family domain theories considering the relationship between WFC and CWB.

Keywords: Counterproductive work behaviour, family-supportive organizational perception, work-family conflict

1.Introduction

In their lifetime, working people try to allocate their time between their work and family issues while fulfilling their roles. With the increasing number of women and single parents in the labor force, the differences in life values of young workers have changed the needs and expectations about the work as well as personal lives roles (Clark, 2000; Duxbury, Higgins, 2001; Mortazavi et al., 2009).

Even though technological improvements enable many jobs to be done in a fast manner, intense business competition is still increasing the pressure on working time and success. For this reason, between these two domains, the employees lose their work-life balance and feel the conflict between work and home-related issues. While a talented workforce generates a competitive advantage for organizations, work stress, which raises the work-family conflict and dissatisfaction, adversely affects the wellbeing of the employees and their work outcomes (Barbarach, 1991; Adams, 1996; Kossek & Özeki, 1998; Martins, 2002; Haar, 2004; Westring & Ryan, 2011).

It is stated that the work-family conflict may cause counterproductive work behavior, and it may reduce the productivity and efficiency of organizations. In terms of HR professionals and managers, in the workplace, it is generally difficult to notice such behaviors which will cost a great deal to the organizations. For instance, it has been revealed that employee thievery costs 15.1 billion dollars a year for retailers in the USA, same as employee fraud costs 2.1 million dollars for the organizations in Australia (Muafi, 2011; Sabir, Harge and Lewis, 2008). Moreover, employees who were exposed to counterproductive work behavior display a high level of stress, difficulty in concentration and decision making, turnover intention and exhaustion (Schat & Kelloway, 2000; Spector et. al, 2001; Taylor, 2012; Macovei, 2016).

Because of the negative outcomes of the relation between work-family conflict and counterproductive work behavior in both organizational and individual levels, the necessity of moderating this relationship has arisen. In this perspective in order to support the workforce, governments and organizations develop legal and internal practices to support employee needs. Some of these practices are; limiting the weekly working hours, flexible working hours, working from home, daycare centers at workplace and leave of absence with pay for families (Kim & Faerman; 2013).

[1] This study produced from the doctoral thesis of the first author

However, researches have shown that; in organizations, it is very difficult for employees to benefit from work family balance practices and reduce work-family conflict as long as the family's supportive understanding, norms and values do not develop in parallel with these practices (Kofodimos, 1995; Lobel & Kossek 1996; Andressal & Thompson, 2008) Therefore, it is important to create family-friendly environments that care about the work and life balance of the employees.

This study has been built on the theoretical framework of Work Home Resources Model. The work-home resource (W-HR) model defines gained resources as a process in one domain (work) relating to the success in the other domain (home) through the generation of various personal resources (e.g., time, energy) (Du, Ders and Bakker, 2018). In this regard, family-supportive organizational perspective is considered to be the contextual resource from work domain and suggests that family-supportive organizational perception (FSOP) will reduce the relation between work-family conflict (WFC) and counterproductive work behavior (CWB) (Collins & Greenhouse,2001; Ahmad & Omar 2013). The study of family-supportive organizational perception and effects on this relationship could contribute to the current organizational behavior researches and business world as well.

2.Literature Review and Theoretical Framework

2.1 Work Home Resource Model (W-HR)

Work Home Resource Model (W-HR Model) developed by Ten Brummelhuis and Bakker (2012) uses the pivotal hypotheses of COR (Hobfoll, 1989, 2002). W-HR model identifies; “Resources gained in one domain (e.g., work) may relate to the functioning in the other domain (e.g., home) through the generation of various personal resources (e.g., positive affect, energy, focus, attention)” (Rofcanin, et. al., 2018,154). In other words "The use of finite resources in one domain reduces the availability of these resources for use in the other domain" (Brotheridge & Lee 2015).

The central component of the work–home resource model is the concept of resources (Russo, 2015). Resources are “an asset that may be drawn on when needed to solve a problem or cope with a challenging situation” (Greenhaus & Powell, 2006, 80).W-HR model uses Hobfool's (2002) contextual resource (social contexts) and personal resource (personal traits) classification to examine work home enrichment and conflict processes.

According to the W-HR model, enrichment (gain resources) and conflict (loss spiral) are integrated with work family interface. While enrichment is a process of resource gain, conflict is a process which consumes the personal sources and obstructs the success in other domain (Ten Brummelhuis and Bakker, 2012; Du, Ders and Bakker 2018). W-HR model mediatizes work home resources.

2.2.Work-Family Conflict (WFC)

Work-family conflict is; “a form of inter-role conflict in which the role pressures from the work and family domains are mutually incompatible in some respect” (Greenhouse & Beutell,1985,77). The conflict perception presumes that individuals have limited time and energy to use on work and family roles. When the demand on role exceeds the time and energy supply, it results as a conflict (Parasuraman & Greenhaus, 2002).

When the conflict is from work to family, the work necessities obstruct and repress family necessities and on the other part it's vice versa. (Frone, Russell and Cooper, 1992; Carr et al.,2007; Mortavazi et al., 2009). This two-way relationship seems to be connected and shows similar features, but they are stated to have differences as well (Turunç, Fındıklı, 2015). Researchers (Pedersen et al., 2012; Frone, Russell and Cooper, 1992; Simon, Kümmerling and Hasselhorn, 2004) have suggested that the effect from work to family is higher than the effect from family to work.

Current work-family conflict findings indicate that, while extensive WFC decreases, employees work with satisfaction, and organizational commitment, work performance, on the other hand, increases turnover intention, job stress and anxiety (Netemeyer, Boles and McMurrian, 1996; Allen, et. al., 2000; Armstrong, Plunk and Wells; 2015)

Studies show that work-family conflict negatively effects both organizational and personal outcomes. For example, It has been found that work-family conflict decrease work satisfaction, organizational commitment, organizational citizenship behavior and increases the will to quit job, stress and anxiety (Netemeyer, Boles ve McMurrian, 1996; Allen et all 2000; Eby et al., 2005; Armstrong, Plunk and Wells 2015).

2.3.Work-Family Conflict (WFC) and Counterproductive Work Behaviour (CWB)

Counterproductive work behavior is one of the important negative results of work-family conflict. CWB has different descriptions and different labels in literature, such as relational behaviour (Skarlicki & Folger, 1997), deviance (Robinson and Bennett, 1995; Hollinger, 1986), organizational countercitizenship behaviour (Ball vd., 1994), antisocial behaviour (Giacalone & Greenberg, 1997; Kalyva,2011), abusive supervision (Tepper, 2000) (Doğan, 2018)

However, considering the common grounds of these different labels and descriptions, counterproductive work behaviour could be described as all of the actions like sabotage, corruption, theft, withdrawal, abuse, mobbing, aggression, that are performed in order to give damage to organization or organization shareholders (employees, customers or investors etc.) (Spector, 2001; Martind et al., 2002). In this perspective, the counterproductive work behavior turns up to be an umbrella concept that represents all kinds of negative and damaging work behaviors (Doğan, 2018).

These undesirable and negative behaviors have been studied individually by some researchers and in categories by the others. For example, Neuman and Baron (1998) have studied it under 3 factors as hostility, inhibition and open aggression, Spector and his friends (2006) have studied under 5 factors as sabotage, retreat, abuse, thievery, gossiping, Robbinson and Bennet (1995, 2000) did so under 4 factors as production deviation, property deviation, political deviation and aggression towards individual. Besides, counterproductive work behaviors could be intended for both organization and individual (Robinson & Bennett 2000, Sacket & Devore 2002, Landy & Conte 2013).

Researchers often used social exchange, reciprocity norms and COR theories to examine the relationship between work-family conflict and CWB. However, these theories have not clearly identified the process of how work and family interfere (Du, Ders and Bakker 2018**)**. The W-HR conflict process provides support to explain the relationship between work-family conflict and CWB. W-HR model claims that contextual demands (from work or family) would induce negative results for organizations by consuming personal resources (Bai, Lin and Wang 2016).

Current CWB studies have found that employees who do not experience work-family conflict tend to show beneficial behaviors to the organization, whereas employees who experience extensive work-family conflict tend to harm the organization (Ferguson et al., 2012; Abdulraheem 2014; Fapohunda 2014; Lasisi, et al 2014; Akanni, Oladejo and Oduaran, 2018). When employees perceive the reason for work-family conflict as excessive demands, policy, initiative using of the organization, employees could react with counterproductive behaviors like coming late to work, making less efforts, having breaks at work without permissions (Beauregard, 2014). Considering these findings we propose that;

P1: Work-family conflict effects counterproductive work behavior positively

2.4. Family Supportive Organizational Perception (FSOP)

Number of organizations that develop many family-friendly policies and applications in order for employees to acquire work-family balance, increase day after day (Kim & Faerman; 2013). However, as long as the organization and managers don't support the use of these practices, the required benefit can not be obtained (Thompson et al, 1999; Grandey, Cordeiro, Michael 2005). Even Lewis (1997) suggested that family-supportive policy and applications are the only artificials, what really matters is in values and assumptions under these artificials.

The essentially needed thing is the existence of a family-supportive work environment. The family-supportive work environment that accepts employee's having family responsibilities, and supports them to fulfill those, helps enabling balance between work and family (Lapierre et al., 2008) Family supportive organizational perception, one of the family-supportive work environment components, could be described as global perceptions of employees intended for family supportivity levels of their organizations (Allen, 2001; Lapierre et al., 2008) FSOP has emerged as the result of organizational support being differently conceptualized (Allard, Haas and Hwang, 2011). However, while there is a general attitude in organizational support, family-supportive organizational perception consists of a special attitude reaction towards that only organization supports the family (Thompson, 1999; Allen, 2001).

2.5 The Moderator Role of Family Supportive Organizational Perception (FSOP)

W-HR model can provide a theoretical framework for how family-supportive organizational perceptions would act as a contextual resource on the relationship between work-family conflict and counterproductive work behavior. The contextual resource derived from work domain (such as support), increases personal resources (energy, time) and these personal resources could create a positive effect for home domain. (Ten Brummelhuis and Bakker, 2012; Du, Ders and Bakker 2018 Hence, family-supportive organizational perception starts enrichment process (gain resource) from work domain to family domain.

Current researches show that family-supportive organizational perception improves positive emotions and positively effects family domain of the employees (Eby, Maher and Butts, 2009; Matias et al., 2017). And this enrichment process (gain resource) would decrease work-family conflicts. Also, the effect of FSOP on work-family conflict and CWB is also negative (Driscoll et al., 2003; Lapierre 2008; Allard, Haas and Hwang, 2011; Wayne et al., 2013). Besides, Tang, Siu and Cheung (2014) suggested that positive improvements in both work and family domain increase employees' efficiency and provide positive results in organizations.

Therefore, basing on the W-HR model, family-supportive organizational perception could define as a contextual resource to tampon the positive sided relationship between work-family conflict and counterproductive work behavior and could decrease this relationship. In light of this literature, the following is proposed;

P2: FSOP moderates the relationship between WFC and CWB

3.Research Method

Building on the findings of previous research and W-HR Model a moderator model developed

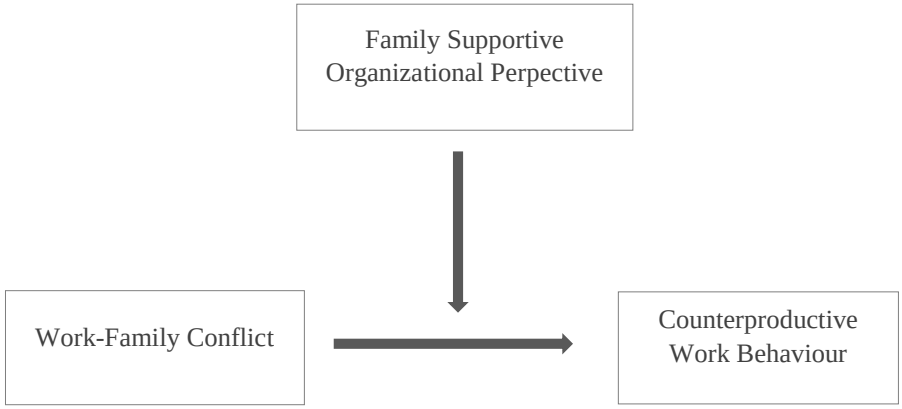


Figure 01: Proposed model

4.Findings

Within the study, the concepts "work-family conflict", "work-family balance", " counterproductive work behaviour", "CWB", "deviance", "family-supportive organizational perception" have been scanned in Ebscohorst, Emerald İnsight, Science Direct, Scopus, Elsevier, Taylor&Francis Group, Wiley Open Library, Google Scholar databases. As a result of the literature scan, only a few studies that investigate the relation between WFC and CWB have been discovered. Current studies are demonstrated on the below table.

Table 01: An overview of research on the relation between work family conflict and CWB

Author (s) / Year	Variable	Finding
Darrat, M., Amyx, D., & Bennett, R. (2010).	WFC, Job satisfaction, Deviance	Work-Family conflict is positively related to CWB

Ferguson, M., Carlson, D., Hunter, E.M., Whitten, D. (2012).	WFC, Deviance	Work-Family conflict is positively associated with cwb
Ahmad A., Omar. Z. (2013).	Abusive supervision, Deviant Workplace Behaviour, WFC	Work-Family conflict is related to cwb
Beauregard, T.A. (2014).	WIB Inıtıatives, CWB	Fairness perceptions of partially wıb İnitiatives are negatively related to cwb
Mercado, B.K., Dilchert, S.(2017).	Family interference with work organizational citizenship, CWB	FIW higer related to cwb than ocb
Akanni, A.A., Olayinka, E.O., Oduaran, C.A. (2018).	Work-life balance, job insecurity and CWB	Work-family conflict is positively related to cwb
Morgan, W.B, Perry, S.J, Wang, Y. (2018).	Leadership style, WFC, Deviance	Work-family resentment mediates the relation between WIF and organizational deviance, Leadership style is a moderator in model of work-family conflict and deviance.
Selvarajan T.T., Singh B., Cloninger, P.A., Misra, K. (2019).	Regulatory focus, WFC, CWB, Affect	Work–family conflict is positively related to cwb and regulatory focus moderates the relationship between work-family conflict and CWB

On the other hand, no studies that investigate the relation of family supportive organizational perception and CWB have been observed. Although no studies investigating the relationship between CWB and FSOP, Lynn and Gieter (2017) examined the relationship between WFC, CWB and family supportive supervisor behavior. As a result of research, FSSB plays a moderate role on the relationship between WFC and CWB (Lynn & Gieter, 2017)

5.Conclusion and Discussions

Counterproductive work behavior, one of the behavioral consequences of work-family conflict which has become a common problem of organizations. Therefore, both the determination of theoretical boundaries and the investigation of the variables that will moderate the relationship between work-family conflict and counterproductive work behavior, which cause negative organizational outcomes, emerges.

In this study, suggested that family-supportive organizational perception, one of the components of the family-supportive work environment, can change the relationship between WFC and CWB using W-HR model. When FSOP is accepted as a contextual resource deriving from work area, It could be used to positively effect home and work results. An employee that perceives the family supportivity of organization, could develop a positive attitude towards the organization and this positive attitude is reflected to both family (Lawson, et al., 2014) and organizational outcomes (turnover intention, job performance) (Rofcanin et al., 2018) In this regard, the study claim that FSOP could increase personal resources and effect and decrease the level of relationship between work-family conflict of employees and counterproductive work behavior. It is considered that the suggested that testing the model with quantitative research could contribute to the literature.

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THE EFFECTS OF PERCEIVED ORGANIZATIONAL CLIMATE ON EMPLOYEE'S ORGANIZATIONAL COMMITMENT IN TEXTILE INDUSTRY FIRMS IN TURKEY

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Abstract

The main goal of this study is to understand the effects of employees' perceived organizational climate on employees' organizational commitment in textile industry firms in Turkey. A survey was conducted on 423 people working in the textile sector. A questionnaire made up of Organizational Climate Scale (Stringer, 2002), Organizational Commitment Scale (Allen et al., 1993) and sociodemographic questions was used. The data were analyzed with SPSS program. The results showed a positive and statistically significant relationship between the perceived organizational climate and employees' organizational commitment. There was no links between organizational climate and responsibility dimension of organizational commitment. Based on these findings, recommendations for academicians and professionals are presented in detail in the conclusion chapter.

Keywords: Organizational climate, organizational commitment, textile industry

1.Introduction

With the first industrial revolution in the 18th century, using modern production methods in the textile industry led to huge increases in the mechanized production of textiles. This development naturally supported the development of a more comprehensive supply chain, leading to the emergence of large corporations with large capital, employing a large number of people in the textile industry. Nowadays, each and every organization that engages in any activity must create value in order to compete. The concept of value creation is described as the ability of an organization to meet the needs of its stakeholders. Value created by industries are directly related to the quality of the masses employed by their particular organizations. Becoming aware of the fact that human resources is one of the most effective organizational resources there is to create value to compete in highly competitive and innovative global markets has led to more research being conducted on organizational members and membership.

Due to high labor turnover rate in the textile industry, employee commitment has been an important issue for decades. Low employee commitment creates significant long-term losses for companies, resulting in reduced organizational effectiveness. Therefore, increasing employee commitment will contribute to the industry in terms of productivity and creativity. In order to be able to preserve the values created by industries and create new values such as innovation, it is important that especially highly-educated and qualified members stay in the organizations for a relatively long time so that the organizations themselves and the national economy do not suffer any economic losses due to lower total factor productivity.

We hypothesized that employees' commitment to the organizations depend, at least partially, on how they perceive the organizational climate. To test this hypothesis, this study aimed to determine the effects of organizational climate perceived by Turkish textile employees on their organizational commitment, thereby investigating the relationship between organizational climate and organizational commitment. By examining this relationship, the present study intended to provide reference information to the textile industry firms that can be used towards finding a solution to high labor turnover and managerial issues in the textile industry, and at the same time contribute to other academic studies in this area. In today's world, the textile industry has a pivotal role in boosting national economies in general, and the Turkish economy in particular. It is therefore important to assess the current situation of the industry from an organizational point of view and identify and resolve the areas open for improvement for the growth of the industry.

2.Literature Review and Theoretical Framework

2.1.Organizational Climate

Organizational climate was first coined in the 1930s and appeared in the literature in the 1960s. Researchers investigating organizational climate have attempted to define this concept, focusing on a number of different factors including Individual Perception, Psychological Climate, Climate Discrepancy, and Job Satisfaction. Issues related to these factors can be examined under the definition of organizational climate (Arslan, 2004, 204). Halpin and Croft (1962), Likert (1967), Litwin and Stringer (1968), Forehand (1968), Campell, Dunnette, Lawler and Weick (1970), and Taugiri (1968) have sought to define this term (Alay, 2016, 6). Climate definitions of Isaksen (2001) and Bowen et al. (1997) can also be found in the literature. In the national academic community, Ertekin (1978), Öge (2001), Karcıoğlu (2001), Arslan (2004), Günay et al. (2017), and Yayhagil (2006) have suggested definitions for organizational climate. According to Litwin and Stringer(1968) climate concept is defined as a group of environmental characteristics, expectations and motives perceived directly or indirectly by the individuals. Erhart(2014) definition of organizational climate is a relatively enduring characteristic of the internal environment of an organization which is experienced by its members, affects the behaviors of its members and explained as a value of a specific set of at- tributes or features of the environment.

Climate is a concept that has its roots in psychology (Lippit and White, 1939; Lewin, 1951; Likert, 1961; Barker, 1965). In his field theory, Lewin describes behavior as a function of the interaction of environment with person, which had an important influence on the development of climate research (Lewin, 1935, 1951). Despite a long history and relatively widespread theory-based organizational climate research, it has been difficult to precisely define the concept of organizational climate. From a general perspective, organizational climate studies are focused on employee perceptions, and organizational climate has been defined as "shared perceptions of formal and informal organizational policies, practices, and procedures" (Carr, Schmidt, Ford and DeShon, 2003, 605; Reichers and Schneider, 1990; cited by Schneider and Barbera, 2014, 29). Organizational climate is a multidimensional concept, determined by many factors acting jointly or separately (Arslan and Halis, 2012, 76). A review of organizational climate literature reveals that some dimensions such as motivation, innovation, leadership, control, conflict have been addressed by many researchers, while some other dimensions have been covered by only one or a few authors. In his 1961 study where he comparatively analyzed authoritarian and participative leadership models, Likert used six dimensions to study organizational climate: decisions, goals, motivation, communication, leadership and control. Gilmer and Forehand proposed, in their 1964 study, that five dimensions of an organization played an important role in determining organizational climate. These five dimensions are the size and shape, goal directions, leadership patterns, communication networks, and decision-making procedures of an organization. In 1966, Halpin and Croft conducted their organizational climate study from a behavioral aspect, classifying the organizational climate studies in two groups as managers and workers. According to them, the behavioral characteristics of principals were aloofness, production emphasis, trust and consideration, with the behavioral characteristics of workers being disagreement, hindrance, esprit and intimacy (Dönmez, 2009, 45).

As a result of the studies carried out under the leadership of Litwin and Stringer in 1968, the organizational climate dimensions and their explanations have become the most widely used measurement and assessment tool in this field. The focus of these studies has not been the "structure" and "process" of the organization in question but the "people working in the organization", "perceptions of individuals" and "how such perceptions affected behavior" (Önen, 2008, 27-28). Based on a review of relevant literature, they started with eight conceptual orientations or climate-related dimensions, asking the managers to define their working environment in an open-ended manner and to divide the themes emerging from open-ended data into eight proposed dimensions. As a result, they gave up one dimension, merged two dimensions and decided on six dimensions (Ehrhart et al. 2014, 39). In 1970, Campbell and colleagues reviewed the important studies on organizational climate in the literature and concluded that there were four shared dimensions. These dimensions are individual autonomy, respect, warmth and support, and position structure and reward orientation (Ertekin, 1978, 22). Moreover, in 1996, Schneider et al. addressed the dimensions of organizational climate under four main headings, the first three of which related to the functioning of the organization and the fourth to the goals of the organization. These headings are nature of interpersonal relationships, nature of hierarchy, nature of work, and focus of support and reward.

The study discussed here is based on the organizational climate dimensions defined by Litwin and Stringer. The six organizational climate dimensions of Litwin and Stringer are clarity, standards, responsibilities, flexibility, rewards, and team commitment. Clarity is about employees' understanding of what is expected of them and how their efforts relate to the overall organizational goals. Standards is about the perceptions related to the management's focus on improving performance, the degree of setting challenging but attainable goals, and understanding which mediocrity is not tolerated. Responsibilities is about the perceptions related to the employee feeling that he is fully in possession of the powers assigned to him, his ability to do his job without any control and supervision, and his full responsibility for the results. Flexibility is about the perceptions related to the employee's perception of unnecessary organizational rules and procedures, and how easily new ideas are accepted. Rewards is about the perceptions related to the recognition of the employee for his performance and this recognition is all about his performance. Team Commitment is about the perceptions related to the employee taking and expressing pride in being a part of the organization, each employee's confidence that they are working towards a common goal, and their perceptions of a positive cooperation between organizational structures when necessary (Permarupan et al. 2013, 90).

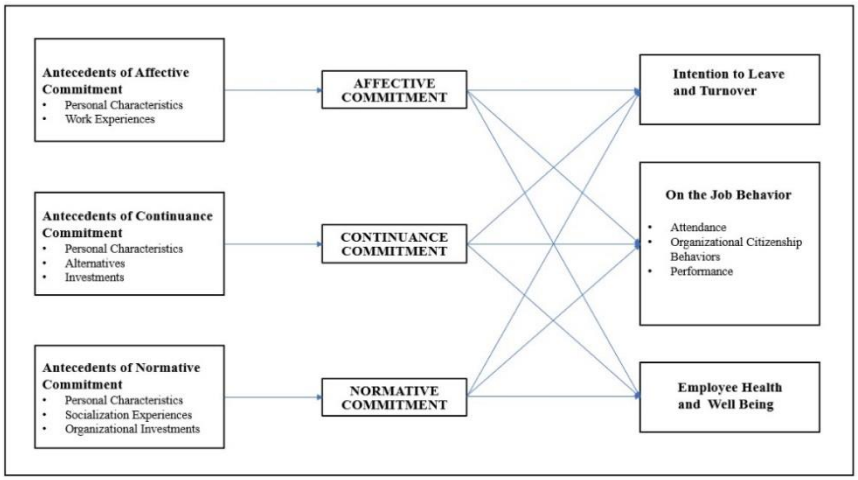
2.2.Organizational Commitment

Organizational commitment is one of the most widely researched topics in the field of organizational behavior (Hanaysha, 2016, 289). Previous studies have defined the concept of organizational commitment in many different ways. These definitions share a common view that they regard organizational commitment as a condition that connects and relates members of organizations with the organizations they work for (Tayyah and Tariq, 2001, 31; cited by Gürkan, 2016, 8). William H. Whyte's book "Organizational Man", published in 1956, is the first published book in the literature on this topic. In this book, Whyte describes an organizational man not only as a person working for the organization, but also as a part of it and as an individual of it. According to this book, the members of an organization are the source of creativity for that organization and the sense of belonging is a basic and ultimate human need (Randall, 1987, 460). Whyte's book created a new trend in the area of organizational behavior, resulting in extensive research on commitment, based on the assumption that high level of commitment is useful for organizations (Randall, 1987, 460). When organizational commitment is achieved, it is expected to have a wide range of positive outcomes (Hanaysha, 2016, 289). Even though there is no universally agreed-upon definition of organizational commitment among researchers and academicians working on this subject (Güler et al. 2012, 23), the general consensus is that sense of commitment ties the individual to the organization (Allen and Meyer, 1997, 13). In this regard, organizational commitment can be defined as the bond felt by an employee and the strength of this bond, rather than the employee's satisfaction with his job (Güler, et al. 2012, 23).

In management and organization literature, the concept of organizational commitment is defined with various dimensions and meanings (Korkmaz and Erdogan, 2014, 545). Mayer and Schoorman (1992) examined organizational commitment in two dimensions, value commitment and continuance commitment; while Jaros et al. (1993) studied organizational commitment in three dimensions, namely, affective commitment, continuation commitment and moral commitment (Korkmaz and Erdogan, 2014, 545). In 1987, Randall's organizational commitment survey examined the levels of commitment and the positive and negative aspects of these levels for the organization and its members. The research classified organizational commitment as low-level commitment, medium-level commitment and high-level commitment in terms of the degree of commitment (Koç, 2009, 205). After evaluating the results from all the research, Meyer and Allen (1987) discussed, in their academic study, organizational commitment as a three-dimensional structure involving affective commitment, continuance commitment and normative commitment (Meyer and Allen, 1987). The study discussed here is based on Allen and Meyer's organizational commitment dimensions. Meyer and Allen (1991) stated that the common and variable definitions of organizational commitment are those that argue that it is a psychological condition "(a) that characterize the relationship of the member with the organization and (b) that affects the decision of the organization to continue its membership. Therefore, regardless of definition, "committed" members of organizations are more likely to remain in the organization than "uncommitted" members (Meyer and Allen, 1997, 11). According to Meyer and Allen, the attitudinal commitment approach is a psychological condition that reflects the relationship between organization members and the organization and is characterized by the behavior of organization members in organizations (Meyer et al., 1993, 538-551). Although the literature contains different conceptualizations of attitudinal commitment, all these conceptualizations reflect one of three main

themes: affective attachment, perceived cost and obligation (Meyer & Allen, 1987; cited by Meyer and Allen, 1990, 2).

Figure 01. Three-Dimensional Organizational Commitment Model



Source: İnce, M. and Gül, H. (2005). A New Paradigm in Management: Organizational Commitment , p.39, Çizgi Publishing House, Konya.

In the commitment model developed by Meyer and Allen, the three main themes mentioned above were transformed into approaches and named as affective commitment, continuance commitment and normative commitment. Members of an organization with affective commitment stay in the organization because they want, members with continuance commitment because they need to stay, and members with normative commitment because they feel they should do so (Meyer and Allen, 1990, 3). *Affective Commitment* means the employee's emotional attachment to, identification with, and involvement in the organization. Members of an organization with strong affective commitment continue to stay in the organization because they want to do so. *Continuance Commitment* means the awareness associated with leaving the organization. Members of an organization whose most important attachment with the organization is based on continuance commitment stay there because they feel they have to do so. *Normative Commitment* means feeling the need to stay in the organization. Members of and organization with a high level of commitment based on rules feel that they have to stay in the organization (Meyer and Allen, 1997, 11).

Naturally, members of an organization can experience each of these psychological commitment conditions by varying degrees (Meyer and Allen, 1990, 4). For example, a particular member of an organization may feel strong commitment and an obligation to say in the organization, while another member may enjoy working for the organization, but may also agree that it would be very difficult to leave from an economical standpoint. Finally, a third member of the organization may feel a noteworthy desire, need and obligation to stay in his current organization. As a result, understanding the relationship of members with the organization more clearly by considering the power of the three dimensions of commitment together is a superior approach (Meyer and Allen, 1997, 13). The net commitment of a member to the organization reflects each of these separable psychological states (Meyer and Allen, 1990, 4). The advantage of recognizing the existence of different forms of organizational commitment is defined with findings resulting from their distinctive relationships with work-related behaviors, such as absenteeism, job performance and citizenship behaviors. The three-component conceptualization model provides guidance in accepting the multidimensional nature of commitment, thus is used to guide the understanding towards the tools for the development, outcomes and management of organizational commitment. (Meyer and Allen, 1997, 13).

2.3.Development of Hypotheses

Several studies performed in a variety of organizational settings (e.g., manufacturing, textile, telecommunication, health, and higher education industries) from all around the world (Australia, Malaysia, Pakistan, Turkey) found a positive correlation between organizational climate and organizational commitment McMurray et al. (2004), Iqbal(2008), Noordin (2010), Permarupan(2013), Hanaysha (2016),Deniz and Çoban (2016), Köse and

Bal(2018), Yüceler (2005), Gürkan(2006), İlleez(2012), Yüksekbilgili(2018), Şerifoğlu(2018). Particularly for Turkey, a number of studies investigated the relationship between organizational climate and organizational commitment for several industries(e.g., manufacturing, hospitality, health, education, higher education industries); however, there is still a lack of in-depth analysis of the relationship between the sub-dimensions of organizational climate and organizational commitment, especially in the Turkish textile industry. The study discussed here aimed to fill these remaining gaps and address all sub-dimensions of organizational climate while investigating the relationship between organizational climate and organizational commitment in the Turkish textile industry. The main hypothesis of the study is as follows.

Main Hypothesis:

H1: *Perceived organizational climate has a significant and positive impact on organizational commitment.*

Sub-hypotheses:

Hypotheses on the Relationship Between Organizational Structure Subdimension and Organizational Commitment

H_{1a} Organizational structure subdimension has a direct and positive impact on the organizational commitment of employees.

H_{1b} Organizational structure subdimension has a direct and positive impact on affective commitment.

H_{1c} Organizational structure subdimension has a direct and positive impact on continuance commitment.

H_{1d} Organizational structure subdimension has a direct and positive impact on normative commitment.

Hypotheses on the Relationship Between Responsibility Subdimension and Organizational Commitment

H_{1e} Responsibility subdimension has a direct and positive impact on the organizational commitment of employees.

H_{1f} Responsibility subdimension has a direct and positive impact on affective commitment.

H_{1g} Responsibility subdimension has a direct and positive impact on continuance commitment.

H_{1h} Responsibility subdimension has a direct and positive impact on normative commitment.

Hypotheses on the Relationship Between Recognition Subdimension and Organizational Commitment

H_{1i} Recognition subdimension has a direct and positive impact on the organizational commitment of employees.

H_{1j} Recognition subdimension has a direct and positive impact on affective commitment.

H_{1k} Recognition subdimension has a direct and positive impact on continuance commitment.

H_{1l} Recognition subdimension has a direct and positive impact on normative commitment.

Hypotheses on the Relationship Between Support Subdimension and Organizational Commitment

H_{1m} Support subdimension has a direct and positive impact on the organizational commitment of employees.

H_{1n} Support subdimension has a direct and positive impact on affective commitment.

H_{1o} Support subdimension has a direct and positive impact on continuance commitment.

H_{1p} Support subdimension has a direct and positive impact on normative commitment.

Hypotheses on the Relationship Between Standards Subdimension and Organizational Commitment

H_{1r} Standards subdimension has a direct and positive impact on the organizational commitment of employees.

H_{1s} Standards subdimension has a direct and positive impact on affective commitment.

H_{1u} Standards subdimension has a direct and positive impact on continuance commitment.

H_{1v} Standards subdimension has a direct and positive impact on normative commitment.

Hypotheses on the Relationship Between Perceived Organizational Climate and the Subdimensions of Organizational Commitment

H_{1x} Perceived organizational climate has a direct and positive impact on affective commitment subdimension of organizational commitment.

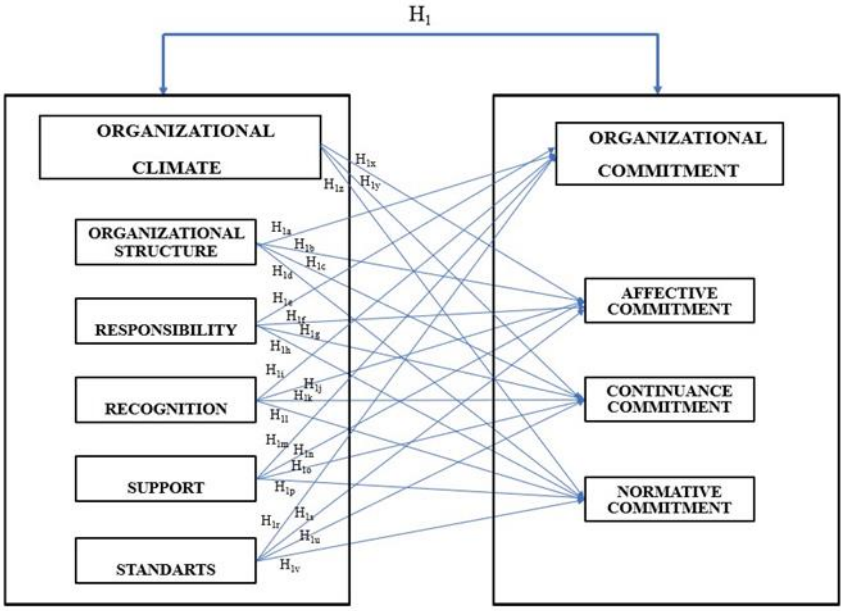
H_{1y} Perceived organizational climate has a direct and positive impact on continuance commitment subdimension of organizational commitment.

H_{1z} Perceived organizational climate organizational has a direct and positive impact on normative commitment subdimension of organizational commitment.

Research Model

The following model has been designed in order to establish the relationship between organizational climate and organizational commitment.

Figure 02. Research Model



3.Research Method

3.1.Research Goal

The main purpose of this research is to determine the effects of organizational climate perceived by Turkish textile industry employees on their organizational commitment. The study seeks answers to the question of how organizational commitments of employees can be achieved and/or improved through changes in the organizational climate. To address this purpose, the study examines organizational climate in five dimensions (organizational structure, responsibility, recognition, support, standards), determines the employees' perceptions about the organizational climate to find out their impact on their organizational commitment, and, by doing so, analyzes the relationship between organizational commitment and organizational climate within the scope of employees in organizations conducting operations in different areas and segments of the Turkish textile industry.

3.2.Methodology

A survey method was adopted in this present study. Organizational Climate Scale developed by Litwin and Stringer in 1968 and updated by Stringer in 2002 was used in this research. The last version of the scale which was updated by Stringer in 2002 consists of 6 sub-dimensions and 24 expressions in total. The sub-dimensions are; organizational structure, responsibility, recognition, support, standards, and commitment. Each sub-dimension in the scale is measured with 4 expressions (Stringer, 2002, 64). For this study, the commitment dimension was removed as we planned to measure its impact on organizational commitment using a separate scale. This research also used the Organizational Commitment Scale developed by Allen and Meyer (1990, 1-18), updated by Allen, Meyer and Smith (1993, 538-551) and translated by Wasti (2000, 401-410), which uses 18 items to measure three dimensions(Affective Commitment, Continuance Commitment and Normative Commitment). The survey form developed for data collection was designed as a 5-point Likert scale. The choices for evaluating the answers in the survey were as follows: (1) Strongly disagree, (2) Disagree, (3) Neither agree nor disagree, (4) Agree, (5) Strongly agree. Opting for the survey method allowed us to be able to reach textile industry employees all around Turkey and to effectively gather data. The data obtained from the study were analyzed using the SPSS 22.0 program. First, the reliability and normality of the scale and its dimensions were tested in the study. Correlation and regression methods were used to determine the relationship between organizational climate and organizational commitment.

3.3.Sample and Data Collection

The universe of the survey comprised of the employees of medium and large-scale companies based in different Turkish cities. Regardless of their areas, a questionnaire was conducted on 423 employees working actively in different regions of Turkey in the Turkish textile industry between February 2019 and March 2019. A pilot study was conducted before the survey forms were distributed to all organizations. Online survey forms were delivered after talking in advance with the executives of 10 companies, with 59 participants. One of them was considered invalid because the survey form was incomplete, and validity and reliability analyzes were performed over the remaining 58 survey forms. The results of this analysis found the reliability of organizational climate scale to be 83% and the reliability of organizational commitment scale 81.5%. The questionnaire was then delivered to a larger sample population, making sure they were completed within a month period. Interviews were made with the relevant departments of 38 companies and they were requested to complete the survey online, with 423 feedbacks from 36 volunteering companies. Two of the companies to whom we sent the survey did not complete the survey due to their Human Resources Policies. A total of 423 surveys were completed. 7 of them were incomplete, so they were considered invalid and excluded from the analysis. The number of surveys analyzed was 416.

4.Findings

4.1.Reliability and Normality Tests of Scales Used in the Survey

This section of the study demonstrates the normality and reliability test results of organizational commitment and organizational climate scales and dimensions.

Table 1 shows the reliability of the organizational climate and organizational commitment scales and dimensions used in the study. A review of the reliability test results shows that the organizational climate and organizational commitment scales and dimensions used in this study are "reliable" (> .70).

Table 01. Reliability of the Scales and Dimensions Used in the Study

Scales and Dimensions	**Item Number**	**Cronbach's Alpha**
Organizational Commitment	18	.840
Affective Commitment	*6*	*.847*
Continuance Commitment	*6*	*.820*
Normative Commitment	*6*	*.776*
Organizational Climate	20	.813
Recognition	*4*	.797
Support	*4*	.704
Organizational Structure	*4*	.705
Responsibility	*4*	.725
Standards	*4*	.789

Table 2 shows the descriptive statistics of the scales and dimensions of the organizational climate and organizational commitment scales of survey participants. "Affective Commitment" has the highest average of organizational commitment dimensions. Moreover, "Standards" has the highest average of organizational climate dimensions.

The scale is normally distributed and parametric tests should be used according to George and Mallery (2010) if skewness and kurtosis values are between +2.0 and -2.0, and according to Tabachnick and Fidell (2013) if skewness and kurtosis values are between +1.5 and -1.5 (cited by Eygü, 2018, 844). Since the skewness and kurtosis values of the organizational climate and organizational commitment scales used in the study were between +1.5 and -1.5, one-way Anova variance and two independent group T-tests were used in the study.

Table 02. Descriptive Statistics of the Scales and Dimensions Used in the Study

Scales	**N**	**Average**	**St. Deviation**	**Skewness**	**Kurtosis**
Organizational Commitment	416	3,2151	,55773	-,614	,376
Affective Commitment	416	3,4980	,82079	-,554	,162
Continuance Commitment	416	2,9391	,51630	-,190	,026
Normative Commitment	416	3,2083	,72209	-,462	-,027
Organizational Climate	416	3,1553	,48733	-,364	,104
Recognition	416	2,8059	,86552	-,120	-,624
Support	416	3,2734	,76632	-,396	-,047
Organizational Structure	416	3,0925	,77450	-,363	-,171
Responsibility	416	2,9453	,51471	-,105	,040
Standards	416	3,5120	,60258	-,627	,648

4.2.The Relationship between Organizational Commitment and Perceived Organizational Climate

This section of the study demonstrated the interactions between Organizational Commitment and Perceived Organizational Climate using correlation and regression analysis.

The relationship between organizational commitment and organizational climate perception was tested using correlation analysis in Table 3. As a result of the analyses, a positive and statistically significant ($p < 0.01$) relationship was found between the organizational commitment scale and its dimensions and organizational climate and its dimensions. In other words, the higher the perceived positive organizational climate, the higher the perceived organizational commitment. However, there is no statistically significant relationship between

organizational commitment scale and its dimensions and responsibility, an organizational climate dimension. The results indicate that all hypotheses, except for the H_{1e}, H_{1f}, H_{1g}, H_{1h}, are supported.

Table 03. The Relationship between Organizational Commitment and Perceived Organizational Climate

	Organizational Commitment	**Affective Commitment**	**Continuance Commitment**	**Normative Commitment**
Organizational Climate	,614**	,610**	,237**	,561**
	,000	,000	,000	,000
Recognition	,577**	,571**	,204**	,543**
	,000	,000	,000	,000
Support	,448**	,485**	,139**	,387**
	,000	,000	,005	,000
Organizational Structure	,442**	,439**	,150**	,418**
	,000	,000	,002	,000
Responsibility	,062	,083	,012	,040
	,210	,089	,813	,420
Standards	,411**	,364**	,272**	,345**
	,000	,000	,000	,000

Table 4 shows the impact of organizational climate on organizational commitment using regression analysis. As a result of the developed model, it was seen that organizational climate has an impact on organizational commitment. In other words, the higher the perceived positive organizational climate, the higher the perceived organizational commitment. Organizational climate accounts for 37.6% of the changes in organizational commitment.

Table 04. The Impact of Organizational Climate on Organizational Commitment

Model Dependent Variable: Organizational Commitment	**Unstandardized Coefficients**		**Standardized Coefficients**	**T**	**P**
	B	**Std.Error**	**Beta**		
(Constant)	,996	,142		7,033	,000
Organizational Climate	,703	,044	,614	15,845	**,000**
P	0,000				
F	251,068				
Durbin-Watson	1,804				
Adjusted R^2	0,376				

5.Conclusion and Discussions

This research examined how the perceived organizational climate of Turkish textile industry affects employees' organizational commitment behavior and sought answers to the question of how organizational commitments of employees can be achieved and/or improved through changes in the organizational climate. Organizations first need to survive and then improve their sustainability and innovation performance adapting to the changing characteristics of the society in order to manage varying supply towards the integration of the textile industry, which is one of the driving forces of Turkey in terms of export, production volume and employment, to global supply chains. Organizational commitment of members is necessary in order to effectively utilize the workforce of the members of the organization who strategically structure and functionally conduct all organizational operations.

Many researchers analyzed the effects of organizational climate on organizational commitment. The common finding of Yüceler (2005), Gürkan (2006), İlleez (2012), Şerifoğlu (2018) in Turkey and Iqbal (2008), Noordin

et al. (2010), Permarupan (2013) and Bahrami et al. (2016) internationally is that there is a positive relationship between organizational climate and organizational commitment. This is consistent with the results of the present research study, which is also in line with the results ofnoord's 2004 study on the manufacturing industry in Australia and Deniz and Çoban's 2016 study in Malatya. Deniz and Çoban (2016) and Yüksekbilgili (2018) found a moderate relationship between organizational climate perception and organizational commitment behaviors. The research model developed shows that most of the organizational climate and organizational climate sub-dimensions have an impact on organizational commitment. In other words, the higher the perceived positive organizational climate of members of the organization, the stronger the organizational commitment. Organizational climate accounts for 37.6% of the changes in organizational commitment. Therefore, in order to increase employee commitment and create sustainable and innovative organizations, the organizational climates need to be improved. In the literature studies, unlike our study, a correlation was found between all sub-dimensions of organizational climate and organizational commitment. In this study, the result dissimilar to the findings of other studies is the lack of a statistically significant relationship between one of the organizational climate sub dimension and organizational commitment among textile industry employees. It is seen that the responsibility subdimension and organizational commitments of members in the sample population did not improve. This important result of the study provides a new field of study for researchers who want to work on the effects of organizational climate on organizational commitment.

Studies by industries analyzing the direct effects of organizational commitment were made in industries including health, tourism, education and banking, however no studies were found specifically addressing the Turkish textile industry. This present study was conducted in the textile industry, which is one of the industries known to have the highest labor turnover rate among other Turkish industries. It is known that people who exhibit an organizational commitment behavior fulfill their duties more effectively by respecting the organizational values and stay in the organization for longer period. In line with this finding, the development of improvement models to reduce employee turnover opens a new field of study for researchers. Analyses were made on a single industry basis, and a large and comprehensive sample of 416 people in order to increase the generalizability of the results of this research for other industries. The findings were obtained from a sample population that was predominantly (90.3%) and closely consistent with the statistics of people in the workforce and was part of the generations X and Y. In this context, a new field has been opened for researchers to examine the effects of the relations of textile organizations with perceived organizational climates and organizational commitment on the sustainability of organizations in the industry through the current employment profile. Also, academicians wishing to do research in this area in the future are advised to work innovation dimension of organizational commitment and organizational climate.

Establishing a strategic roadmap for improving the organizational climate and ensuring organizational commitment of the employees is of great importance for the growth and successful development of the Turkish textile industry. Organizational climate and organizational commitment studies in the industry and the direction of the relationship between these two variables will provide a baseline and guide the development of the industry on this roadmap.

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THE IMPACT OF SUCCESSFUL MANAGEMENT OF THE IDEA-TO-PRODUCT PROCESS ON THE SUCCESS OF NEW PRODUCT DEVELOPMENT IN THE PHARMACEUTICAL INDUSTRY

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Abstract

Increase in world population, changes in disease burdens, creation of new treatment methods, growing interests and quality expectations are enhanced the need and demand for health services and medicine. However, developing original medicines is a challenging and expensive process. For that reason, generally generic drug development activities are carried out in Turkey. On the other hand, technological infrastructure of pharmaceutical industry in Turkey has been strengthened by making the necessary investments in the "Good Manufacturing Practice" framework, which is determined by the World Health Organization. Therefore, the sector has reached a comparable technological level with European countries and nowadays become an important and growing market position. In this study, to examine the process from idea to launch, Abdi İbrahim Pharmaceutical Company's new product development model has been selected and the steps of the model have been defined. Main aim is to examine and evaluate the impact of successful management of the model on the success of new product development which depends on reliability, quality, efficiency, sustainability and profitability. Study revealed that the success of new product development highly depends on not only the effective management of the process but the interdepartmental integration and the value attached to information technologies.

Keywords: New product development, management, pharmaceutical sector

1.Introduction

Medication is a basic health-related product used in the treatment, prevention, or diagnosis of diseases and is subject to extensive research and strict controls prior to its launch and approval by authorized parties. New drugs based on a patented molecule that has never been considered before are regarded as "original (reference) drugs". On the other hand, "generic drug" refers to products that have the same pharmacological properties as the original drugs and that have been proven by scientific studies to provide the same treatment and can only be introduced after the patent expiry of the original drugs. Cristancho et al. (2015) stated that, in today's world over the half of total pharmaceutical products is represented by generic pharmaceutical products. Although proportions can vary by region and country (Gorokhovich et al., 2013), it is known that generic drugs are cheaper in the market due to being much less costly than the original drugs, as well as being beneficial to society and economy in terms of easy accessibility, increasing investment and employment.

Shah (2004) stated that the pharmaceutical supply chain used to be seen as a tool to supply products to market in an effective way however rapid changes in the markets directly changes the business models. Therefore, companies should determine new ways of extracting additional advantages so supply chain in the pharmaceutical sector cannot be considered as a simple process distribution. Companies should focus on a value-chain perspective to manage innovation and development. The value chain of the pharmaceutical sector covers the process from production to sale of the drug (Pharmaceutical Research and Manufacturers of America, 2007). During this process, there are several steps such as obtaining the license of the drug following the R&D activities, production, delivering the new drug to the customer through marketing and entering the market in large quantities using sales / distribution channels if positive feedback is received. However, in order to produce both original and generic drugs, R&D activities is the most important part of the value chain and should be given importance since highest added value and the most costly activities are R&D activities. Additionally, context of the pharmaceutical industry changes day by day because of the shortening of patent life periods, generic competition and public health policies (Sousa, 2011) thus the importance of R&D activities increase day by day.

New product concept; is a very comprehensive term that includes the original product, the improved product, the modified product. Regardless of the type, developing new products is a long-term and risky process for the company. The success of new products in pharmaceutical production depends on reliability, quality, efficiency, sustainability and profitability. In this study, to examine the process from idea to launch, Abdi İbrahim Pharmaceutical Company's model "Efficient Management of from Idea to Launch Process" has been selected and the steps of the model have been defined (Abdi Ibrahim, 2016a, 2016b). Main aim is to examine and evaluate the impact of successful management of the idea-to-product process on the success of new product development. Study revealed that the success of new product development in the pharmaceutical sector highly depends on not only the effective management of the process but also the interdepartmental integration and the value attached to information technologies.

2.Literature Review and Theoretical Framework

2.1.New Product Development in Pharmaceutical Sector

In pharmaceutical sector new product development is considered as a common strategy to overcome the rapidly changing business environment conditions and to survive among competitors (Yousefi et al., 2017). However, almost half of the resources that companies devote to new product development are spent on products that may fail (Yousefi et al., 2017) since the development of an original drug is based on clinical trials. Clinical trials are a way to test new methods for diagnosing, treating or preventing health conditions. The aim of clinical trials is to determine whether the new molecule is safe and effective (Pharmaceutical Research and Manufacturers of America, 2007). Drugs, drug combinations and new uses for existing drugs are evaluated with clinical trials. The process of developing an original drug consists of 4 basic steps (Meadows, 2002).

- Determination of target, biosynthesis of candidate molecules or obtaining by natural means,
- Pre-clinical studies,
- Clinical studies,
- Approval and licensing.

At the initial stage of the process, there may be thousands of compounds with potential for development as medical treatment. However, only a few of the thousands of compounds after testing can be promising and may require further study. After identifying a promising compound for development, researchers conduct experiments to gather information such as potential benefits and mechanisms of compound, how the compound interacts with other drugs and treatments, optimal dosage for compound and etc.

Before testing a drug in humans, researchers must find out whether the compound concerned has the potential to cause serious harm, also called toxicity. Preclinical studies should provide detailed information on dosage and toxicity levels. After preclinical testing, researchers review their findings and decide whether the drug should be tested in humans.

While preclinical research answers basic questions about the safety of a drug, clinical studies are used to investigate the ways in which the drug interacts with the human body. Clinical research refers to studies or trials in humans and includes 4 phases (Meadows, 2002).

- Phase 1: This step covers several months of studies to determine the safety and dosage of the compound by testing 20 to 100 healthy volunteers or people with disease / condition. Generally, after Phase 1, about 70% of the drugs proceed to the next step.
- Phase 2: It covers studies that last several months to 2 years to determine the efficacy and side effects of the drug by testing the drugs that successfully pass phase 1 on target patients of several hundred people or people with disease potential. Approximately 33% of the drugs proceed to the next stage.
- Phase 3: It covers 1 to 4 years of testing to determine the efficacy and follow-up of drug adverse reactions by testing 300 to 3,000 volunteers. Approximately 25-30% of the drugs proceed to the next stage.
- Phase 4: It covers a wide range of studies conducted with thousands of volunteers with disease or disease status to determine the safety and efficacy of drugs that successfully pass phase 3. Drugs that successfully pass phase 4 are included in the licensing process.

Safety, efficacy and quality at the licensing stage are the three main criteria that are taken into account by health authorities around the world. All the information obtained from pre-clinical and clinical studies related to the safety and efficacy of the drug at the licensing stage is summarized in a file called short product information. The potential benefits and risks of the drug are presented with a relatively small sample (4,000 - 5,000 subjects), given the availability of a drug that will be available worldwide (Meadows, 2002). Because of this limitation, drug safety is not as clear as the criteria for efficacy and quality. Authorizing a drug means that the drug has a satisfactory benefit-risk ratio under the conditions defined in the short product information. In other words, at the stage of licensing, the health authority only checks whether the safety of the drug is within acceptable limits. Therefore, surveillance that begins during the drug development process has to continue throughout the duration of the drug's stay in the market. Pharmacovigilance systems are also designed to collect this information and continuously assess drug safety.

The main purpose of the new product development process is to determine the specifications of the product and to identify the processes necessary for the development of the product in compliance with the regulations and quality requirements (Pharmaceutical Research and Manufacturers of America, 2007). In order to achieve the desired product quality, it is necessary to identify possible critical product properties and identify potential critical impacts that may have an impact on the product formulation, production process or product packaging. Furthermore, the laboratory-scale production process and formulation needs to be improved to ensure the desired quality characteristics and product stability. Processes must be moved from laboratory scale to industrial scale dimensions with specific process control and, where possible, with the design area of critical process parameters. Necessary controls should be performed to monitor the product throughout the life cycle, keep it under continuous improvement and ensure its stability (Revathi, 2015).

2.2.Pharmaceutical Industry in Turkey

The development of an original drug is based on clinical trials. Clinical trials are a way to test new methods for diagnosing, treating or preventing health conditions. The aim of clinical trials is to determine whether the new molecule is safe and effective. Drugs, drug combinations and new uses for existing drugs are evaluated through clinical experiences (Revathi, 2015). However, developing original medicines is a challenging and expensive process (DiMasi et al., 2003). Even a pharmaceutical company with the fastest, highest production capacity and workforce can only apply for one or more licenses per year. For each drug that comes to the marketing stage, about 10,000 molecules are abandoned until the final stage. One or more of these molecules can be tested in the human body. Developing an original drug requires about 12-15 years and $ 500-800 million (DiMasi, 2001 and DiMasi et al., 2003). Due to this long and expensive process, in Turkey generally generic drug development activities are carried out instead of the original drug development activities.

According to the 2019 data of Pharmaceutical Industry Employers Union (IEIS), considering the magnitude of the global pharmaceutical market, Turkey is in the world's 17th largest pharmaceutical market position as it is stated in Figure 01 and industry shows a rapid growth trend. It is known that the hospital channel has an important share in addition to many reasons such as the aging of the country's population, the increase in the number of domestic and foreign competitors, and the introduction of new products in the growth of the pharmaceutical sector, which has a mosaic structure in which many national and non-national firms take part.

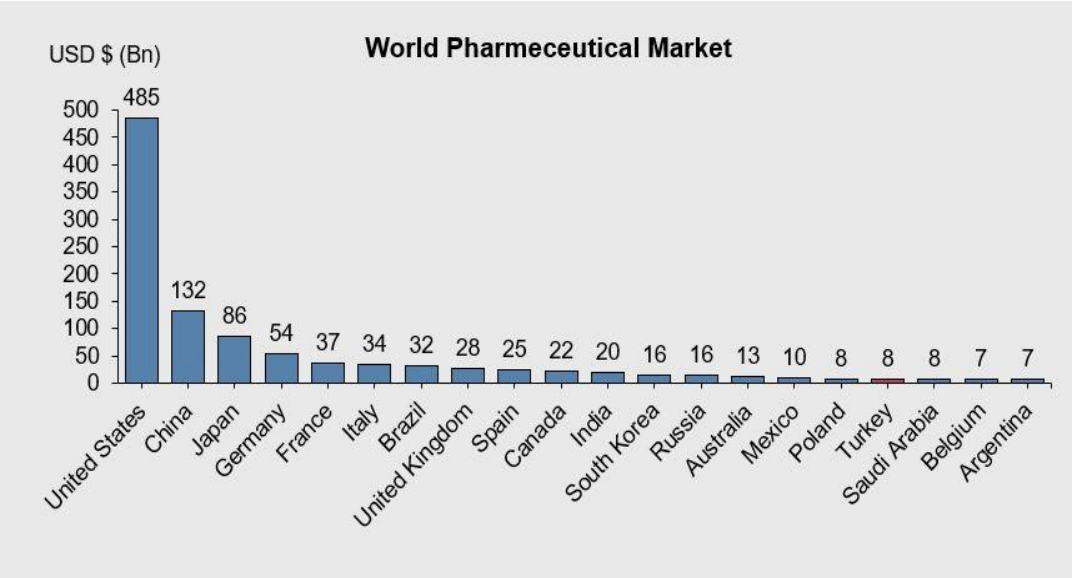


Figure 01.2019 year-end sales data of Pharmaceutical Industry Employers Union (IEIS, 2019)

When the data of the last five years are evaluated, the pharmaceutical market grew by close to 60% by the end of 2016, while it was around 12.9 billion TL in 2012. In 2018, the Turkish pharmaceutical market grew in value by 26.1% in the hospital and pharmacy channels, reaching 30.94 billion TL (IEIS, 2019). Unit sales rose by 3.6% to 2.30 billion units. From 2010 to 2018, the hospital market raised its value share from 7.5% to 13.5%. In unit terms, the hospital market, which had a share of 8.3% in 2010, rose to 13.3% in 2018. An analysis of the 9-year period between 2010 and 2018 indicates that the pharmaceutical market grew by 131% to 30.94 billion TL in 2018 from 13.39 billion TL in 2010. Changes in the sales distribution of current products in the market, in other words shifts in the sales volume towards higher-priced products, contributed 6.3 percentage points to growth (1,536 million TL). In 2018, a total of 444 new drugs were launched to the market, of which 418 are chemical and 26 are biotechnological products, and a contribution of 2 percentage points (483 million TL) was made to growth (IEIS, 2019).

According to the industrial production index data in Figure 02, production in the pharmaceutical sector, which has achieved double-digit growth since 2014. The production index, which was realized in the first 6 months of 2019, is in line with the rates of the previous year (IEIS, 2019).



Figure 03. Production index in Turkey between the years 2010-2019 (IEIS, 2019)

According to IEIS data (2019), an analysis of companies operating in the sector reveals that the number of players rose from 441 in 2010 to 488 in 2018. The number of multinational companies operating in the sector totalled 109 in 2010, whereas the number had soared to 130 for 2018. In the meantime, with 26 local companies entering the market in 2018, the total number of local companies registered at 358. When the market is analysed in terms of concentration, multinational companies receded to a 66% market share on the value scale, decreasing by 1 percentage point over the past nine years. In 2010, 90% of the market was accounted for by 50 companies. Within the span of nine years, the leading companies in the market lost market share and the number of companies making up 90% of the market rose to 66 in 2018. The share of foreign capital companies is 69%.

Turkey's pharmaceutical sector has a significant share in the realization of innovation and industry transformation with 32 accredited R&D centres and 1.298 R&D employees as of May 2019. From 2010 to 2017, pharmaceutical R&D spending climbed from TL 92.1 million to TL 314.1 million on a 241% rise. This increase points to 92.3% real growth on a manufacturer price basis, and 19.1% CAGR. As of May 2019, there are 81 production and 11 raw material facilities meeting international standards (IEIS, 2019). Despite these developments, it is seen that Turkey is still under an innovation activity which is below its potential.

Strengthening state, university and sector cooperation and creating a culture that supports R&D and innovation can be listed as the first steps to be taken to overcome this deficiency. Republic of Turkey Ministry of Development aimed to reach a competitive position in the pharmaceutical field with "Structural Transformation Action Plan for the Health Industry" plan which is a part of the framework of "10th Development Plan" published in 2014. Moreover, it is aimed that Turkey will become a global pharmaceutical R&D and manufacturing centre in the long-term.

3.Research Method

Effective management model of idea to product process developed by Abdi İbrahim Pharmaceutical Company and model covers the process from the birth of the idea to the launch stage via detailing each processes for an effective management. Abdi İbrahim Pharmaceutical Company, is the largest player in the pharmaceutical industry among the six pharmaceutical company listed in Istanbul Chamber of Industry Top 500 industry company list. In this study, process were divided and examined into 5 main stages (Abdi Ibrahim, 2016a, 2016b);

- Stage I: The emergence of the idea
- Stage II: Preparation and process of new product committee
- Stage III: Preparation of registration application file
- Stage IV: Licensing
- Stage V: Launch

From the idea to the product process, the new product development process is a process involving various departments within the company, requiring professional knowledge and expertise in various fields. The purpose of the process; development of new products that meet the regulations and quality requirements accepted in the market within the given time and cost framework (according to the project plan), obtaining the license and placing it on the market.

3.1.Stage I: The emergence of the idea

It covers the process from the start of the new product idea to the Business Development and R&D evaluations. The critical success factor of this stage is the number of ideas serving strategic priorities. New product suggestions can be obtained from all internal and external sources, and there is no filtering about the flow of ideas. All suggestions received are transferred to the New Product Portfolio Manager, which works under the Business Development department, and the New Product Portfolio Manager saves all suggestions to the electronic information flow (eBA) system. Incoming new product proposals are evaluated. The products are categorized according to the expiration date of the original patent of the originator company and the data protection period. The New Product Portfolio Manager takes the status of proposal records which have 4 or more years before the expiry date of the patent, into “monitoring” status. In order to increase the frequency and quality of new product proposals, the following reports and workshops are regularly held.

- Global Pharmaceutical Industry Report: Twice a year, Strategic Planning prepares and publishes a report that focuses on general trends and supports the development of new product ideas.
- Pharmaceutical Industry Report for Turkey: Twice a year, the Sales Marketing Event prepares and publishes a report that focuses on general trends in areas where the company has and does not operate and supports the development of new product ideas.
- Medical Information Systems New Product Ideas Workshop: A workshop is held once a year with the coordination of medical information systems consultants and Business Development with the participation of R&D, Sales & Marketing, Medical and Strategic Planning departments.
- New Product Ideas Workshop for Prioritized Areas: Once a year, a workshop focusing on areas prioritized is organized with the participation of opinion leaders, under the coordination of Sales & Marketing Directors and with the participation of Business Development, R&D, Medical and Strategic Planning departments.
- Workshop of Expired Patent New Products: The patent department scans molecules that have a certain amount of time left -4-6 years for Turkey, longer years for international markets- before the patent expires, especially for strategic priority areas. Business Development department organizes a workshop every 4 months with the participation of R&D, Sales & Marketing, Medical and Strategic Planning departments.

3.2.Stage II: Preparation and process of new product committee

It covers the stages from the medical evaluation to the creation of new product ideas and until the new product committee meeting. The critical success factor of this stage is the ratio of the recommendations submitted to the new product committee to the decision at once.

For new product proposals that are less than 4 years from the expiration of the patent, the New Product Portfolio Manager initiates the workflow through eBA. New product forms are sent to the R&D, Business Development, Medical and Regulatory Departments simultaneously to be completed within 2 weeks. For the products to be evaluated in the new product committee, the licensing periods foreseen within the framework of the prioritization rules of the Ministry of Health are obtained from the licensing directorate and project planning is shaped. After all new product related document are completed, at the new product committee meeting to be held in the following weeks, new product proposals are evaluated multi-dimensionally and the final decision is made.

The new product portfolio manager creates a new project in the system for each new product idea approved by the new product committee, saves the new product form as the first version, defines the project schedule, milestones, budget and team information received from the relevant units. The new product portfolio manager coordinates the project team and manages the entire process up to launch.

3.3.Stage III: Preparation of registration application file

It covers the steps until the projects approved in the new product committee are ready for the application for licensing. Critical success factors of this stage;

- To be able to take the highest GMP inspection priority in the import projects approved by the new product committee.
- Compliance with the project timetable decided at the first project management meeting.

There are three different process possibilities: Import, Technology Transfer and Abdi İbrahim development. Despite any changes in assumptions during these processes, a routine check is carried out every 6 months for all projects. In addition, project prioritization activities are carried out every 6 months with the guidance of Sales Marketing for the correct allocation of resources.

Monthly review meetings are held for all projects in the file preparation processes organized by AGS and R & D Director with the participation of R & D, HR, Licensing, Sales & Marketing, Finance, Domestic Technical Operations, Supply Chain and New product portfolio manager. Projects at critical stages are assessed, inter-departmental questions are answered / agreed and, if necessary, some projects may be prioritized due to changes in time plan, budget or quality.

- Imported Product File: The file preparation process of the imported product is carried out by the Business Development Directorate. After approval of the new product committee, the terms of business are negotiated.
- Technology Transfer Product File: The Business Development Directorate and the R&D Directorate carry out the process of technology transfer file preparation jointly. At the beginning of each technology transfer project, a start-up meeting is held with the participation of relevant persons from Business Development, R&D, Licensing and domestic Technical Operations departments. The R&D technology transfer and file preparation process is completed within 3-9 months and the file is forwarded to the licensing officer. Domestic Technical Operations accompanies R&D during pilot production
- Product Development at Abdi İbrahim: Abdi İbrahim file preparation process is carried out under the leadership of the R & D Directorate. The product development process is completed in 15-21 months if it is for Turkey market 15-21 months; for international markets, the project is completed in 21-27 months. The file is then forwarded to the licensing officer. Development times may vary depending on internal and external factors such as product complexity, clarity of patent status, API availability, required clinical studies, project priority and etc.

3.4.Stage IV: Licensing

The Project Regulatory Officer checks the incoming license file, makes the necessary additions and then transfer the project within 2-4 weeks according to its scope to the relevant authority; for example, the Ministry of Health, the Ministry of Agriculture and Livestock or International markets. The licensing phase lasts 18 months. Critical success factors of this stage are (i) speed of response to questions from authorities and (ii) compliance with reimbursement plan.

The pre-examination process lasted between 1-3 months and during this process (i) the necessary corrections are made if the submission resulted negatively, (ii) if the results are positive, P&L checks are carried out for imported products despite the possible changes in the assumptions and the application is completed by paying the license application fee if appropriate. In Technology Transfer and AI Development projects, there is no need for P&L control since large item expenditures have already been completed.

For the new products remaining 6 months before the approval of the license, P&L study is carried out for the last time. This P&L is evaluated with the launch confirming meetings which are held every 6 months with the participation of Regulatory Affairs, Technical Operations, Sales Marketing, R & D, Business Development and Supply Chain departments. According to these meetings two final decision can be occur such as (i) It is decided to go to the market and stage V is started or (ii) it can be decided to not to go to market, in this case, Business Development department is looking for an alternative company to sell the product file.

3.5.Stage V: Launch

12 months medical information systems sales forecasts are shared with Demand Planning for the products that are decided to go to the market at the launch confirmation meeting. Demand Planning then shares warehouse sales forecasts with Production Planning and launch preparations are initiated. Critical success factors of this stage are (i) Success of products approval at launch confirmation meeting and (ii) Time between reimbursement approval and launch.

Launch Management Meetings are held every two months with the participation of licensing, Technical Operations, Sales Marketing, R & D, Business Development and Supply Chain departments for the purpose of operational follow-up and coordination of launch preparations. Controls are made over the list in the marketing launch tracking file.

Commercial charge size is calculated according to the sales figures in the last P&L study prepared for the launch confirmation meeting, finalized by R & D and Technical Operations and is not changed. After the approvals are completed, the transfer from R&D to production and quality control is completed. Commercial productions take place, optimization series are produced when necessary, are shipped to warehouses following quality approvals and launched in accordance with the plans specified in the marketing launch follow-up file

4.Findings

Marketing and R&D are two very important departments for a company to survive, compete and develop. The interaction between these two departments, which can be called the lifeblood of the companies, is also important. Strong cohesion between departments, cooperation between functions without competition and solidarity between units will contribute to the fulfilment of the moves that will carry the company forward. The marketing and R&D departments, which play an active role in the development of new products, will influence each other, transfer information to each other and will be in constant relationship.

The success of new products in pharmaceutical production depends on reliability, quality, efficiency, sustainability and profitability. In order to achieve this success, the departments involved in the process from the idea stage to the launch stage of the product, which is decided to be developed, have to interact effectively with each other and fulfil their responsibilities in the job descriptions in a timely and effective manner.

The Effective Management of the Idea-to-Product Process model (Abdi Ibrahim, 2016a, 2016b) implemented at Abdi İbrahim Pharmaceuticals is designed to achieve new product success and achieve sustainability in the success. The success of the model is mainly based on the integration between marketing and R&D department. In order to ensure integration between the marketing and R&D departments, the company has made effective use of technological information systems such as Electronic Information Flow System (eBA), SAP and Qmex a part of the corporate cu

lture (Abdi Ibrahim, 2016a, 2016b). In addition, regular meetings between departments are organized and processes are reported in order to effectively manage the processes in the model. Thus, it is able to adapt R&D and marketing strategies to the conditions simultaneously against the rapidly changing market dynamics and achieve sustainable success.

Moreover, the continuous interaction of R&D and marketing departments, which play a key role in the effective conclusion of the model, depends on the effective use of the company's information and technology systems. Otherwise, the weak inter-departmental communication will cause the company's market share to decline by transforming its R&D strategies, which should be aggressive in the face of rapidly changing market dynamics. A company with a reduced market share will reduce the resources it will allocate for R&D activities, which will cause it to lose its competitive advantage in the market.

5.Conclusion and Discussions

Increase in world population, changes in disease burdens, creation of new treatment methods, growing interests and quality expectations are enhanced the need and demand for health services and medicine. However, developing original medicines is a challenging and expensive process. According to the literature, R&D expenditure in pharmaceutical firms, which is between 14% and 18% of their annual sales, is about five times more than average R&D expenditure in others industries (Subramanian et al., 2010). What is more, pharmaceutical companies generally face to face with many challenge because of the low R&D productivity, high R&D costs, tight regulation, low probabilities of technical success, unsure market, and limited qualified human resources (Blau et al., 2004). This uncertainly put pharmaceutical companies under pressure in new product development processes (Mehralian et al., 2016).

Due to this long and expensive process, in Turkey generally generic drug development activities are carried out instead of the original drug development activities. On the other hand, technological infrastructure of pharmaceutical industry in Turkey has been strengthened by making the necessary investments in the framework of "Good Manufacturing Practice" which is determined by the World Health Organization. Therefore, the sector has reached a comparable technological level with European countries and nowadays sector become an important and growing market position.

The success of new product development in Turkey is measured with drug safety, quality, effectiveness and success at drug's market. The quality, reliability and effectiveness of the new product to be developed require a strong and deep-rooted R&D work. Therefore, looking more closely to success factors of new products might help pharmaceutical industry achieve more successful new products. Adherence of the drug in the market is only possible with the efficient and effective work of the marketing department regardless of innovation model which can be radical or incremental. In Abdi İbrahim Pharmaceutical Company which is the leader of the sector in Turkey, “The Effective Management of the Idea-to-Product Process” model is designed to be able to successful in all these factors since new product development is the most important determinant of sustained company performance.

It is a well-known fact that new product development is a high-risk process along with a high cost and there is a significant failure rate (González and Palacios, 2002). For that reason, many researches focused on improving new product development by identifying several success factors (Graner, and Mißler-Behr, 2013). For the purpose of this study, the effect of “Effective Management of Idea to Product Process” model that is designed by Abdi İbrahim Pharmaceutical Company on the success of new product was examined. In the light of the information reviewed, it was concluded that the integration of departments to ensure the success of the product to be developed and that the departments involved in the process from the birth of the idea to the launch stage must fulfil their responsibilities in a timely and successful manner.

New product development is one of the key elements of pharmaceutical company in terms of its growth and development among rivals. In a rapidly changing business conditions, success of new product development processes highly depend on the technological knowledge and the company’s ability to transform it into value. Nerkar and Roberts (2004) stated that in addition to these factors, manufacturing, marketing, sales, and distribution of those products should be managed strategically. Yousefi et al. (2017) explained in their study, in which they identified critical success factors of new product development based on the relevant literatures and expert opinions, that managerial capabilities and management commitment to new product development projects are considered as two important factors in in literature. As this study is indicated, the success of new product

development in the pharmaceutical sector depends on the effective management of the process from the birth of the new product idea to the launch stage, the interdepartmental integration and the value attached to information technology.

Increasingly, pharmaceutical companies seek to have a unified view of their entire product development lifecycle with the ability to view and trace every product detail throughout the entire process. For that reason, in future studies it is aimed to examine the Effective Management of Idea to Product Process" model that is designed by Abdi İbrahim Pharmaceutical Company in detail to reveal its direct effect on new product development success via considering a sample case study and its performance indicators.

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THEORETICAL PERSPECTIVE OF GREEN-TRANSFORMATIONAL LEADERSHIP IN CORPORATE SUSTAINABILITY AND ITS IMPORTANCE[1]

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Abstract

Global climate change negatively effects all areas that are necessary for our living like physical and natural environment, vital activities in cities, technology, human rights and economy, businesses, agriculture and food, clean water and health. It is seen that enterprises adopt environment management systems to be able to compete with the global climate change and decreasing natural resources. Type of leadership is an undeniable fact in achievement of these kinds of initiatives. The green transformational leadership type adopting green values is out of internal resources and capability of the enterprises in terms of environmental sustainability. Therefore, It is very important to analyze the studies on green transformational leadership and to classify existing studies collecting as titles with an interpretive approach. This study aims to introduce the importance of green transformational leadership and its theoretical perspective in corporate sustainability. With this study including an extensive literature review, It is aimed to contribute to literature and practice by introducing the effects of green transformational leadership type on corporate sustainability.

Keywords: Green behaviour at work, green creativity, green performance, green transformational leadership

1.Introduction

Industry, beyond all questions, has contributed to social welfare by providing high quality products adapted to human needs. However, existing production models are not environmentally sustainable (McWilliams et al., 2016). In this respect, society, public sector and non-governmental organizations require industry sector to make economically, socially and environmentally sustainable productions (McWilliams et al., 2016; Sarkis & Zhu, 2018). It has been seen that the production when It only focuses on the products, results in inequal wealth distribution, poor work environments, exhaustion of environmental stocks and excessive environment exploitation. Global climate change representing one of the most important environmental problems forms a big risk for human health and natural systems (McMichael, Woodruff & Hales, 2006; Kovats & Akhtar, 2008; Punyatoya, 2014). Datas obtained by Global Footprint Network as of 2019 also show that the natural resources produced by the planet in 12 months are consumed in 7 months and during the rest of the year, we get indebted with natural resources of 2020 (Yesilist, 2019). The only goal to fight with global climate change for human beings today is to decrease global heat increase to down below 2 degrees (Peşkircioğlu, 2016). To be able to reach this critical goal, It is necessary to decrease usage of fossil fuel, prefer using renewable energy resources, adopt energy fertility as a production philosophy, change consumption habits and prevent wastage (Özgül & Mengi, 2016). As It is seen, welfare bet of the human being has undervalued real limits of biosphere and provided in sustainability of our consumption and production systems (Bonilla et al., 2013).

According to Robbins (2001) corporations are responsible for almost %50 of global greenhouse gas through their activities. As known, this greenhouse gas causes global warming, acid rains, smoke and health problems for human and other beings in the world. For Nattrass and Altemore (2002) "*If we keep our current way, we are going to plant seeds of our own end."* From this point of view, to be able to make the world fit to live in and to always use the nature, It is quite clear that there should be changes in production and consumption models. According to Senge et al., (1999) "sustainable development cannot be realized without innovation and innovation can be obtained in culture which embraces and feeds learning and changing in best way." In this context, corporates of the era should make "being green" a philosophy, even a lifestyle. Corporations with this awareness consciousness adopt environmental management systems which aim to perform green processes and applications (Darnall, Henriques & Sadorsky, 2008; Gotschol, De Giovanni & Esposito Vinzi, 2014). But leaning on these systems are not seen as enough to deal with treats created by climate changes (Robertson &

[1] This study was produced from the doctoral thesis of the second author.

Barling, 2013). In the world generally, It is accepted that global climate change is mainly formed as a result of human activities (Gbadegesin, Olorunfemi & Raheem, 2011), and the achievement of corporations' environmental activities are mainly connected with the employees' behaviours (Daily, Bishop & Govindarajulu, 2009; Paillé, Boiral & Chen, 2013). Therefore, in order to fight with climate change, It could be said that employees should be directed to green behaviours (Ones & Dilchert, 2012; Paillé & Boiral, 2013). Green behaviour is conceptualized as a large activity group which is sensitive to environment, like developing and applying processes, giving importance to recycling and reusing and questioning applications that do harms to environment (Graves, Sarkis & Zhu, 2013).

Literature on corporate sustainability shows that a leader is needed for achievement of environment management systems (Ramus & Steger, 2000; Egri & Herman, 2000). Researchers brings forward the fact that green transformational leadership behaviour plays an important role to be able to direct the employees to green behaviour (Graves, Sarkis & Zhu, 2013; Robertson & Barling, 2013; Graves et al., 2013; Kura, 2016; Hadi &. Rasoll, 2017). The concept of green transformational leadership, though, is described as a behaviour style that motivates its followers to reach environmental goals and inspires them to perform beyond expected environmental performance levels (Bass, 1998; Gardner & Avolio, 1998; Chen & Chang, 2013; Mittal & Dhar, 2016).

Resource based theory puts emphasis on the importance of intangible assets and capabilities of corporates (Barney, 1991). According to this theory, leadership behaviour is accepted as being one of corporates' internal resources and capabilities (Barney, 1991; Hart, 1995). Therefore, according to the resource based theory view, green transformational leadership behaviour is one of valuable resources and capabilities of a corporate. In this research, the importance of green transformational leadership to enable corporate sustainability and its theorical perspective is being discussed. Detailed literature review has been realized with the aim of putting forward the contribution of green transformational leadership in implementing the aims devoted to environmental sustainability.

2.Literature Review and Theoretical Framework

2.1.Green Transformational Leadership and Green Behaviour at Work

The corporations' being successful in the context of environmental sustainability significantly depends on the behaviours of the employees in workplace (Daily, Bishop & Govindarajulu, 2009; Paillé, Boiral & Chen, 2013). Behaviours of the employees are strongly effected from leadership style (Bass, 1985). Empirical studies show that transformational leadership style has effects on employees' behaviours (Avolio & Bass, 1988; Bass & Avolio, 1994; Sosik, Kahai & Avolio, 1998). There are findings in literature that leadership style provided by close managers is important in encouraging the employees for green behaviour at work (Ones & Dilchert, 2012; Norton et al., 2015) as a environment sided activity (Anderson, Shivarajan & Blau, 2005; Ramus & Steger, 2000; Robertson & Barling, 2013). Value based and inspiring quality of transformational leadership understanding makes it suitable to encourage green behaviour at work (Shamir & House,1993; Egri & Herman, 2000; Fernández, Junquera & Ordiz, 2006).

Transformational leadership is formed with four dimensions as inspirational motivation, idealized influence, individual consideration and intellectual stimulation (Bass, 1990; Bass & Riggio, 2006). Transformational leader could be described as a leader who gives inspiration to its followers towards going above their own profits, by means of changing their ideals, interests, souls and values to reach high performance levels (Bass, 1985). Chen & Chang, referring to Bass (1998), Gardner & Avolio (1998) in 2013, has extended the transformational leadership concept with environmental/green viewpoint. He has brought green transformational leadership concept as a style that motivates its followers to reach environmental goals and inspire them to show higher performances than the expected.

Intellectual stimulation of directors who have high green transformational leadership could encourage employees to question assumptions about environmental problems and to consider new and different ideas to solve these. Green transformational leaders with individual consideration could increase employees' competent feeling levels about environment issues, by providing coaching and consulting. They can also develop employees' capacity to solve environment problems, by means of evaluating development needs of every employee and providing proper personal training opportunities (Graves et al., 2013). Moreover, based on their idealized influence, If they act proper to green behaviour at work, employees could also act the same, and hence green behaviours at work

could be adopted (Hadi & Rasoll, 2017). Besides this, they could clearly state the importance of environmental sustainability, build a vision based on a sustainable future and utter environmental values by passionately and modestly speaking, with inspirational motivation. Therefore, they could be an inspiration source for bringing green behaviour out at work (Egri & Herman, 2000; Daily, Bishop & Govindarajulu, 2009; Graves et al., 2013; Robertson & Barling, 2013).

Studies confirm that there is positive meaningful relationship between green transformational leadership behaviour and employee's green behaviour at work (Graves et al., 2013; Robertson & Barling, 2013; Kura, 2016; Wang, Zhou & Liu, 2018). However, there is also a call that mechanism improving and interfering the relationship between employee's behaviour at work and green transformational leadership behaviour should be found (Avolio et al., 2004; Bass, 1999; Chen & Chang, 2013; Kura, 2016; Hadi & Rasoll, 2017).

Graves et al., (2013), made a research to form a deeper understanding about the determiners in the relationship between green transformational leadership and green behaviour at work, by using self-determination theory (Deci & Ryan, 2000; Ryan & Deci, 2000), focusing on autonomous motivation and external motivation component of controlled motivation. According to self-determination theory, the motivation type that the individuals possess is an important behaviour determiner. This theory evaluates motivation types in two categories as autonomous and controlled motivation. Autonomous motivation argues that individuals have consistent ego and maintain activities in accord with the ego (Deci & Ryan, 2000; Gagné & Deci, 2005). According to this motivation type, individuals could in real terms be motivated to perform an activity If It matches with their own values and goals and they find it interesting and pleasant (Gagné & Deci, 2005). In this context, the individuals that give importance to environmental sustainability could head towards green behaviour at work as they are internally motivated.

According to controlled motivation, though, individuals continue their activities as they should do so or they believe they should (Deci & Ryan, 2000; Gagné & Deci, 2005). For example, the individuals that are externally motivated, could be trying to do what the system requires, be rewarded and confirmed or avoid sanctions (Graves et al., 2013). This kind of external motivation could be common among the employees and could encourage green behaviour our at work (Andersson, Shivarajan & Blau, 2005; Ramus, 2002).

In conclusion of the study, as suggested by self-determination theory, while autonomous motivation is in positive connection with green behaviour at work, It is seen that the relationship between external motivation and green behaviour at work is moderated by green transformational leadership. It is also observed when the green transformational leadership is high, the relationship between external motivation and green behaviour at work is positive and when It is low, the relationship is negative. Consequently, It is seen that interaction of green transformational leadership, autonomous and external motivation is important for impressing the green behaviour of employees at work (Graves et al., 2013).

Green transformational leaders could enable their followers to internalize organizational values (Bono & Judge, 2003; Dvir et al., 2002). Such that, they could clearly point out environmental goals with ideological explanations that emphasize environmental values. Hence, they could make the environmental activities more meaningful for their followers (Jung & Avolio, 2000; Bono & Judge, 2003). Besides, they could help their followers to harmoniously experience green behaviours at work and hence enable autonomous motivation to be realized (Graves et al., 2013).

Transformational leaders, according to widespread view, use internal rewards and motivation (Bono & Judge, 2003). But, It has been also proven that they use external rewards and motivation together with the behaviours like determining the expectations and managing rewards based on performance (Judge & Piccolo, 2004). In this context, green transformational leaders could use external rewards as a motivation instrument in order to make employees to direct to green behaviour at work. For example, they could provide external motivation by increasing their followers competence through focusing on improving their capabilities (Graves et al., 2013).

Kura (2016) made a study thinking that the concept of environmental concern could be a key mechanism in explaining the connection between green transformational leadership and green behaviour at work. Basing his study on theory of planned behaviour, tried to explain that an employee who is worried about natural environment has high possibility to head towards green behaviour. Conclusion of the study shows, environmental concern plays an mediating role between green transformation leadership and green behaviour at work. Consequently, It is seen that employees inspired and intellectually encouraged by their green

transformation leaders, have higher possibilities to show apprehension about nature and this situation positively effect green behaviour at work (Kura, 2016).

Hadi & Rasoll (2017) have developed a conceptual frame that displays the importance of green transformational leadership in supporting employee pro-environmental behaviours, basing on self-determination theory and transformational leadership theory, as a result of an extensive literature review. They have pointed out that there would be a positive sided meaningful relationship between green transformational leadership style and employee pro-environmental behaviours and in this relationship, autonomous motivation would take the mediator role.

Wang, Zhou & Liu (2018) have studied the effect of green transformational leadership on green behaviour at work in the light of value congruence perspective and moderating role of employees' green identity, by using the theory of transformational leadership and identity. Conclusion of the study shows that value congruence plays a mediator role in relationship between green transformational leadership and green behaviour at work and this mediatory could be managed according to green identity. Therefore, employees with high green identity could interpret vision and values provided by green transformational leaders more greenly and could experience a deep harmony between leaders' values and their own (Wang, Zhou & Liu, 2018).

Maziriri & Saurombe (2018) as a result of the study they made basing on human capital theory, natural resource based theory and green theory, have concluded that green transformational leadership style has positive and significant effect on employee's harmonious habitation of the environment. Besides, It has been also revealed that employee's harmonious habitation of the environment has a positive and significant effect on employee's green behaviour at work. However, in this study as different from the others, It is surprisingly seen that the same positive and significant relationship could not be retained between green transformational leadership and employee's green behaviours.

2.2.Green Transformational Leadership and Green Creativity

Creativity in business literature is generally described as creating new and useful products, ideas and procedures for innovation (Amabile, 1988; Shalley, Gilson & Blum, 2000). Creativity is critically important for corporates to organizationally develop and to show high performance (Amabile, 1988). Creativity is brought out as a determiner of new product development performance (Grifnn & Page, 1996; Chang, Tein & Lee, 2010). Conclusions of the study show there is a positively meaningful relationship between creativity of product development team and product development performance (Cooper, 1979; Smith & Reinertsen, 1992; Amabile et al., 1996; Grifn, 1997).

Green creativity, though, is to develop new ideas about green products, processes and services or applications considered as new and useful (Amabile, 1988; Chen & Chang, 2013). In the research by Cheng & Chang (2013), it is seen that corporates with high green creativity have high green product development performance. Directors of corporates get highly worried about the way to encourage green creativity (Chen & Chang, 2013; Zhu, Cordeiro & Sarkis, 2013). Studies made on creativity show that one of the most important factors to develop employees' creativity is the "leadership behaviour" (Amabile et al., 2004; Mumford & Hunter, 2005; Woodman, Sawyer & Griffin, 1993). The leadership behaviour that inspires its employees with a certain vision, helps some concrete goals to be cleared and enables the employees to well communicate within their team (Moslehpour et al., 2019), is seen as one of the main factors to be successful in all kinds of group activities (Dansereau, Graen & Haga, 1975).

Academicians who make researches about creativity by social learning theory principles, state that thanks to charismatic behaviour and intellectual stimulation of the leader, the followers could proactively think and develop new ideas (Eisenbeiß & Boerner, 2013; Gong, Huang & Farh, 2009; Mittal & Dhar, 2015). Social learning theory could be described as an indirect learning based on the other's behaviours and observing these behaviours. According to this learning called observational learning, people, without need for trial and error, could earn general and integrated learning molds (Bandura, 2001). This kind of learning processes could help employees to form creative self-efficacy, then to determine difficult goals and to be motivated to fearlessly continue when they face a negative situation (Bandura, 1986). As seen, this theory is closely connected with specific components of transformational leadership.

Transformational leader through intellectual stimulation could be an inspiration source for employees to build problems, search for information, find solutions and develop cognitive process about creativity (Avolia, Bass & Jung, 1999; Reiter-Palmon & Illies, 2004; Gong, Huang & Farh, 2009). With inspirational motivation, the

transformational leader who puts a clear vision for its followers and shows way to realize this vision (Gong, Huang & Farh, 2009; Mittal & Dhar, 2015), gingers up by team soul vaccinating (Gao & Bai, 2011) and becomes an inspiration for followers to express their ideas, encourages the creative thought.

Moreover, with individual consideration, It could support creativity by providing coaching and consultancy to its followers (Gong, Huang & Farh, 2009). In conclusion, with its idealized influence namely charismatic power, It could help the followers to produce inspiring ideas (Gao & Bai, 2011). Results of the study also show the importance and positive effects of transformational leadership behaviour on employees' creativity (Avolio, Bass & Jung, 1999; Woodman, Sawyer & Griffin, 1993; Jung, 2001; Elkins & Keller, 2003; Shin & Zhou, 2003; Gong, Huang & Farh, 2009; Gümüşlüoğlu & İlsev, 2009; Wang & Rode, 2010; Cheung & Wong, 2011; Zhang et al., 2011; Mittal & Dhar, 2015).

Similarly, Chen & Chang (2013), Mittal & Dhar (2016) and Jia et al., (2018), reveal with their studies that green transformational leadership style has positive effect on green creativity. In a study, It is seen that green organizational identity is a partial mediator for the relationship between green transformational leadership and green creativity and when the corporates' sourcing commitment is high, the positive effect of green organizational identity on green creativity increases (Mittal & Dhar, 2016).

Another study confirms that green transformative leadership style develops green creativity by encouraging green human resources management (Jia et al., 2018). Besides, It is seen that there is a positive meaningful relationship between green transformational leadership and employees' green passions (Robertson & Barling, 2013; Jia et al., 2018). Moreover, green passion acts as mediator for the relationship between green transformational leadership and green creativity (Jia et al., 2018). Consequently, In order for leaders to provide green creativity, It could be said that they need to make necessary sources ready and develop employees' green organizational identity perceptions and knowledge, awareness and capabilities about nature.

2.3.Green Transformational Leadership and Green Performance

With the effect of environmental pollution and global warming increasing these days, environmental preservation has become an important subject. Consumers who have understood the negative effects of industrial production on environment, have begun to pay more attention to green products (Chen, 2010; Chen & Chang, 2012). Therefore, corporates are in position to both meet the environmental needs of the market and to adopt green innovation for various strategies (Chen, 2008; Sheu, 2014). Corporates who have reached to this awareness level, head towards designing and developing green products (Chen, 2011).

Leaders, thanks to their leadership, empathy and persuading abilities for employees to reach the goals, could play a key role for achievement of development team (Edmondson & Nembhard, 2009). Studies show that transformational leadership has positive effects on organizational innovation performance (Waldman & Bass, 1991; Shamir & House, 1993; Sosik, Avolio & Kahai, 1997; Jung, Chow & Wu, 2003; Ross & Gray, 2006; Sarros, Cooper & Santora, 2008; Gümüşlüoğlu & İlsev, 2009; Chen, Chang et al., 2014). Transformational leader could create benefits for new ideas in innovation process to pervade. Moreover, they could play a supporting role by motivating the followers to think about all problems in new technics (Waldman & Bass, 1991; Keller, 1992). As a result, transformational leader could increase new product development performance by building a new vision, putting high performance expectations out, showing clear goals to its followers and personal supporting (Podsakoff et al., 1990; Sarros, Cooper & Santora, 2008).

Studies show that transformational leadership style has positive and important effect on green performance (Chen & Chang, 2013; Chen, Chang & Lin, 2014; Zafar et al., 2017). Green performance could be described as software and hardware performance included in innovation process that consists of modernizing in technologies related with energy saving, waste reduction, recycling and corporate environment management, for a corporate to produce green products and processes (Chen, Lai & Wen, 2006). According to the results of a study made by Zhou et al., (2018) both the green transformational leadership and individual green values create positive effects on green psychological climate, and green product development performance is positively effected from this situation. As addition to this, It has been proven that when green transformational leadership style is matched with employee's green values, It is possible to create green psychological climate, and hence increase green product development performance. So, according to person-supervisor fit theory, as a result of the match of employees' individual green values and green transformational leader's values, It could be said that the green psychological climate level increases. Besides, It could be also said that when green development idea of green

transformational leader matches with employee's environmental beliefs, employees' motivation and green product performance increase (Zhou et al., 2018).

Researches show that green transformational leadership positively affect green mindfulness, green self-efficacy and green performance. Moreover, green mindfulness and green self-efficacy act as partial mediator to positive relationship between green transformational leadership and green performance. When the green transformational leader decide on applicable goals, clarify standards, develop a collaborative culture, make positive feedbacks and take a coaching role, It could be said that the employees could increase their green self-efficacy (Chen, Chang & Lin, 2014; Zafar et al., 2017). Besides of this, as the green transformational leaders could encourage the employees to develop new green ideas, carry out their knowledge and learn new green technologies, they could both raise green awareness context and activate green organization processes (Vogus & Sutcliffe, 2012). As a result, It is seen that in order to increase the green performance, corporates should enhance their green transformation leadership, green awareness and green self-efficacy (Chen, Chang & Lin, 2014; Zafar et al., 2017).

3.Research Method

In order to combine the conclusions of many independent researches made on green transformational leadership, literature review has been conducted by searching the keyword "Green Transformational Leadership" and its variations on Web of Science, Science Direct, Scopus and Google Scholar databases. Due date for researches included in the study has been determined as October 2019.

4.Findings

In this research, downloadable 12 articles have been selected and evaluated. In the study, researches related with green transformational leadership style has been gathered under three titles as "green transformational leadership and green behaviour at work", "green transformational leadership and green creativity" and "green transformational leadership and green performance". Hence, researches about green transformational leadership have been examined, existing studies have been discussed with an interpretive approach and classified being collected as headings.

Table 01. An overview of research on green transformational leadership

Author(s)/ Year	Title	Journals	Theory	Keys Finding
Graves, Sarkisa, & Zhu, (2013)	How transformational leadership and employee motivation combine to predict employee pro-environmental behaviours in China	Journal Environmental Psychology	Self-determination theory	Green transformational leadership have a strong, direct positive relationship with green behaviour at work. Green transformational leadership is positively related to the employee's autonomous and external motivation. Autonomous motivation is in positive connection with green behaviour at work, It is seen that the relationship between external motivation and green behaviour at work is moderated by green transformational leadership.
Kura, (2016)	Linking Environmentally Specific Transformational Leadership and Environmental Concern to Green Behaviour at Work	Global Business Review	Theory of planned behaviour	Environmental concern plays an mediating role between green transformation leadership and green behaviour at work.

Hadi, & Rasool, (2017	Environmental Transformational Leadership and Employee Pro-Environmental Behaviours: The Bridging Role of Autonomous Motivation	Abasyn Journal of Social Sciences	Self-determination theory	They have developed a conceptual frame that they have pointed out that there would be a positive sided meaningful relationship between green transformational leadership style and employee pro-environmental behaviours and in this relationship, autonomous motivation would take the mediator role.
Wang, Zhou, & Liu, (2018)	Value congruence: a study of green transformational leadership and employee green behaviour	Front Psychology	Transformation leadership theory İdentity theory	Value congruence plays a mediator role in relationship between green transformational leadership and green behaviour at work and this mediatory could be managed according to green identity.
Maziriri & Saurombe, (2018)	Antecedents towards employees' harmonious habitation of the environment and workplace environment-friendly behaviour: a case of Johannesburg employees within small and medium enterprises	Journal of Business and Retail Management Research	Human capital theory Natural resource based theory Green theory	Green transformational leadership style has positive and significant effect on employee's harmonious habitation of the environment. However, in this study as different from the others, It is surprisingly seen that the same positive and significant relationship could not be retained between green transformational leadership and employee's green behaviours.
Chen, & Chang, (2013)	The Determinants of Green Product Development Performance: Green Dynamic Capabilities, Green Transformational Leadership, and Green Creativity	Journal of Business Ethics	Resource based theory Transformation leadership theory	Green transformational leadership positively influence green creativity and green product development performance. The positive relationships between green product development performance and green transformational leadership—are partially mediated by green creativity.
Mittal & Dhar, (2016)	Effect of green transformational leadership on green creativity: A study of tourist hotels	Tourism Management	Organizational identity theory	Green organizational identity is a partial mediator for the relationship between green transformational leadership and green creativity and when the corporates' sourcing commitment is high, the positive effect of green organizational identity on green creativity increases.
Jia, Liu, Chin & Hu, (2018)	The Continuous Mediating Effects of GHRM on Employees' Green Passion via	Sustainability	Ability-motivation-opportunity theory	Green transformative leadership style develops green creativity by encouraging green human resources management. There is a

	Transformational Leadership and Green Creativity		Transformation leadership theory	positive meaningful relationship between green transformational leadership and employees' green passions Moreover, green passion acts as mediator for the relationship between green transformational leadership and green creativity.
Robertson & Barling, (2013)	Greening organizations through leaders' influence on employees' pro-environmental behaviors.	Journal of Organizational Behaviour	Social comparison theory Social learning theory	There is positive meaningful relationship between green transformational leadership behaviour and employee's green behaviour at work. Besides, there is a positive meaningful relationship between green transformational leadership and employees' green passions.
Chen, Chang & Lin, (2014)	Green Transformational Leadership and Green Performance: The Mediation Effects of Green Mindfulness and Green Self-Efficacy	Sustainability	Transformation leadership theory Self-determination theory	Green transformational leadership positively affect green mindfulness, green self-efficacy and green performance. Green mindfulness and green self-efficacy act as partial mediator to positive relationship between green transformational leadership and green performance.
Zafar, Nisar, Shoukat & Ikram, (2017)	Green Transformational Leadership and Green Performance: The mediating role of Green Mindfulness and Green Self-efficacy	International Journal of Management Excellence	Transformation leadership theory Social cognitive theory	Green transformational leadership positively affect green mindfulness, green self-efficacy and green performance. Green mindfulness and green self-efficacy act as partial mediator to positive relationship between green transformational leadership and green performance.
Zhou, Zhang, Lyu & Zhang, (2018)	Does Seeing "Mind Acts Upon Mind" Affect Green Psychological Climate and Green Product Development Performance? The Role of Matching Between Green Transformational Leadership and Individual Green Values	Sustainability	Transformation leadership theory Person-supervisor fit theory	Both the green transformational leadership and individual green values create positive effects on green psychological climate, and green product development performance is positively affected from this situation. As addition to this, It has been proven that when green transformational leadership style is matched with employee's green values, It is possible to create green psychological climate, and hence increase green product development performance.

5.Conclusion and Discussions

Warming of the globe that we are living on, stares us in the face as one of the most serious risks that threaten human beings' together with plants and other living species' future. It is seen that corporates, to be able to solve the problems of sustainability like climate change, global warming and extinction threat of natural resources, apply environment management systems with policies (Darnall et., 2008; Gotschol vd., 2014). In the achievement of environment management systems being mainly connected with employee's behaviours, It is seen that there is a consensus in literature in direction that leadership style is important in directing the employees (Andersson, Shivarajan & Blau, 2005; Ramus & Steger, 2000; Robertson & Barling, 2013). Green transformational leadership style has been first suggested by Chen & Chen (2013) as being a product of transformational leadership that specifically adopts green values. This leadership could be described as a leadership style that adopts behaviours motivating followers to reach environmental goals and encouraging them to show performances more than the expected. On the grounds of resource based theory, "green transformational leadership style" could be pointed out as one of the important internal resources and capabilities of corporates to be able to reach their environmental sustainability goals. Thereby, It is quite clear that putting forward the contributions about this internal resource and capability that creates advantages to corporates in sustainable competition, is important. From this point of view, in this study It has been aimed to examine green transformational leadership researches, to discuss the existing studies with interpretive approach and to classify them gathering as headings. For the purpose of this goal, It has been aimed to contribute to this practice. In the conclusion of the study, researches related with green transformational leadership style has been gathered under three titles as "green transformational leadership and green behaviour at work", "green transformational leadership and green creativity" and "green transformational leadership and green performance". As a result, It is understood that for the achievement of corporates in the context of environmental sustainability, employees should perform green behaviours (environmentally responsible behaviours), and the closest manager's leadership style is important in fulfilling this (Andersson, Shivarajan & Blau, 2005; Ramus & Steger, 2000; Robertson & Barling, 2013). It has been proven with studies that green transformational leadership style is also effective in encouraging the employees to green behaviour at work (Graves et al., 2013; Robertson & Barling, 2013; Kura, 2016; Wang, Zhou, & Liu, 2018). Besides, it is understood that green creativity concept is important for corporates to increase their green innovation performance, and green transformational leaders have positive and significant effects on green creativity (Chen & Chang, 2013; Mittal & Dhar, 2016; Jia et al., 2018). Moreover, the importance of green transformational leadership style has been supported by empirical studies carried out (Chen & Chang, 2013; Chen, Chang, & Lin, 2014; Zafar, et al., 2017). At the same time, It has been found out that green transformational leadership style is effective for increasing green awareness and green self-efficacy of the employees and hence increases green performance.

6.Future Research Directions

Green transformational leadership style is a concept that has just begun being relatively discussed in literature, and It is seen that It has a positive and significant effect on green behaviour at work, green creativity and green performance. When the studies in literature are examined, It could be seen that green transformational leadership has always been discussed as an independent variable. Future researches could analyze green transformational leadership's moderating role. For example, green absorptive capacity described in literature about environmental sustainability as "obtaining environmental information, internalization, conversion and usage capabilities", is considered to have a positive and significant effect on green dynamic capacities (Chen, 2015). In this relationship, both moderating role of green transformational leadership and moderating role of this leadership between green absorptive capacity and green innovation could be investigated.

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THE RELATIONSHIP BETWEEN SOCIAL INNOVATION AND SOCIAL INTELLIGENCE: A CONCEPTUAL FRAMEWORK

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Abstract

In this study, it is aimed to investigate the relationship between innovation and emotional capabilities, at the societal level. The objective of this study is to explain the content and the scope of the social innovation concept, and determine the relationship between social innovation and social intelligence, which is the basis of emotional competency. The ultimate goal of social innovation is to create the transformation that will result in social benefit. This study is based on the theoretical discussions on innovation and transformation, which are the two of the theoretical dynamics of social innovation. The phenomenon of social intelligence lies at the basis of the transformation. The development and the maintainability of the social innovation must be transformed into social competence. Social intelligence at the societal level provides awareness for transformation. In this study, social innovation is explained on the basis of the relevant theories and the relationship between social innovation and social intelligence is discussed. This study also aims to increase the awareness for the social innovation concept.

Keywords: Social innovation, social intelligence

1.Introduction

Increases in population, technological revolutions, economic crises and other similar incidents have caused problems in social structure of the societies. Disorder in social life has resulted in significant need for change. These problems have tried to be scientifically solved through the modernist approaches. Social innovation, conceptualized on the basis of systems approach, has been considered as an effective tool in solving social problems. Social innovation is to find novel solutions to social needs and problems to create change in a positive way. It is important for the social order that this process must be sustainable by being transformed into competence. One of the dynamic phenomena affecting this transformation is social intelligence. Although social intelligence was first defined as "the ability to understand and manage men and women, boys and girls, to act wisely in human relations" by Thorndike (1920), in the literature there is no consensus on the definition of the social intelligence concept. According to Marlow (1986), social intelligence is an individual's ability to understand their own and the others' feelings, thoughts, and behaviors and to response appropriately to this understanding. This definition also consists of an individual's problem solving abilities to reveal problems in their relations with others and to find beneficial solutions to those problems. Based on this, it can be said that social intelligence is closely related to social competence.

In this study, it is aimed to investigate the relationship between innovation and emotional capabilities, which has been primarily considered in the organizational context, at the societal level. Organizations, which are considered as subsystems of the societies, use their physical, intellectual, and cultural resources to create value that will result in benefits for the society. They develop some behavioral patterns related to their operational activities by coordinating their resources. Over time, those patterns are transformed into competence within the organization that will provide the marginal value. According to the dynamic capabilities approach, it is important for the operations of the system that capabilities and competencies within the system must be steadily restructured and regenerated. At this point, organizations must reinforce their learning process and ability by using knowledge effectively. It was proved that organizational novelty and innovation are enhanced through the development of the organizational capabilities. It is also important for social innovation that the same dynamic process is transformed into competence.

The main objective of the social innovation is to create the transformation that will provide social benefit. This study explains the content and the scope of the social innovation concept on the basis of the system approach and investigates the relationship between social innovation and social intelligence. This study is based on innovation and transformation, which are the theoretical dynamics of social innovation. The phenomenon of social intelligence lies at the basis of the transformation. The development and the maintainability of the social

innovation must be transformed into social competence. Social intelligence at the societal level provides awareness for transformation. In this study, social innovation is explained on the basis of the relevant theories and the relationship between social innovation and social intelligence is discussed. This study also aims to increase the awareness for the social innovation concept.

2.Literature Review and Theoretical Framework

In this section, theoretical discussions on social systems and social structures, and social innovation is explained on the basis of the systems approach.

2.1.System Aproach

Systems Approach is one of the theories which provide the basis for a better understanding of social innovation and a better explanation of how it emerges since social innovation, in principle, symbolizes the radical change in the social structure and the social system (Heiskala, 2007). Additionally, Systems Approach provides the basis for a number of theoretical discussions on social structure and social systems (Frank, 2013, 15). Systems Approach is a holistic view addressing the social studies and investigating the societies and the relationship between the societies and the individuals. It has made contributions for explaining the social phenomena and developing the social order (Hatch & Cunliffe, 2006).

All phenomena current in the universe are in a hierarchical order within systems. Societies are composed of groups, groups consist of individuals, individuals are made of organs, and organs include cells. Each of these phenomena is called as a system. For example, individuals exist in a number of systems, both natural and artifactitious, such as the Solar System, the Earth, the society, and the organizations. Each one is the subsystem of another. Each subsystem provides the systematic order by performing different functions (Hatch & Cunliffe, 2006). Changes in the structures of the societies cause problems in the systems over time. Since those problems hinder social development, unprecedented solutions to these problems are needed to be provided in social systems (Howalt, 2017).

Consideration of the Systems Approach in social sciences increased with the modernism approach. Increases in population, deficiencies in economic and social systems as a result of the first industrial revolution led to social problems. The quest for new solutions to those problems paved the way for the use of innovation concept as an effective tool to organize the social life (Howalt, 2017).

The term “system” was first used by Durkheim to explain social system. This provided the basis for the analyses of systems theories at the organizational and societal levels. Boulding (1956) explained the systems in a hierarchical order based on the General Systems Theory. In his model, he indicated the levels in the systems with examples from the nature, and considered the society which reflects the systems of social relations as the eighth complex level in the nine-level hierarchy. This level, which considers the social relations in an order, specifies the systems which are shaped by the collective communication, ideologies, dominant ideas, values, and prejudges (Hatch & Cunliffe, 2006).

Another theoretician studying on social structure in the framework of the systems approach, Giddens (1984) pointed out seven structures in the societies. These are economic structure, the structure of the natural environment, technological structure, demographical structure, regulatory structure, normative structure, and finally, cultural structure. According to the Gidden’s structuration theory, structure both enhances and hinders the individual activities. This both enabling and restricting structure is created by the selective behaviors of the individuals. Giddens explained the dynamics of social structure through the dichotomous concepts that mutually support one another. These are meaningfulness-communication, equity-power, and legitimacy-allowance. Between these dichotomous concepts, three different phenomena, which are schemes, norms, and power relations play mediator roles. In this process, material and symbolic experiences generate the structure and outputs of the social systems through reciprocal effects (Hatch & Cunliffe, 2006). Heiskala (2007) defined the changes in those structures as social innovation. The term “structure” reflects the parts and the relationships among those parts in a society. Individuals having social role in the social system and the relationships they establish with their groups and societies constitute the social structure.

In 1966 sociologists Peter Berger and Thomas Luckman, in their book called “The Social Construction of the Reality” identified the language and speaking, that is symbolism, as the determinant of social structure. This

theory, also called as Social Construction Theory, emphasizes that individuals are affected by others and this interaction can enable the transformation that will automatically provide the stability in the social system.

Modern social theoreticians accepted social structure as a tool that can control the social outputs and specified social structure as an objective entity that can be definable and measurable. Open systems approach, on the other hand, found out that social structure is not stable and emerges by being affected by environmental variables. As a result, social structure was accepted as a variant process, rather than an objective entity (Hatch & Cunliffe, 2006).

In general terms, Systems Approach considers the society as a complex system that consists of sub-systems and argues that social order is provided through these structures and systems that make of the society. Others theories on the basis of the Systems Approach examine the social structure and social system under the perspective of different paradigms. All these approaches aim to make predictions on what will provide the stability of the social system and create the radical change under the unstable conditions.

2.2.The Concepts of Social Innovation and Social Intelligence

2.2.1. Social Innovation

The general term used for the radical change in the social system is named as social innovation (Drucker, 2014). Social innovation is a result of trying to create a social change and solve problems radically with an innovative approach. Therefore, societies have social order through social systems and social structures (Hatch and Cunliffe, 2006)

Giddens defines social innovation as a process, product or program that causes a throughout change in the functioning of the social system. This change reduces the harmful effects on individuals and the environment in that social system. As a result of positive social innovation, the system becomes more resistant and acquires the capability to challenge with the difficulties in the future (Giddens, 1984).

Social innovation is a concept resulted from the quest for a solution to the world complexity. It is considered as a reflection of the need for the radical change in the society and is evaluated as a cultural innovation organizing the transformative social change to have a sustainable human development (Howalt, 2017).

Social innovation refers to the new and convenient ideas in reaching social goals to meet the needs and problems of the societies. Social innovation requires knowledge. Social innovations develop to the extent how they response to social needs. For innovation to spread, individual support (fund provision, investments, purchases etc.) is a must (Mulgan, 2007) because for an invention, an idea or a social novelty to become social innovation it must be accepted by the society in which it is initiated. This is possible through the transformation of the social innovation into societa reality via a series of coordinated and planned actions, that is, through the institutionalization of social innovation (Howaldt, Schwarz, 2010).

Based on the abovementioned discussions on social innovation, it is apparent that social innovation is consisted of a chain of activities. All activities in the chain are considered as a process as a whole. This process is related to behavioral changes beyond the creation and structuration of social innovation in the society (Hoffman & Riem, 2008). The process beginning with noticing the need for a social change must have a societal focus to be resulted in social innovation and it is important that the whole process must be understood.

2.2.2. Social Intelligence

Social intelligence was first defined as the ability to understand and manage the others in the literature by Thorndike (1920) (Salovey and Mayer, 1990). The concept of social intelligence was not considered as a research topic for a long time. Later, Goleman (2006) studied the social intelligence in his book called “Social Intelligence: The New Science of Human Relationships”. Goleman, in his studies, emphasized the social intelligence as the ability for interrelationships, and as social phenomena revealed when interaction happens (Goleman, 2006).

Increases in neuroscience studies emphasized the importance of social intelligence as much as emotional intelligence (Albrecht, 2006). Whereas emotional intelligence is related with an individual’s noticing and managing their own feelings, social intelligence considers the psychology of groups rather than individual psychology. Social intelligence focuses on phenomena revealed in relationships an individual establish with

others and is closely related with understanding and establishing communication of groups, organizations, or communities (Goleman, 1995).

Goleman (2006) identified two determinants of social intelligence: social awareness and social ability. Social awareness consists of a wide array of phenomena from intuitively noticing another person's intrinsic mood, understanding their feelings and thoughts to comprehending the complex social circumstances. Social ability, on the other hand, enables to establish effective relationships by benefiting from social awareness. There are also a few measurement scales for social intelligence (Goleman, 2006, 5, 330; Unterbon, 2011).

Management scholars have pointed out the importance of the concept of social intelligence for understanding and effectively managing people. It is emphasized that social intelligence enhances the individual ability to understand and cooperate with others in a group, and additionally, reduces conflicts (Unterbon, 2011).

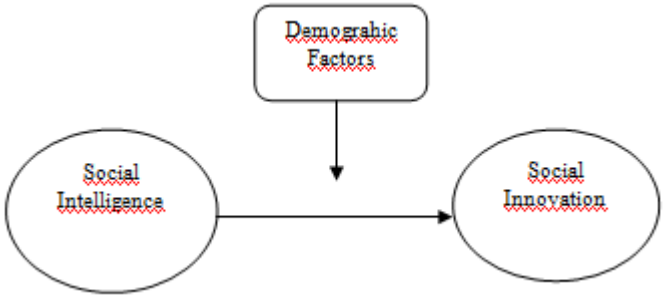
3.Research Method

The research model that established in the context of predicted theoretical relationships and related hypothess are given below. After that, this research will be tested on people or organizations that have made social innovation.

H_1: There is a significant relationship between social intelligence and social innovation.

H_2: Demographic factors have a moderator effect on the relationship between social intelligence and social innovation.

H_3: There is a significant relationship between social awareness and social innovation.



Figüre 1. Research Model

4.Findings

In this section, theoretical findings of the study and hypotheses are given.

In organizational analyses based on the Systems Approach, it was discoursed on social structures and the systems of the organizations, which are considered as the subsystems of the society. Descending from the societal level to the organizational level, Barnard (1938) defined an organization as a cooperating system in which formal structures made of social mechanisms and informal structures made of self-organizing processes are interacted with one another. On the other hand, Robert Merton (1957), one of the outstanding science sociologists, specified formal rational organizations as social systems made of predefined action forms in compliance with the rules and procedures of the hierarchical order. These approaches considered the organizations as subsystems of the societies and made contributions to the development of the concept of social innovation in the organizational sciences by trying to understand and explain the social structure of the organizations. Some organizational researchers also appreciate some approaches or applications in the organizational science that have caused changes in the social structure of the organizations as important social innovations in the field. Perhaps the best example of this is EFQM excellence model, which is an important social innovation for organizations that has had worldwide affects and caused transformation in a number of organizations (Franz, 2010).

The argument that changes at the organizational level can also have effects on the societies can also be explained on the basis of the institutionalization theory. Organizations operate in an institutionalized environment which is dominated by the social, cultural, political, and legal regulations. Organizations survive in their environments since they are adapted to the belief, norm, and behavior systems, that is, structures and institutions of their environments and they are socially supported. Organizations act as change agents having influence to change

their environments by way of this social support and empowerment and thus, they can display creative actions affecting their institutional environments (DiMaggio, 1988).

Social structure at the organizational level points out the individuals having organizational roles and the relationships within their organizational groups and units. Organizations, with all their departments and employees, are considered as effective systems at a high rationalization level. Organizations have also a social structure in addition to their physical structure, which is reflected by being a sub-sytem of the society. They use a number of their physical, intellectual, and cultural resources in order to create the social value that will provide benefit for the society. They generate some behavioral patterns through coordinating these resources in compliance with their operational field. These behavioral patterns are transformed into competence to generate the marginal value within the organizations over time. According to the dynamic capabilities approach, competencies and capabilities emerged within the system must be steadily restructured and renewed for the proper functioning of the system (Barney, 1991). In this process, organizations must enhance their learning process and learning capability through an effective use of knowledge. It was proved that innovation is enhanced through capability development (Calantone et al., 2002; Drucker, 1985). Systems approach have a critical effect on organizations' abilities to achieve success, use knowledge effectively and enhance innovation. (Pedler et al., 1997; Baker et al., 2007). Abrupt changes in environmental conditions force organizations to improve their abilities for effective learning and gaining competency. Organizational learning leads to a radical change at the basis of the organization (Hatch & Cunliffe, 2006).

This process of organizational change begins with identifying the problem and gaining awareness. There are also studies in the literature investigating the relationship between organizational awareness and emotional and social intelligence (Akgün, Keskin, Byrne, 2009).

The phenomenon affecting the innovation process is knowledge. The speed of creating new and genuine knowledge facilitates the innovation process (Drucker, 2014). A number of organizational studies provided evidence that innovation is enhanced through the development of learning abilities (Baker & Sinkula, 1999). Additionally, Drucker considered the changes in the individual behavior as a criteria for innovation and as a result of learning and emphasized that innovation must have the characteristics of originality, novelty and genuineness (Drucker, 2014).

As organizations have organizational abilities for creating and spreading knowledge and are able to transform their social capital into intellectual capital, a society also must have competencies for creating and sharing knowledge and transforming it into value (Nahapiet, 1998). To do this, they must develop their abilities.

Increasing awareness at the societal level and supporting entrepreneurship and knowledge-based innovation pave the way for social innovation. (Mulgan, 2007). Whereas innovation provides an organization with a competitive advantage, innovation at the societal level provides social welfare (Kırım, 2005; Çavuşgil, Calantone, & Zhao, 2003)

5.Conclusion and Discussions

This study is based on the current theoretical discussions in the relevant literature. Social innovation is related to how social welfare is enhanced through positive transformation. A number of factors, such as negative effects of technology, increases in population, and depletion of resources have caused social innovation to become important. The aim of social innovation is to use all of the society's tangible, intangible, natural, cultural and human resources effectively for social order and the operation of the system.

The phenomenon of social innovation has also become subject to studies at the organizational level. Organizations create value by using their resources and capabilities in coordination with their operations. They develop their capabilities by forming complex behavioral patterns in line with their objectives. Emotional capabilities is one of those complex behavioral patterns.

Emotional capability is defined as an organizational capability, based on individual emotional and social intelligence, which specifies an organization's competency in personal and interpersonal relations. On the other hand, social intelligence is defined as an ability to understand and establish relationships with others and it is an important phenomenon for effective communication. Research have provided evidence that organizational emotional capabilities enhance innovative activities and performance of the organizations.

This study emphasizes that the same dynamic process must be initiated in social systems at the societal level. Additionally, it argues that this perspective contributes to development of social innovation. It is predicted that social intelligence will provide the basis for the development of social competence and social innovation which will enable the social transformation.

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PERSPECTIVES ON LEADERSHIP

MODERN BAYESIAN METHODS MAY HELP LEADERSHIP ANALYTICS IN HIGH- PERFORMANCE BUSINESS AND SPORT

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Abstract

In this era of team-based organizations and data-driven Human Resource, people management is, as never before, involved in analytics and modelling of data with multilevel structure. In recent years, this has become especially true for leadership analytics, a relevant applied research topic in high-performance business and sport. In these fields, every last insight out of people data certainly help in winning the game at the top international level. Since the data to be analysed are often related to individuals grouped into teams, when fitting statistical models to them, multilevel regression methods should be preferred to their one-level ordinary least squares counterpart. Although in leadership research a frequentist approach has historically been used in addressing multilevel modelling, in this paper we suggest a Bayesian approach. Besides matching our intuitions from everyday reasoning and research, the Bayesian approach has several advantages. Among them, a lower sample size required when proper informed prior for the parameters of interest are available, a more intuitive interpretability of estimates, and the flexibility of fitting increasingly complex models. Inspired by recent literature in leadership analytics, we have simulated a concrete data set with an intrinsic two-levels structure. In order to show how the availability of modern intuitive, user-friendly and open-source statistical packages facilitates mathematical computation and results exploration, we have fitted a Bayesian hierarchical linear model to our data.

Keywords: Bayesian statistics, leadership analytics, multilevel model.

1.Introduction

Since the impressive explosion in data measurability and availability we are witnessing in our fast changing world, the way Human Resources (HR) operates is being transformed. We are in the era of data-driven, or intelligent, HR rise. It means that modern HR teams is taking advantage in the decision making process by turning data into insights with several analytics techniques: text analytics, predictive analytics voice or speech analytics, video analytics, image analytics, sentiment analysis (Marr, 2018). This is especially true in the high performance (or elite) sport and business world, where the goal is to win world competition at the highest possible level and the strategic management of the human asset certainly have extraordinary impact on performance. Today business is discovering all the potential of data analytics, putting on it a great emphasis as a new source of innovation and competitive advantage (Karaboga, Zehir, & Karaboga, 2019). Analytics techniques are now used in specific type of people analytics available to HR teams. Among others: capability analytics, competency acquisition analytics, capacity analytics, churn analytics, culture analytics, recruitment analytics, talent identification and tracking, injury prevention and wellness of athletes and employees, leadership analytics, performance analytics (Marr, 2018). All these business people analytics have their counterparts and applications in the wisdom of high performance sport. This is particularly true for rowing, which is intrinsically a data-rich and analytics-friendly sport as almost everything athletes do is measurable and analytically linkable to their performances. However the technical skills needed to build data-driven organizations are not native to the world of elite sport and business. Analytics partnerships are of vital importance. Just to give an example from elite sport, SAS, the giant of analytics, is the official analytics partner of British Rowing and is working with GB Rowing Team to drive improved performance through advanced analytics.

In modern team-based sport or business organizations, leaders are asked to motivate not only individuals but also teams as a whole. Leadership performance plays a key role in empowering and engaging employees or athletes to improve performance, with impact on global results, productivity and profit. Data for leadership performance analytics can also be easily gained through the use of traditional surveys, focus groups, employees or athletes' interviews. Models considered in the statistical data analysis should reflect which leadership characteristics are valuable for the organization goals, based on other analytics, such as performance analytics, or on the particular corporate culture. Since individuals are usually nested in teams, teams are nested in departments, and so on,

leadership analytics often involves data with a at least two levels in the hierarchical structure. This is also true with more general scientific research on Human Resource Management (HRM) in business and sport. In this setting, using statistical approaches such as ordinary least squares regression, that are designed to analyse data at one single level, may lead to severe prediction errors. Multilevel regression models are more suitable in the general context of HRM (Shen, 2016) or specifically in leadership analytics (Chen, Kirkman, Kanfer, Allen, & Rosen, 2007), because they account for variance among variables at different levels, handling source of errors more appropriately (Rowe & Hill, 1998). Multilevel regression models are also named hierarchical linear models (Raudenbush & Bryk, 2002), mixed effects or mixed models (Littell, Milliken, Stroup, Wolfinger, & Schabenberger, 1996), random coefficient models (Kreft & de Leeuw, 1998), variance component models (Longford, 1986).

While in leadership analytics single level and multilevel model are usually estimated with a frequentist statistical approach, we propose here the Bayesian statistical approach. The foundational ideas of the Bayesian methods match our intuitions from everyday reasoning and research (Kruschke & Liddell, 2017). Furthermore, the Bayesian framework offers several advantages in term of interpretability of estimates and flexibility of fitting increasingly complex models (Korner-Nievergelt et al., 2015; McElreath, 2016). Bayesian methods are also especially convenient for analysing multilevel models (Rouder & Lou, 2005; Shiffrin, Lee, Kim, & Wagenmakers, 2008).

In this paper, in order to show the advantages of the Bayesian approach and ease researchers in the field of leadership analytics into Bayesian statistical methods, we have considered an example concerning the estimation of a simple hierarchical model with two levels. Inspired by Chen et al. (2007) we have simulated a typical data set centring on the relationship between self-reported scores of Leader-Member Exchange (LMX) and Individual Empowerment (IE). LMX, an individual-level construct, should be intended as the quality of the social exchange between leaders and followers, characterized by mutual trust, respect, and obligation (Gerstener & Day, 1997) and a stimulus that exerts a direct influence on individual motivation in teams (Chen & Kanfer, 2006). Individual Empowerment should be conceptualized as a multidimensional construct consisting of *impact*, *competence*, *meaningfulness*, *choice* (Kirkman & Rosen, 1997, 1999; Thomas & Velthouse, 1990; Chen et al., 2007). The data set refers to 40 individuals grouped in 4 teams. We have fitted a simple linear model and a two-levels model to our data.

In data simulation, model fitting procedures, and results exploration and presentation we have intensively used the Stan (Stan Development Team, 2017) and R (R Core Team, 2018) software via the R packages *rstanarm* (Gabry & Goodrich, 2018), *shinystan* (Gabry, 2017), *ggplot2* (Wickham, 2016), *bayesplot* (Gabry, Mahr, Bürkner, Modràk, & Barret, 2018).

2.Literature Review and Theoretical Framework

2.1.Literature review

For state of art, wide and exhaustive introductions to multilevel thinking and modelling in HRM research, we refer to Bliese (2002); Bliese and Hanges (2004); Renkema, Meijerink and Bondarouk (2017); Shen, Messersmith, and Jiang (2018); Shen (2016); Aguinis, Gottfredson, and Culpepper (2013); and the references therein. For more mathematical treatments of multilevel modelling we refer to Snjider and Bosker (2012); Hox, Moerbeek, and van de Schoot (2018); Bates, Mächler, Bolker, and Walker (2015).

Kruschke and Liddell (2017) and Krushcke and Vanpaemel (2015) are short and friendly introductions to Bayesian data analysis and hierarchical linear modeling. Kruschke (2015) is a more complete presentation of the subject. Gelman and Hill (2007) is a good, perhaps dated from a computational point of view, introduction to general Bayesian statistical methods. Gelman et al. (2013) is a quite complete, but mathematically and technically demanding, presentation of modern Bayesian methods with an appendix on using Stan and R. McElreath (2016) is a gentle introduction to Bayesian methods, including multilevel linear models, with R and Stan. Fox and Weisberg (2019) is a good reference for applied regression with R, including multilevel models, with a freely available web appendix on Bayesian estimation with Stan.

For the Stan program, the state of art in Bayesian statistical software, we manly refer to Carpenter et al. (2017). Gabry and Goodrich (2018) present *rstanarm*, a Stan based R package. Gabry et al. (2018) is the reference for the *bayesplot* package for plotting Bayesian models. Muth, Oravecz, and Gabry (2018) is an excellent introduction to Bayesian hierarchical linear models fitting with *rstanarm* package and the user-friendly

exploration of results with the *shinystan* package. References therein can guide the interested readers toward a deeper knowledge of the subject.

3.Research Method

3.1.Bayesian modelling

Here we give just a hint of the Bayesian estimation process. The main idea behind it is simple and intuitive. Parameters to be estimated are random variables. Bayesian estimation is based on learning about the *posterior* distribution of the model parameters. The posterior distribution consists in a reallocation of the credibility across the possible values of a parameter. It is obtained starting from a *prior* distribution, using the information gained from data and precise mathematics driven by Bayes' rule. Modeling in the Bayesian statistical framework is composed of four key steps: 1) specify the data model and prior, 2) estimate the model parameters, 3) check sampling quality and model fit, 4) summarize and interpret results. Muth et al. (2018) is a very useful self-contained tutorial providing a pragmatic introduction to the Bayesian statistical methods, specifically oriented to the estimation of multilevel regression models. It describes in details all the steps of the estimation process and the advantages of using the *rstanarm* and *shinystan* packages.

3.2.Data and Statistical Models

Inspired by Chen et al. (2007) and Aguinis et al. (2013) we have simulated a data set composed of 40 individual obervations of three variables: quality of *Leader-Member Exchange* (*LMX*), *Individual Empowerment* (*IE*) and *Team*. The categorical variable *Team* classifies each sample component as belonging to one of 4 teams, each composed of 10 individuals.

The main purpose of this paper is to introduce the Bayesian approach to multilevel modelling into the field of leadership analytics and more generally into HRM research. We focus on the advantage of a Bayesian statistical approach with respect to the traditional frequentist one, rather than on the multilevel modelling itself. For the sake of simplicity we consider two simple statistical models to be fitted to our data. The first considered model is a simple linear model explaining the relationship between the level-1 variables *Individual Empowerment* (*IE*) and *Leader-Member Exchange* (*LMX*):

$$IE_i \sim Normal(\beta_0 + \beta_1\, LMX_i, \sigma^2)\,.$$

We will refer to this model as *model 1*. This model could be considered a conceptually wrong one, because it ignores the nested (hierarchical) structure of our data. However we will fit it to data to derive an overall relationship between *IE* and *LMX*. The second considered model, referred as *model 2*, is a *hierarchical two-levels linear model*, with random intercept and random slope. It is defined by the following two equations:

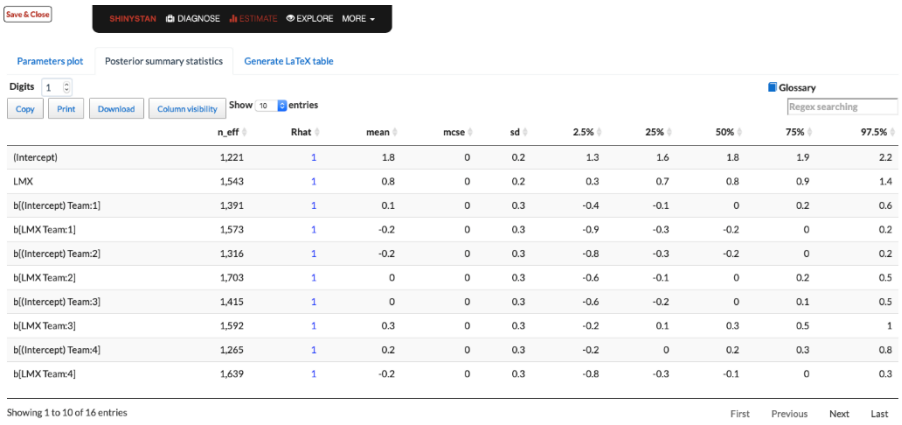
$$IE_{ij} = Normal(\beta_{0j} + \beta_{1j}\, LMX_{ij}, \sigma^2),$$
$$\begin{pmatrix}\beta_{0j}\\ \beta_{1j}\end{pmatrix} \sim Normal\left(\begin{pmatrix}\mu_{\beta_0}\\ \mu_{\beta_1}\end{pmatrix}, \begin{pmatrix}{\sigma_{\beta_0}}^2 & \rho\,\sigma_{\beta_0}\,\sigma_{\beta_1}\\ \rho\,\sigma_{\beta_0}\,\sigma_{\beta_1} & {\sigma_{\beta_1}}^2\end{pmatrix}\right)$$

where IE_{ij} and LMX_{ij} denote the *Individual Empowerment* and the *Leader-Member Exchange* for individual i in team j. This model improves *model 1* by taking into account the nested structure of the data: individuals are grouped in teams. It is expected that people in the same team share similar *IE-LMX* relationship and the strength of this relationship is supposed to vary among teams. Parameters μ_{β_0}, μ_{β_1} represent the overall intercept and slope. The team specific parameters β_{0j} and β_{1j} are assigned a bivariate Normal distribution with means $(\mu_{\beta_0}, \mu_{\beta_1})$, variance $({\sigma_{\beta_0}}^2, {\sigma_{\beta_1}}^2)$, and correlation ρ that are common across all groups at the population level. The variance of β_{0j}, denoted by ${\sigma_{\beta_0}}^2$, quantifies the degree of heterogeneity in intercept across teams. The variance of β_{1j}, denoted by ${\sigma_{\beta_1}}^2$, quantifies the degree of heterogeneity in slope across teams. The parameter ρ represents the correlation between intercepts and slopes and it should be interpreted in the following way: a positive value for ρ means that teams with stronger *IE-LMX* relationship tend to have higher *IE* level (Aguinis et al., 2013). The error σ^2 quantifies the within-team variation and is assumed to be the same for all teams. We will later graphically compare *model 1* to each team-specific fitted regression line considered in *model 2* (see Figure 03).

As for the computational aspects, we have used the Stan (Stan Development Team, 2017; Carpenter et al., 2017) based *rstanarm* R package (Gabry & Goodrich, 2017b), the *ggplot2* R package (Wickham, 2016) for graphical model representation, and the graphical user interface based *shinystan* R package (Gabry, 2017) for assessing convergence and exploration of results.

4.Findings

After model estimation, the *shinystan* package allows to show results and check sampling quality in a user-friendly way. It provides all the needed tools to visualize the posterior distribution and diagnose any problems with the Markov chains. A web browser drives the visualizations. The *Posterior summary statistics* in the *ESTIMATE* menu (see Figure 01) provides a summary of parameters estimates as well as diagnostic information such as the effective sample size (*n_eff)* and the $\widehat{R}$ statistics *(Rhat).*



	n_eff	Rhat	mean	mcse	sd	2.5%	25%	50%	75%	97.5%
(Intercept)	1,221	1	1.8	0	0.2	1.3	1.6	1.8	1.9	2.2
LMX	1,543	1	0.8	0	0.2	0.3	0.7	0.8	0.9	1.4
b[(Intercept) Team:1]	1,391	1	0.1	0	0.3	-0.4	-0.1	0	0.2	0.6
b[LMX Team:1]	1,573	1	-0.2	0	0.3	-0.9	-0.3	-0.2	0	0.2
b[(Intercept) Team:2]	1,316	1	-0.2	0	0.3	-0.8	-0.3	-0.2	0	0.2
b[LMX Team:2]	1,703	1	0	0	0.3	-0.6	-0.1	0	0.2	0.5
b[(Intercept) Team:3]	1,415	1	0	0	0.3	-0.6	-0.2	0	0.1	0.5
b[LMX Team:3]	1,592	1	0.3	0	0.3	-0.2	0.1	0.3	0.5	1
b[(Intercept) Team:4]	1,265	1	0.2	0	0.3	-0.2	0	0.2	0.3	0.8
b[LMX Team:4]	1,639	1	-0.2	0	0.3	-0.8	-0.3	-0.1	0	0.3

Figure 01. Posterior summary statistics for *model 2* from *shinystan*.

The $\widehat{R}$ statistics is based on comparing the variation between the chains to the variations within the chains. A commonly used heuristic is that $\widehat{R} < 1.1$ for all parameters is a strong indicator of convergence. In our case, results are fine. The output table in Figure 01 shows, among other things, that the estimate of the mean LMX parameter is 0.8, with a standard deviation equal to 0.2, and 95% interval equal to (0.3,1.4).

By clicking on the *Parameters plot* button, by default, the posterior distributions with medians and 80% intervals graph (see Figure 02) is shown.

Figure 03 shows a graphical illustration of results. The points are the team-specific observed data, the blue lines are the posterior mean estimates of the team-specific regression lines, the light blue lines are based on a random sample of 100 of the posterior draws, and the dashed line is the mean regression line from the single-level *model 1*. The uncertainty about the team-specific line is represented by the 100 light blue lines and depends on the variability in that team's data.

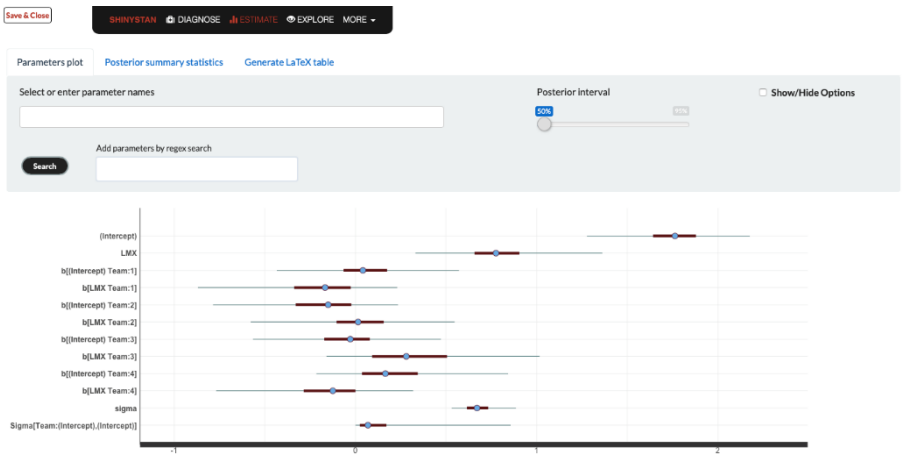


Figure 02. Posterior distribution with medians and 80% intervals for parameters of *model 2.*

5. Conclusion and Discussions

Leadership analytics is a relevant topic of applied research in high-performance business and sport. Since the organizational nature of modern business and sport involves individuals organized in teams or groups at different

levels, leadership analytics usually analyses and interprets hierarchically structured data. The interplay between variables at different levels of analysis plays a key role in applied research. This is especially true in the high performance wisdom, where people work in strongly interdependent environments and leadership performance has a certain impact on winning the game at the top level. Thus, there is an increased interest in multilevel modelling, the natural statistical environment to address models including variables at more than one level of analysis (Bliese, 2000).

In today high-performance sport and business, leadership analytics, as well as other people analytics used by modern data-driven HR, is taking advantage, as never before, of the more recent advances in technologies for data measurability and data analysis methods.

Multilevel models are usually estimated in the frequentist statistical framework. In this paper, we have suggested a Bayesian approach instead, for several reasons. The Bayesian approach to data analysis matches our intuition from everyday reasoning and research. It offers also unique advantages in terms of interpretability of results and extension to more complex models (Kruschke & Liddell, 2017; Kruschke, 2015).

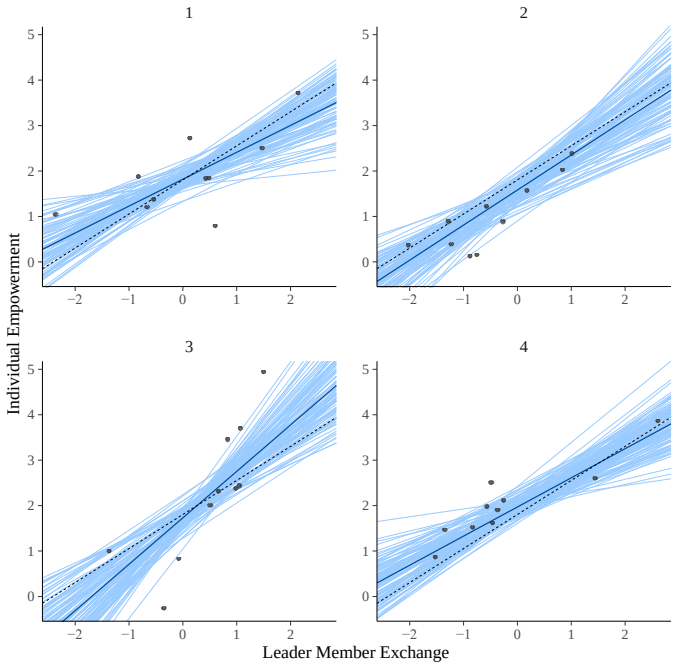


Figure 03. Graphical illustration of the team-specific results: observed data (dots), posterior mean regression lines for hierarchical (dark lines) and single-level (dark dotted line) models, and uncertainty (light lines).

Presenting the results of fitting a two-levels hierarchical model to a typical data set in leadership analytics, we have shown the increased accessibility and efficiency of the Bayesian estimation process due to recent advances in statistical software, estimation engine, and user-friendly interface.

We hope that this paper will encourage applied researchers in leadership analytics for high-performance business and sport, and more generally in Human Resource Management, to use Bayesian modelling in their future research activity.

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MANAGERS' COMPETENCIES AND MANAGERS' EDUCATION IN DIGITAL ERA

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Abstract

Digitalization is a major tendency in the contemporary global economy. By the opinion of the authors, the gap between present managerial education that mainly based on the traditional schemes of organizations, cultures are constrained in vertical silos, and the needs of the new digital ecosystems, mainly horizontal, clients' needs-driven, internationally and interculturally integrated, is growing and should be rapidly changed. The research goal is to find what competencies should a manager in the digital era have and what changes should be applied to the managerial education. In order to achieve the research goal, the authors constructed the paper in the following logical sequence, highlighting the main areas of the research: analysis of social and economic characteristics of the digital transformations; description of the main changes in a company's business model and its implementation; and discussion the new needs of knowledge and competences of management. Based on the authors' rich experience in the field of corporate management, preparation of modern managers and trends in management education, the paper presents the authors' viewpoint on the interpretation and analysis of the approaches used in the field of management education. The result of the research is proposal of some conceptual aspects of designing a study program to be offered in business management schools towards the process of digital transformations.

Keywords: Digital transformation, manager's competencies, managerial education

1.Introduction

The digital era has started with the arrival and diffusion of smartphones, which put computer power in people's hands. A deep socio-economic transformation started and has been deployed along with society, not only in business. The nineties years where streaming organizations through Process Reengineering in business and public administrations, creating a big services economy through outsourcing of professionals and staff previously internal to companies, impacting the work market with new flexibility, new educational needs, within the market's globalization process.

Social and economic aspects of the society have been impacted by digital technologies; a process, which has accelerated a lot with the new millennium. We call "millennials" the new generation born around 2000, that profoundly change ways of living, learning, and working. Globalization processes are accelerated through new ways of producing, shops are disappearing from cities because of e-commerce; many people are interconnected on social media and web; schools and universities are also impacted by this technology and social change. This situation is an enormous challenge also for managers that will be motivating, coordinating, leading these new millennials in the firms, whose environment will be radically modified by the new wave of digital technologies. The new generations are demanding more freedom, more creativity expression, more proactivity in the work environment, traditionally structured through many levels of organization departments, tasks, and quite rigid procedures.

In the current stage of economic development, the economy of any European country needs a new generation of leaders who are able to synthesize academic, professional and information competences, including the ability to work in a dynamic and volatile global environment, and who are able to make decisions, tackle issues, plan and set priorities. Students are provided with an opportunity to enhance their employment prospects through advanced courses focusing on digital business innovation, marketing and communication strategies, development of emotional intelligence, financial literacy and leadership.

Digitalization is a major tendency in the contemporary global economy. The digitalization of society is pursued in relation to individuals, whereas businesses and the public sector create new models of collaboration among people, businesses, and government institutions. Such developmental trends yield new professional competencies for a modern manager, which requires the application of innovative and technological knowledge in various fields of management. Integrating information systems with digital communications in an

organization's management system enables many of the company's business processes to be enhanced, such as customer service, enhancement of manufacturing processes and inventory management, enhancement of its accounting and reporting system, which generally increases the efficiency of management decisions. This tendency increases the need for talented graduates with digital management skills who can help companies compete in a global business environment.

The goal of this study is to propose new content and to develop a set of different subjects in order to provide more effective educational approaches in supporting the management needs in the era of digital transformation.

In order to answer the question: what competences should a manager in the digital era have, the authors constructed the paper in the following logical sequence, highlighting the main areas of the research:

- analysis of social and economic characteristics of the digital transformations;
- description of the main changes in a company's business model and its implementation;
- discussion the new needs of knowledge and competences of management;

proposal of some conceptual aspects of designing a study program to be offered in business management schools regarding to the process of digital transformations.

The results of the analyses will be discussed and recommendations will be provided for managers and academician at the last section of the paper.

2.Literature Review and Theoretical Framework

2.1.Digital Era

Now looking back, we could say that these transformations were preparing people for the new wave of change, the digital change. All the processes started ten years before are sharply accelerated from technology interconnecting people at every level in the firms and in social life.

McKinsey & Company describes digital as "less of thing and more of a way of doing business". To be more specific, going digital is a combined collaborative strategic effort across an entire organization with a focus on technology transformation, new ways to engage with customers, entirely new ways of doing business, redefining your organization (Haisman, 2018). Information diffusion and consciousness, speed of decision, flattening of organization structure, automation of clerical work in planning and control, after that of blue-collar in the production area, disruptive new materials and services, further integration of international markets, all these and others to be discovered are characteristics of the Digital Era. The new opportunities of cultural growing and personal creativity contribution to society are enormous, so as the possible bad use of interconnecting technology for criminal objectives. Once again, people will decide how to use new technology, but remembering McLuhan and Fiore (1967) and their "The medium is the Massage", individuals will be deeply changed by the integrated networking, completely different from past communication devices. Later, in 2001, McLuhan wrote: "Everything is changing – you, your family, your neighbourhood, your education, your job, your government, your relation to the others. And they are changing dramatically" (McLuhan, 2001).

So, Digital Era is growing and diffusing in real time with the possibilities of studying it and forecasting its impact on human life and business, and many things should be discovered on going, experimenting, collecting facts and phenomena, acting as research always performed, but with very high time constraints compared to the past speed of change. Some things we can learn observing the behaviour of the native digital, the so called "millennials", who live more spontaneously and comfortably with these transformations, but they cannot compare them with previous evolution stages to explain to others. They very rarely explain the processes which they normally live with, and this makes it difficult to specify all the potential socioeconomic changes.

2. 2. Digital business

The proceeding impacts business at different speed depending on products/services, size, competitive and international position, of the firms and it is a process of better definition. If we remember "Snow's model" approach of business as Strategy, Structure and Processes, we can try to categorize the major changes originated by digitalization technology according to the same classification. Teepa's care strategies and techniques look at "what is known about brain function and changes that happen with various conditions and integrate that information with therapeutic approaches" (teepasnow.com, 2019).

Strategy becomes a high-speed reformulating process, it is no more something that can be planned annually for the next three or five years, but a concept is very dynamic, subject to the change and correction according to business intelligence and environment perspectives, also difficult to forecast.

Digital transformation is changing the way how organizations interact with customers, suppliers and partners. The pace of change is unprecedented. Across industries, 'born digital' organizations are disrupting traditional business models (The Economist.com, 2019). Digital pressure will be very high on technical constraints in engineering and production of new products, because it is clear that the throughput time of a product from its design to final distribution must be substantially reduced. It can be done through further outsourcing of internal working phases, in order to adequate the reaction time to the accelerated pattern of change and the quite instantaneous information and decision flow. At the moment, the strategic approach seems absolutely insufficient to leverage the new opportunities offered by the digital environment.

Also, all the technological and marketing scouting outside the firm should be empowered to follow if not anticipate the external dynamics, and benefit from business intelligence new approaches and tools, AI based. The mainstream of new strategical opportunities in this context is naturally networking with other firms, and also competitors, to create the value from cooperation, identifying new business possibilities.

Organizational structures will be profoundly changed from a digital scenario because individuals, empowered by smartphone technology, will try to overcome the silos approach of firm hierarchy.

Organization will be more and more simplified and flattered, more than in the past, and the work will be mainly developed in multidisciplinary teams and finalized through projects managed with adequate models of Project Management, the old approach which never succeeded in traditional organizations. Supply chains will be cooperative, interfirm extended, more integrated.

Processes both at the operational level and at the planning and control level will be largely automated with internal software engineering and development on AI basis, or with the support of external services centers, necessary to be implemented because of the shortage of human resources specialized in digital fields. The new approach to technology dynamics through external multi-firms' providers will be easily adopted due to the general lack of internal digital specialists. **As digital technologies offer new ways to connect, collaborate, conduct business and build bridges between people, it touches the core of all business functions and even the ways the organizations are managed.** Digital technologies have also challenged the existing business models; and continue doing it. One of the fundamental driving forces of it is the capacity of innovation and the consumerization of IT certainly also plays a role. Digital business is about that stage you see in many maturity models *(in marketing, ICT, social, business, you name it)*: the converged – or fully connected/integrated stage. From a sheer technology perspective, it goes beyond the famous third platform and the evolutions we are witnessing today: cloud computing, the Internet of Things, mobile, Big Data.

It is really a very broad ecosystem of processes, technologies, business functions, infrastructure, etc. moving towards higher stages in the maturity models. It moves from digitization to digital transformation and beyond. It is not a matter of just deciding to 'do it'. There is legacy, resistance, know-how, priorities, resources, silos. Yet, no organization can resist de facto change and (pro-active) adaptation. It is the law of the ecosystem, the organism and the holistic reality connected. It is clear that digital business makes utter sense beyond social business.

According to the recent report by Gartner Inc. "Six Key Steps to Build a Successful Digital Business", by 2017 25% of companies will have seen their competitiveness undermined by shortcomings in their digital business model (Gather, Inc., 2014). Gather Inc. recommended the six keys to avoid this: (1) Create the Right Mindset and Shared Understanding; (2) Put the Right Leaders in Place; (3) Launch a Digital Business Center of Excellence; (4) Formulate a Digital Strategy to Respond to Opportunities and Threats; (5) Find, Develop and Acquire Digital Business Skills and Roles; (6) Create New Digital Business Capabilities. The Gather Inc. concluded that digital business is changing the way organizations use and think about technology, moving technology from a supporting player to a learning player in innovation, revenue and market growth (Gather, Inc., 2014).

While most digital evolutions are looked upon from a technology- and company-centric perspective, often leading to disconnected business strategies. It's important to cut through the noise and buzzwords of the day, put them in context and focus on the real questions: how to improve your efficiency, business and the lives of the

people in the ecosystem you operate in. Digital business goes beyond the social business and certainly beyond marketing or information communication technologies, ICM. It is about business and people, or as said: about experiences. And those experiences are shaped, among others, by having the proper information, resources, tools and much more, to allow choice and a partial/gradual shift of control. The "i" of IT (information) plays a crucial role in it, as does the context within which it resides.

2.3. The balance between technology, efficiency, and humanity

Digital business is not just about technology, disruption or even business in the strict sense. Technology is not a holy grail. What matters is how digital technologies impact business in real life because they affect the behaviour and attitudes of people across all their activities. Just consider how organizations, executives, teams and people use them to improve the ways they serve their customers, collaborate and operate.

Digital business is business with a people-centric view and agile processes, whereby digital technology is used to enable people (customers, employees, managers, etc.) to succeed, optimize all business functions and make your business more relevant and profitable. It does this in the increasingly connected ecosystem in which organizations and people live and work. The CIO, CMO will need to learn from each other and not to understand the role of digital and how it is used by customers, employees and other stakeholders is not an option for any C-level exec anymore. You cannot "manage" a business or business function without missing competitive benefits if you do not understand the digital reality and its' impact on customer experiences in the broadest sense.

People-centricity and humanization sometimes mean disconnecting from efficiency and technology, as well. We can optimize and improve everything. Efficiency, productivity, profit, customer experiences, the ways we work and collaborate, but in the end, nothing works when we ignore the human element. We are not robots, we cannot always focus on being more productive, collaborative and connected. We need the conditions, space, and environment in which our freedom and creativity can be nurtured and cultivated. We cannot do business if we cannot be "human" and inefficient at times.

2.4. Management needs in digital transformation

From the business changing process of the previous point, we can start to analyse the requirements for managers' competences in the next future. The main cultural jump will be to use simultaneously all the classical management capabilities, from strategical to operational and vice-versa according to the organizational situation, and to adequate the behaviour to the culture of the different teams, involved in the various projects, to which one participates. So, the classical managerial skills, from analytical ones to the planning and control skills, from organization design to budgeting and performance indicators, should absolutely not be forgotten, but a lot of new hard and soft skills must be added.

We already referred to the Project Management techniques and style as the core competence, because the new structure of organization will be based on many projects performed by multi-competence teams, measured on results developed according to timing strategically prefixed, but with flexible and autonomous pattern decided within the team. Therefore, management will study and implement a general framework strategically consistent and control the results, without too much entering in organizational details and procedures, to leave the maximum space to personal creativity and contribution, managing on the border of what traditionally was looked at as a chaotic situation. Due to the fact that these teams are not only internal to the firm, but in collaboration with suppliers and clients not only in the local market, but mostly in a very international context, negotiation and coordination challenges are much more frequent than in present situation. Therefore, the managers should have been trained to multicultural environment, geopolitical factors, and different level of technological developments of the people.

Other critical variables of future companies will be the relentless innovation in products and services, international competition/cooperation on innovative initiatives, and the continuous development of decisional techniques and processes automation at any level of the firm.

The innovation front requires forecasting capabilities and entrepreneurial ones. A lot can be done scouting and integrating new start-up initiatives coming out from Universities as a spin-off or from new young entrepreneurs, identifying the new market or social needs or leveraging on new specialized technology.

But this is also a new competence for managers, and very scarce one at the moment, because traditional big companies have the "not invented here" approach to external success story, looking at them with scepticism, as

the start uppers know very well when they meet managers of big firms. This competence of scouting the best from the scientific and technological environment, now particularly from green new industries, must be developed through educational programs and direct contacts with knowledge most updated centres of research and development. Also, entrepreneurship courses should be necessary, to develop more proactive entrepreneurial attitudes in managers, already put in the past to the attention of the big companies, which are too much bureaucratic in their structure and processes.

There is a growing demand for a highly-skilled workforce capable of quickly absorbing and mastering innovations. The report "Doing Business in the Digital Age: The Impact of New ICT Developments in the Global Business Landscape" (2015) by the multinational company Deloitte, indicates that there is "demand for a new generation of specialists-executives". Such need is created by the increasing role of digital technologies, which is the most important source of growth for national economies. Digital technologies are changing the world, organisations, business, society and setting new demands for specialist education. In this context, the European Commission has formulated the following vision for the labour market: "Europe aims to accelerate transformation of the business environment by developing and wisely using digital technologies to accelerate growth and create jobs." To achieve this goal, three tasks have been set:

- ✓ to become a magnet for highly qualified talents and a great place for business;
- ✓ develop an entrepreneurial culture to harness the digital potential of European economics, focusing on small and medium-sized companies;
- ✓ actively maintain and develop the link between traditional industries and digital economics.

What competencies must modern leaders have in order to be competitive in the European market? A study "Employers' Needs and Expectations for Qualified Employees", conducted by Latvian scientists in collaboration with the Erasmus University Rotterdam, led by Professor B. Sloka, identified the key competencies that Latvian employers require from young specialists. They are as follows: loyalty to the company and business, ability to plan their own time, ability to do business independently, communicativeness and desire to improve. Results of this study are in line with the statements made during the 12th European Quality Assurance Forum (2017) by Anita Līce, the Head of Education and Employment of the Employers' Confederation of Latvia. According to employers, the competencies necessary for managerial work "should be concentrated on developing the competencies related to emotional intelligence such as responsibility for one's own decisions, attitude towards work and colleagues, work motivation and ability to adapt to new situations during the teaching and learning process".

What competences should a manager have today? According to the authors, the set of competences that graduates of the Grenoble Ecole de Management will master under the Advance Master's in Digital Business Strategy program, best reflect the core competences of managers in the digital era (Masterstudies.com, 2019):

1. The leader who can drive a company's digital transformation,
2. The manager who knows how to identify and implement the opportunities for growing business created by the digital business environment,
3. The team member who has the required team spirit and global vision to develop and implement the company's digital business strategy.

Regarding the subject of new technology wave in the automation of operational but mostly also decision-making processes of a firm (AI), the argument of so many articles in magazines and newspapers, the possible approach is not so simple as to go to Human Resources department, and planning new recruitments with technical skills. The talent market is already in shortage of these scientific types of skills, and so probably service centres and consulting companies will be the main actors of this side of digital transformation. As at the time of operations, research managers are significantly not prepared to evaluate the efficiency and usability of an analytical tool or math model to decisional processes. The offer of sophisticated software on this subject will multiply, and someone must evaluate and purchase it. So at least some basics of knowledge should be diffused in management to better evaluate and understand the organizational impact of these new automation trends.

All these change factors will have as a final result empowerment of the people in their work and in the social environment. People will be more creative and will want to be more respected in the desire to contribute to the

firm with the more conscious role and work. The growing entrepreneurial attitude of single workers will be not easy to coordinate and to utilize without depressing their initiatives and making them converge to the common efforts and teaming for common objectives.

What is the competitive advantage of digital pioneers? They are leaders! That is one finding of a study by the Harvard Business School (Whitehurst, 2015). The big question is though, which special skills managers need in order to become dedicated leaders for their teams. Leadership in the digital transformation is marked by fast-changing and complex environment, as well as diverse multi-competence teams that work closely together. Therefore, successful leadership depends on the right mindset and skills built on rational, emotional and digital intelligence:

1. **the Intelligence Quotient (IQ) means skills "**to analyze and to apply past lessons to new situations**";** they also need "to develop a deep understanding to be able to make complex decisions; in other words, they need the sharpest mind".
2. **the Emotional Quotient (EQ) includes communication skills:** "a successful leader, therefore, must be able to build collaborative relationships, foster diverse talents and influence different people".
3. The Digital Quotient (DQ) - this pillar might be the most apparent leadership trait regarding digital transformation. Managerial competencies refer to "a rapid adaption and transformation by injecting a digital mindset into the organization's strategy".

In recent years, there has been much talk of the shift from managers to coaches. This evolution is happening and testifies to the challenges posed by digital transformation (eLearning industry.com, 2018). What is the manager's role when a company announces projects focused on innovation and disruptive technology when 50% of staff struggle to upload a video in less than a minute? The manager must not only convey the organization's strategic vision but also provide their team with the means to understand and adapt their work accordingly.

In terms of day-to-day support, managers have a pivotal role to play. Transformation is not so much a question of competence as one of culture and training to fit this culture. It becomes a matter of empowering staff by allowing them to explore and learn and helping them anticipate the obsolescence of their current skill set. A manager's primary role is to encourage this almost organic skill improvement by identifying learning opportunities based on the strategic corporate goals. Managers must also support and encourage self-training. As it was previously mentioned, training used to be done at specific times or dates; now, our relationship with learning has changed since we are continually training and learning new things. It also implies that managers give staff time to learn by allowing them to manage their schedules, for example, and creating dedicated time for training.

Finally, managers need to nurture employees by helping them understand multiple viewpoints and understand the goals of other departments within the company. It is essential to allow staff to understand their work fully by viewing it as an ecosystem and not merely as a set of meaningless tasks without concrete, measurable and understandable outcomes for the employee.

When a company is continually learning and adapting, managers tend to take on another role: that of centralizing, facilitating, and promoting best business practices and methods internally. It is up to him or her to encourage their team to document best practices, to highlight them, develop a process, and circulate content that is produced. Managers are in charge of creating optimal working conditions in order to develop collective intelligence within the company. This role is paramount, especially when there is a generational renewal taking place within a team. Orchestrating the transmission of knowledge between senior staff members and younger employees (and vice versa) is essential. It helps save time and increases performance by leveraging knowledge accumulated within the company and making it actionable.

3.Research Method

Methodologically the paper has been developed on recent literature basis, not so rich until now, and on the personal experiences of the authors, one from them has operated for half a century along all the managerial and ICT transformation phases as a top-level manager and consultant in Europe, and has been professor in many different business schools internationally. Another author has rich experience in managing higher education curricula in Business and Management and participating in scientific and consulting projects for training and coaching the managers in Latvia.

The authors classify the paper as the original research with elements of perspective, opinion, and commentary. Based on the existing experience in the field of corporate management, preparation of modern managers, and trends in management education, the paper presents the authors' viewpoint on the interpretation and analysis of the approaches used in the field of management education. The authors assume discussion development on current issues concerning the research problem.

The content of the paper is logically structured. Starting from the new paradigm of digital society, authors analyze the change inside business through digital impact and consequently, the new management needs and competencies are required. In order to achieve the research goal, the authors constructed the paper in the following logical sequence, highlighting the main areas of the research:

- ✓ analysis of social and economic characteristics of the digital transformations;
- ✓ description of the main changes in a company's business model and its implementation;
- ✓ and discussion the new needs of knowledge and competences of management.

Looking at the present educational areas, covered in managerial courses and schools, it is easy to find a gap between the new requirements and current competencies, on which management education is based. From this gap analysis, the authors proposed some suggestions of educational mix to overcome the lack of managerial knowledge about the digital transformation and the behavior inducted in the people, they are responsible for.

So, the result of the research is proposal of some conceptual aspects of designing a study program to be offered in business management schools towards the process of digital transformations.

4.Findings: Redesigning managerial education

The new generation of leaders

The educational programs in the field of contemporary Business Management benefit from irreversible trends of the modern world. *The first* tendency pertains to the need for organizations to undergo digital transformations in order to overcome the economic shocks and address social issues, considering the growing importance of information technologies. *The second* trend relates to that globalization tendencies, intensification of data protection and information security requirements, as well as an expansion of outsourcing necessitate the creation of new organizational structures and new business model based on horizontal rather than vertical (traditional) organizational management principles. *The third* trend is closely connected to the first two tendencies because any change in the organization affects the financial resources of the organization, its planning, allocation, and control. In this light, it is important to develop the analytical abilities of modern managers, who must make operational decisions and who must be able to predict the impact of these decisions on the financial performance of the organization.

These three trends in the modern world call for the training of a new generation of leaders. This training should be based on implementing the integrated and multidisciplinary approaches to the leadership training system. It means that contemporary organizations should rely more on highly skilled professionals with excellent analytical skills to enhance and sustain a good quality of changing strategies and business processes. The change manager is a trained professional who can lead an organization through the change in business processes. This manager can model the change outlook, can determine the financial consequences of the change, and can help handle the stress of the change in the organization.

Managerial competencies

Based on the theoretical background, some basic things in management competencies have changed, and some of the significant impacts on work can be identified:

- work will be more and more implemented in the multidisciplinary teams, finalized to specific transformational result;
- throughput time in any process will be further shorter;
- management style and leadership will be those of Project Management codified approach;
- mathematics and statistics knowledge should be increased at any work level to better understanding of the structure and application possibilities of new AI tools and models;

- cultural and soft skills will be also required to integrate workers' experience in the digital transformation of a firm.

The significant changes in the social behaviour will be potentially disruptive for the economic organizations. If managers are not conscious of the new type of people they will have to manage and if they do not anticipate the impact of these social changes, resulting from a progressive interconnection among people and from a sense of empowerment and unique contribution they can give through the new technologies.

Main areas of teaching

On the basis of all these analyses and evaluations, it seems very clear the need for redesigning the managerial education for a digital era, focusing on the competencies the managers will need in this context. Today managerial courses programs are very similar in all the private and public Institutions; sometimes the similarity is boring.

Main areas of teaching could be generally:

- Strategic area, mission/vision, scenarios building, M&A, product/market positioning, financial policies; the weight in the entire course is about 30%.
- Financial Management area, structuring financial assets of the firm, financial markets, investment policy and methods, cash flow analysis and control; the weight in the entire course is about 20%.
- Marketing area, communication policies and tools, marketing mix, service marketing, customer experience, customer focus, mkt researches, mkt department organization; the weight in the entire course is about 20%.
- Planning and Control area, budgeting and cost control, managerial reporting, accounting; the weight in the entire course is about 10%.
- Change management area, HR management policies, educational and training programs, processes reengineering and overcoming people resistance to change; the weight in the entire course is about 10%.
- Supply Chain Management area, logistic networks, purchasing policies, supplier's integration and cooperation, inventory policies, transportation options; the weight in the entire course is about 10%.

So, it is evident that the pillars of the past and present management education are Strategy, Financial, Marketing, Human Resources, Operations Management through the Supply Chain Management concept.

The digital era requires a total rebalancing of these subjects, which remain very important, but changing contents, and also adding knowledge in new fields.

- Strategic area should be reoriented to understanding the external factors opportunities and the threats of globalization, through injection of Geopolitical concepts, competition analysis, technology scouting, intercultural communication; the weight in the entire course must be a bit reduced to 20%.
- Financial Management Area basically remains the same, adding Fintech new tools; weight also must be reduced to 10%.
- Marketing area, many changes in contents, focused on the digital approach and customer-centricity, micro-segmentation, personalized products and services; weight remains about the same.
- Planning and Control area, many changes regarding the impact of AI in the automation of planning models and their retrofitting; weight remains about the same.
- Change Management area, a lot of changes, main focus on team building and project management approach, the usability of AI and new tools, robotics cooperation, human/machine interface, machine learning; weight remains about the same.
- In the Supply Chain Management area, many changes focused on the integration of suppliers and clients, cooperation with other firms, internal new technology applications AI and robotics; weight increases up to 20%.

- Technology Strategy and Management area, a new area to familiarize managers with the opportunities of new algorithm-based technologies, focusing on how to buy and introduce them, understanding and controlling the digital transformation; weight is about 10%.

Of course, these are only suggestions and ideas, considering the wave of technological and market changes typical for the digital era. But as we observed from the beginning, everything is in a transformational phase, so new managerial needs will add, new subjects to be dealt with will emerge, all is in a liquid status. Only actual experiences will reorient the educational programs.

5.Conclusion

We started our path from the fundamental critical change factors of the current digital era and tried to analyze their impact on management, with the creation of new managerial needs to develop the enterprises of today and for the future. Managers must transform themselves from command and control attitude to more coaching and innovation drivers for all the people involved, from a traditional leadership based on strategy formulation, to a more effective project manager approach, leading people teams empowered by digital techniques and tools to results.

Digital transformation means the transition of companies and organizations to the digital management methods, which change the corporate culture and organizational behavior and which create the necessity to introduce new digital management tools. Digital transformation expands the organizational boundaries and helps restructuring the business models to deliver economic growth by blurring boundaries between the economic sectors.

Educational new investments and coaching skills in managers should be more necessary than in the past, and also this need is not easy to be nurtured through the present training courses. Management will become a delicate balance between the respect of more demanding people and the energy and credibility of leadership of the digital transformation.

Consequently, managers develop new educational needs, which must integrate the present courses, with new knowledge, skills, and competences. Analyzing the USA and European managerial programs, we tried to propose the new content and a set of different subjects; it is done to provide more effective educational approaches, oriented on supporting the needs of management in the era of digital transformation.

Major schools of management are running to transform themselves both in educational programs and in internal educational tools and processes, taking into account the digital transformation of new managerial needs and the opportunities of teaching through the new technological devices and solutions. The researches in these fields should improve the situation a lot for the next future, with an interdisciplinary approach from cognitive sciences to technological knowledge and decisional process new modeling with artificial intelligence culture. This paper is an attempt to stimulate further studies and research of digital impact on managerial education.

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EXAMINING OF THE EFFECTS OF MANAGEMENT CAPABILITY AND TECHNOLOGY ORIENTATION ON PRODUCTION COMPANIES, PRODUCT INNOVATION AND BUSINESS PERFORMANCE

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Abstract

One of the most important features of the manufacturing companies lies in the technological infrastructure used. Investment in technology is important to ensure innovation in production. Both product innovation and widespread use of technology are directly proportional to the capability of management. Management capability has an important feature in ensuring employee participation in the organization and in fulfilling the performance criteria. The aim of the research was to investigate the effect of technology focus on product innovation and business performance in the production companies located in the organized industrial zones in Istanbul, and also the effect of management capability on technology and product innovation. The questionnaires were collected from engineers working in technology-oriented manufacuring companies located in the organized industrial zones in Istanbul. The data was obtained from the sample analyzed with SPSS 25 program. Factor and reliability, mean of variables loaded on each factor, correlation and regression analyzes were performed. Sobel test was also performed for mediation effect. By analyzing the data obtained as a result of the research, we can see that management capability and technology orientation positively affect both product innovation and business performance. At the same time, when the mediation effect of technology orientation is examined, a meaningless result emerges in terms of its effect on product innovation, but it can be explained that there is a significant relationship in terms of its effect on business performance.

Keywords: Business performance, innovation, management capability, product innovation, technology orientation

1. Introduction

Technology has become the most important competitive element. In the global structure, nations, companies and multinational companies are examining the competition and it is seen that technology, technological development, technology management, technological talent, knowledge management and innovation management activities take the first place in creating competitiveness. This study focuses on technology, product innovation and management capability as the central processes in technology management, information management and innovation management play an important role in competitiveness. While focusing on the market in changing environmental conditions, focusing on technological developments is also critical for companies to gain competitive advantage and superior performance. Managers' understanding of performance is to show a constantly changing and renewed process from past to present. In this process, the understanding of performance that has lost its value, has been re-established and gained more importance has emerged. Generally; traditional methods represent old and outdated and contemporary methods represent new and modern performance evaluation practices (Neely, 2007). Management, which is basically influenced by the science of economics and is defined as designing, creating and sustaining the environment for individuals to work in groups in order to obtain the aims efficiently, started to develop after the industrial revolution as a theory (Weihrich & Koontz, 1993; Taylor, 1911). Nowadays, the characteristics of new product studies are from innovation to innovation based; from sequential linear model to dynamic model based on close interaction with technological developments and market changes; from single discipline to interdisciplinary studies; from product features to creating value for the customer (Fritsch & Meschede, 2001). In the 2000s, the rate of change in technology and market increased significantly. The innovative product development capabilities and capacities of the enterprises have become the focal point of success in an intense competitive environment (Baxter, 2018). For this reason, management cability has an important place in order to make technology orientatiton effective both in performance and innovation (Unsal & Cetindamar, 2015). However, the main reason why companies attach importance to product innovation is; the intense and difficult competition in the market, the large number of market segments, the rapid change of technology. In addition, customer needs change and equalize, the life span

of the products gradually shortened and the need for new products to meet customer expectations and desires. In other words, this type of innovation is directly related to customer expectations and demands and results from the changes made by the companies in the products they offer to the market (Johne, 2018). Successful management capability, the desired level of technology orientation, the contribution of business units or employees to the objectives of the business in which they are located can be demonstrated by directly determining the performance of the unit or employees (Grady, 1991). It is important to determine the location of the businesses in which it operates, to measure its performance in order to find the possible differences between them and other enterprises by benchmarking and to improve the quality of internal and external activities (Bilgen, 2001). The aim of this research is to investigate the relationship between management capability, technology orientation, product innovation and business performance.

2. Literature Review

2.1. Management Capability

According to Selznick, capabilities are the distinctive elements of the enterprise that have the potential to drive the firm forward (Selznick, 2011). Capabilities are positioned as a source of strategic competition. Prahalad and Hamel stated as a product of sharing-based learning capabilities in the enterprises that they transformed into all kinds of knowledge, mastery, experience, cultural codes and technical processes, and turned into business-specific basic ability and as a result, they created non-replicable competitiveness (Prahalad & Hamel, 1990). The management capability of the top management of organizations is considered as one of the important elements that can lead the organizations to success in their activities (Mithas et al., 2011). One of the main reasons for this is that senior executives, who have the ability to manage, create a sustainable organization by applying their skills on how organizations should be managed and controlled in terms of organization (Rothaermel & Deeds, 2006). In this way, organizations have a manageable structure. It is very important to adopt all efforts at the management level in order to create and manage an organizational structure based on capabilities. On the other hand, maagement capability can be defined as the implementation of integrated strategies or systems designed to recruit, develop and retain people with the skills and attitudes necessary to meet existing and future organizational needs. It can be stated that a closer examination of this definition reveals an understanding that capability management has become synonymous with human resources functions such as workforce planning, recruitment, learning, development and retention as an expression and concept (Abraham, 2011). The research model examines the effects of management capability on technology orientation, product innovation and business performance.

2.2. Technology Orientation

The fact that technological superiority is the determining factor in today's consumers' product and service preferences has brought the concept of technology orientation to a central point in the long-term success of companies and has been seen as one of the most important strategic orientations (Zhou et al., 2005). While companies are trying to update and strengthen their technology bases to increase their competitive advantages due to the rapid spread of new technologies, they also face significant resistance to adopting the innovations brought by these new technologies within the company (Zhou & Li, 2007). Technology orientation enables a company in order to develop more innovative and superior products. Gatignon and Xuereb (1997) indicated that companies can proactively gain superiority in creating new product ideas, developing new technologies, integrating new technologies and using advanced technologies in new product development (Gatignon & Xuereb, 1997). In order to be successful in technology orientation, the experiences and capability of management and employees are important (Im et al., 2016). Especially the creative ability of management can have a positive effect on technology orientation. For this reason, technology-based advantages give the company a great competitive advantage that can not be easily imitated by its rivals. These competitive advantages and internal processes developed through technology orientation will positively affect the overall performance of the company, leading to more satisfied customers, superior performance and higher operating income (Rajala & Westerlund, 2012). On the other hand, from resource dependence view, firms leaded by technology orientation collect rich technological knowledge through the collection of up-to-date technological information, which could be used to form a new technological solution in order to meet new market demand (Saqib et al., 2018). In the given theoretical context, the following hypotheses have been developed;

H1: Management capability has an impact on technology orientation

H6: There is a mediation variable effect of technology orientation on the relationship between management capability and product innovation.

H7: There is a mediation variable effect of technology orientation on the relationship between management capability and business performance.

2.3. Product Innovation

Product innovation is to launch a new product or to develop new outputs by developing new products (Johne, 2018). The meaning of the new concept here refers to being new for business, consumer, user, manufacturer, distributor and product technology and for their combination. Successful product innovation includes four elements. These include: (1) combining market needs and technological potential (2) incorporating creative solutions produced into problems (3) managing the process well and (4) deciding to engage in this issue (Dougherty, 2017; Dunne & Dougherty, 2016). Product innovation is a progression that increases the life expectancy and competition value of a new product or service or an existing product or service (Jajja et al., 2017). In this regard, Product innovation is one of the key business processes that transform the needs and opportunities around the enterprise into satisfied needs and occasions. Product innovation is basically an important process for developing products and services or for renewing them to create completely new products and services, and for securing the future of the enterprise (De Massis et al., 2015). Product innovation is associated with a new product or service, or an existing product or it is an improvement that increases service life and competitive value (Estrada et al., 2016). Furthermore, risk taking is the intentness of an entrepreneurial firm to invest in or engage in an initiative or project that can be rather vague or unknown, such as engaging in courageous actions such as entering new markets. This means that the firm is afraid to move away from routine, riskless, reputable activities and want to enter the unknown. On the other hand, proactivity is defined as acting with the expectation of future problems, needs or changes. It represents the company's vision in search of new opportunities, anticipating future demands and needs in the market, including the introduction of new products or services in front of rivals (Aloulou, 2019). In the given theoretical context, the following hypotheses have been developed;

H2: Management capability has an impact on product innovation

H4: Technology orientation has an impact on product innovation

2.4. Business Performance

While organizations continue their lives in today's conditions where change is inevitable, their ability to cope with their competitors and maintain this competition depends on their desired and required performance. Business performance is "the fulfillment and completion of a particular job (Chiu, 2005). Business performance means taking into consideration the quantity, quality, time and cost effectiveness of a job. Employees' performance is determined by their personal characteristics and abilities within the organization, the desire to succeed in their work, the ability of management to mobilize this desire and the working environment provided (Smith & Goddard 2002). One of the most important reasons for looking at the performance of the institutions is that the stakeholders investing in the institution want to be informed about how much earnings they have as a result of the capital they invest. In order for organizations to achieve their goals and objectives, business owners determine the decisions they need to take about the steps to be taken by following the performance. The other important factor in the performance measurement is that those who want to invest make decisions by looking at the financial and productivity reports of the enterprises (Prajogo, 2016). The performance is important for the management and the performance data of the previous years is important for the future decisions. In terms of employees, the increase in the wages they receive for their labor and the premium system are directly proportional to how good the organization's performance is. Therefore, they follow the outputs of the employees regarding the performance of the organization. At the same time, in non-profit organizations, they pay attention to their performance in order to continue their activities. In 2003, Behn found eight important concepts for performance measurement: (1) assess; (2) power; (3) finances; (4); (5) promote; (6) praise; (7) memorize; and (8) develop (Behn, 2003). Organizations give importance to performance criteria in order to be in a better position against competitors in the future. Stakeholders who want to have information about organizations are looking at financial reports. In addition to financial reports, they can also look at market performance to see if the business is sustainable in the long run (Lee et al., 2015). In the given theoretical context, the following hypotheses have been developed;

H3: Management capability has an impact on business performance

H5: Technology orientation has an impact on business performance

2.5. Research Framework

Based on the literature review, Independent Variable (IV); Management Capability, Mediation Variable (MV); Technology Orientation, Dependent Variables (DV); Product Innovation and Business Performance. In this study, the data were analyzed to determine the relationship between statistical concepts due to a quantitative approach. Generally, we use the independent variable or independent variables to try the effect on the dependent variable in a quantitative research test (Thomas et al., 2015).

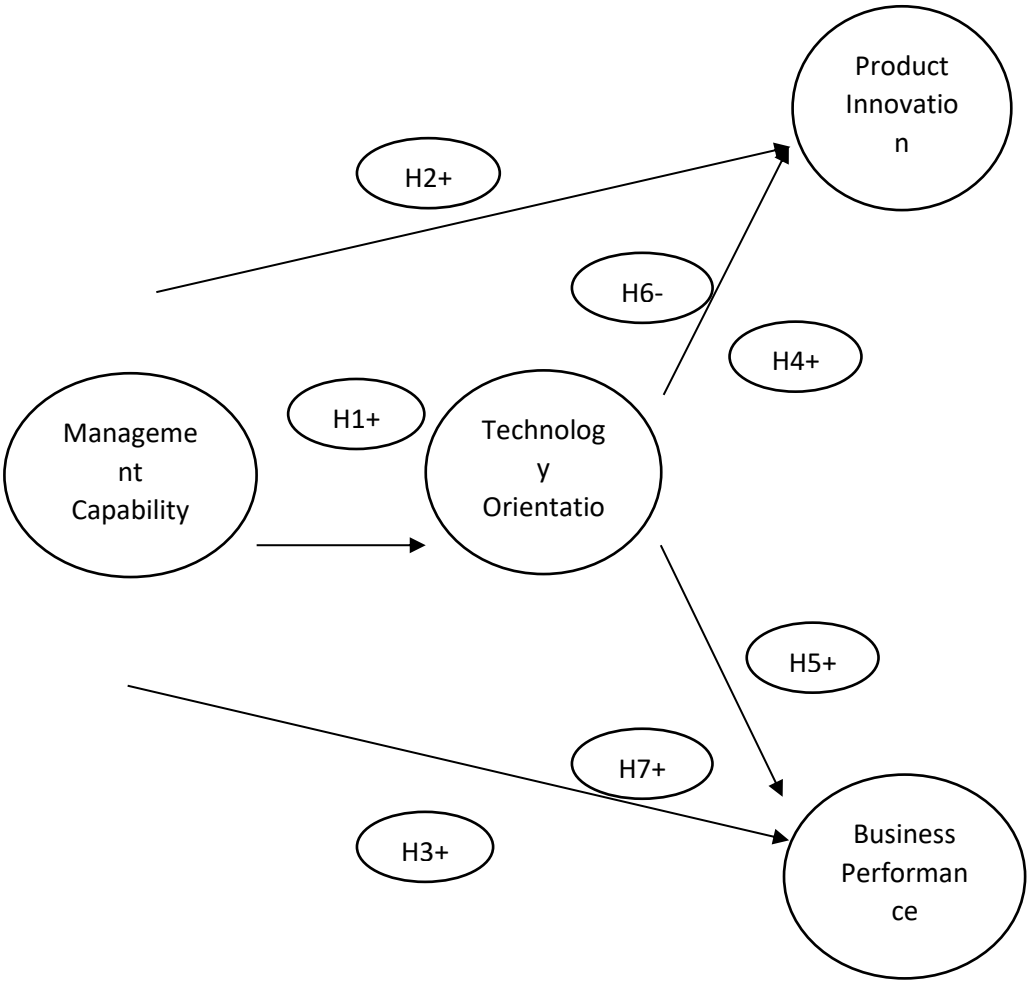


Figure 01. Research model

3. Methodology

The aim of this research is to investigate the effect of technology orientation on product innovation and business performance in the technology-oriented manufacuring companies located in the organized industrial zones in Istanbul and to investigate the effect of management capability on technology and product innovation. The questionnaires were collected from engineers working in technology-oriented manufacturing companies. SPSS 25 program was used to analyze the data obtained from the sample population with the survey application. Factor and reliability, mean of variables loaded on each factor, correlation and regression analyzes were performed. Sobel test was also performed for mediation effect. The questionnaire consists of four variables. In the first part of the questionnaire, demographic information and job-related information of the individuals are given. In the second part of the questionnaire, there are questions by representing 4 variables.

3.1. Research Goal

The main purpose of this research is to obtain data on the effects of management capability and technology orientation on business performance and product innovation, and to examine these data with scientific research methods to reach meaningful scientific results.

3.2. Measurement Tools (Scales)

The management capability scale was obtained from the scales in the studies conducted by Schilke and Goerzen (2010) and Simonin (1997). Technology orientation scale was obtained from the scale in the studies conducted by Atuahene-Gima and Ko (2001), Venkatraman (1989), Zhou et al. (2005). 5-point Likert scale was used, ranging from "strongly disagree" to "strongly agree". Product innovation scale was obtained from the scale in the studies conducted by Jajja et al. (2017), Fynes et al. (2015), Jean et al. (2014), Business performance scale was obtained from the scale in the studies conducted by Li et al. (2006), Martínez Sánchez and Pérez Pérez (2005), Yang et al. (2011), Kannan and Tan (2002).

3.3. Sampling

It has been applied to 310 white collar (engineers) employees working in different departments of companies. 310 people are sufficient for population size and 5% significance level (Yazıcıoğlu & Erdogan, 2004). 202 (73%) males and 108 (27%) females have answered the questionnaire. 108 (37%) of the participants were in the 17-27 age group; 159 (49.7%) are in the 28-40 age group. The number of managers over the age of 31 was 53 (13.3%). 230 (74%) of the respondents were university graduates; 80 (26%) have masters degree. The level of achievement of the goals determined by the employees individually; 24 participants stated that they achieved their targets as “Very Low”, 47 participants stated that they were Low ”, 107 participants stated that they were “Medium”, 96 participants stated that they were “High”, 36 participants stated that they were “Very High”.

3.4. Analyses

KMO test and Bartlett sphericity test were applied to determine the suitability of the data set for factor analysis. If the KMO value is .921 and the Bartlett test is $\alpha = 0.00$, the sample size is considered appropriate and sufficient for factor analysis.

Table 01. Rotated component matrix[a]

Rotated Component Matrix[a]				
	Component			
	1	2	3	4
MC4. Management presides the problems among the employees very well due to differences in status within the organization.	.857			
MC3. Management manages the coordination of activities within the organization very well	.794			
MC1. Management successfully performs process management within the organization	.752			
MC5. The decisions taken by the management following the competitors are quite successful	.697			
MC2. Management manages conflicts between employees very well.	.618			
PI3. Products should not be imitated		.903		
PI2. We focus on customer orientation in new product development.		.882		
PI1. In the development of new products, attention is paid to be the first in the market.		.852		
PI4. The importance of product innovation increases the size of the market.		.834		
PI5. The importance of product innovation creates value.		.812		

BP6. The return rate of assets is quite good in the enterprise.			.857	
BP5. Overall profitability of the company is quite good.			.794	
BP3. Brand equity of the company is quite good.			.752	
BP2. Market share and growth rate of the company is quite good			.725	
BP7. The income of the enterprise is quite good.			.697	
BP1. The market share of the business is quite good.			.658	
TO1. Information systems play an important role in decision-making.				.710
TO4. We tend to utilize technologies to support our strategic planning.				.700
TO2. We are actively using information systems with a focus on technology.				.698
TO3. We conduct a comprehensive analysis.				.646
Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalization.				
a. Rotation converged in 5 iterations.				

MC: Management Capability, TO: Technology orientation, PI: Product innovation, BP: Business performance

Reliability Analysis; reliability and validity of the scales should be investigated in order to give meaningful results to the scales used in the survey technique, reliability and validity of the scales should be investigated. Reliability is the consistency between independent measurements of the same thing. With the reliability analysis, it is aimed to determine the variables that do not share the common value to be measured with the scale and to increase the internal consistency of the scale by excluding these variables Reliability analysis results are given in Table 02.

Table 02. Reliability

Variables	Number of Questions	Cronbach Alfa (α) Values
Management Capability	5	.857
Technology Orientation	4	.783
Product Innovation	5	.928
Business Performance	6	.820

Correlation Analysis; The correlation test provides an examination of the structure and amount of the relationship between the variables. The aim of the correlation test is; to determine in which direction the dependent variable (Y) changes when the independent variable (X) changes (Kalaycı, 2009: 115). The strength of a relationship is indicated by the amount of the relationship between the two variables, and this value is expressed as the correlation coefficient. Correlation coefficients (r) are between -1 and +1. If the correlation coefficient is 0, it means that there is no relationship between the variables, the correlation coefficient is +1.00 positive linear relationship, and the correlation coefficient -1.00 means that there is a negative linear relationship. Regardless of the sign of the correlation coefficient, the value being below 0.30 indicates a low, the value being between 0.30 and 0.69 indicates a medium, and a value of 0.70 and above indicates a high level of relationship. The statistical significance of the correlation requires hypothesis testing (Çokluk et al., 2012: 52).

Table 03. Correlations

Correlations					
		Technology orientation	Management Capability	Product Innovation	Business performance
Technology orientation	Pearson Correlation	1	.596**	.259**	.657**
	Sig. (2-tailed)		0.000	0.000	0.000
	N	344	344	344	344
Management Capability	Pearson Correlation	.596**	1	.429**	.955**
	Sig. (2-tailed)	0.000		0.000	0.000
	N	344	344	344	344
Product Innovation	Pearson Correlation	.259**	.429**	1	.391**
	Sig. (2-tailed)	0.000	0.000		0.000
	N	344	344	344	344
Business performance	Pearson Correlation	.657**	.955**	.391**	1
	Sig. (2-tailed)	0.000	0.000	0.000	
	N	344	344	344	344
**. Correlation is significant at the 0.01 level (2-tailed).					

In quantitative research, regression analysis was performed to test hypotheses; simple regression and multiple regression. The purpose of regression analysis; It is the analysis method used to examine the relationships between variables (Küçüksille, 2010: 199). According to Kalaycı (2008), regression analysis indicated that the relationship between one dependent variable and independent variable or more than one independent variable was explained by mathematical equation (Kalaycı, 2008).

Table 04. Regression analysis results of impact of independent variables (IV) on Dependent variables (DV)

IV	DV	Standard β	Sig.	Adjusted R Square	F Value
Management Capability	Technology Orientation	**.596*** **	**.000**	**.353**	**188.362**
Management Capability	Product Innovation	**.429*** **	**.000**	**.181**	**76.921**
Management Capability	Business Performance	**.955*** **	**.000**	**.912**	**3576.169**
Technology Orientation	Product Innovation	**.259*** **	**.000**	**.065**	**24.668**
Technology Orientation	Business Performance	**.657*** **	**.000**	**.430**	**259.577**

*: p<0.05 **:p<0.01 ***:p<0.001

Regression analysis is used to estimate the value of dependent variable which is difficult to obtain with the help of independent variables. To find out if the hypotheses are supported, sig. value. If the values are appropriate, hypotheses are tested.

Table 05. Hypotheses

Hypotheses	**Supported / Unsupported**	**Significance Level (Sig.)**
H1: Management capability has an impact on technology orientation	**Supported**	**P<0.001**
H2: Management capability has an impact on product innovation	**Supported**	**P<0.001**
H3: Management capability has an impact on business performance	**Supported**	**P<0.001**
H4: Technology orientation has an impact on product innovation	**Supported**	**P<0.001**
H5: Technology orientation has an impact on business performance	**Supported**	**P<0.001**

As a result of regression analysis, it is seen in Table 05 that independent variables have an effect on dependent variables and hypotheses are supported. Regression analysis was done for the analysis of mediator variable effect and the results are shown in table 06.

Table 06. The effect of the mediation variable (MV)

	IV	**DV**	**Standard β**	**Sig.**	**Adjusted R Square**	**F Value**
Regression	Management Capability (IV)	Product Innovation	**.425*** **	**.000**	**.181**	**76.921**
	Technology Orientation (MV)		**.006**	**.919**	**.179**	**38.355**
Regression	Management Capability (IV)	Business Performance	**.874*** **	**.000**	**.912**	**3576.169**
	Technology Orientation (MV)		**.136*** **	**.000**	**.924**	**2090.676**

*: p<0.05 **:p<0.01 ***:p<0.001

In the analysis of the mediating variable effect, the hypothesis 6 was rejected. The reason for this was that the variable effect of the technology orientatiton tool was meaningless. The hypothesis 7 was supported by analysis and the technology orientation tool variable effect was found to be significant. We can also analyze the tool variable effect with the sobel test. The Sobel test includes the ratio of the product of coefficient estimates a and b to the standard error of that product. Many formulas have been proposed to estimate this standard error; however, differences often have insignificant effects on test results (MacKinnon et al., 2002; Preacher & Hayes, 2004). The coefficient A denotes the path between the independent variable and the mediating variable, Sa denotes the standard error of this path (coefficient), the coefficient b denotes the path between the mediating variable and the dependent variable, Sb denotes the standard error of this path. As a result of the calculation, Z value of mediation effect is obtained. This value is used to assess whether the mediating effect is statistically significant using the probabilities corresponding to the standard normal distribution.

Table 07. Sobel test

Sobel / Aroian / Goodman Analysis; Determine whether the Technology Orientation mediation variable has an effect on the relationship between Management Capability and Product Innovation;							
Variables			**Input:**		**Test statistic:**	**Std. Error:**	**p-value:**
IV	Management Capability	a	0.572	Sobel test:	0.10526001	0.05434162	0.91616949
MV	Technology Orientation	b	0.010	Aroian test:	0.10497742	0.05448791	0.91639373
		Sa	0.042	Goodman test:	0.1055449	0.05419494	0.91594344
DV	Product Innovation	Sb	0.095				
We can explain that there is an effect of the mediation variable between the variables because p value is less than 0.05.							
Sobel / Aroian / Goodman Analysis; Determining whether the Technology Orientation mediation variable has an effect on the relationship between Management Capability and Business Performance;							
Variables			**Input:**		**Test statistic:**	**Std. Error:**	**p-value:**
IV	Management Capability	a	0.572	Sobel test:	6.51012978	0.01107075	0
MV	Technology Orientation	b	0.126	Aroian test:	6.49663239	0.01109375	0
		Sa	0.042	Goodman test:	6.52371165	0.0110477	0
DV	Business Performance	Sb	0.017				
We can explain that there is an effect of the mediation variable between the variables because p value is less than 0.05.							

As a result of the sobel test, the data obtained by testing the mediation effect made by regression analysis are supported.

Hypothesis results;

Table 08. Supported / unsupported research hypotheses

Hypotheses	**Supported / Unsupported**	**Significance Level (Sig.)**
H6: There is a mediation variable effect of technology orientation on the relationship between management capability and product innovation.	**Unsupported**	
H7: There is a mediation variable effect of technology orientation on the relationship between management capability and business performance.	**Supported**	**P<0.001**

As a result of Sobel test, hypothesis 6 was not supported and hypothesis 7 was supported. While it is expected to have an effect on mediation variable technology orientation, product innovation, it can be assumed that the management capability directly affects product innovation. We can assume that a meaningless relationship emerges when technology focus is activated, as the talent for product innovation is eliminated.

4. Conclusion and Discussions

The ultimate goal of an enterprise is to maintain its existence for a long time by providing sustainable success. When the dynamics of today's business world are taken into consideration, the survival of the enterprises in this challenging process depends on their ability to produce effectively and effectively, to apply the right strategic decisions in a timely manner and to differentiate itself from their competitors. As a result of the information age in which information is readily accessible, rapid technological change and rapid globalization along with the rapid spread of information and technology has led to the establishment of a more conscious consumption habit by expanding the area of customer preferences and expectations (Metcalfe, 2018). All these factors have made the competitive environment facing businesses more challenging. For this reason, the competencies of executives in the top management of organizations must bring success both in product innovation and business performance (Visnjic et al., 2016). Because, changing environmental conditions created an opportunity for the emergence of new technologies and a period called technological innovation process emerged with many formations, the effects of this process on the macro and micro levels starting from individuals have effects on the welfare level of the society. The rapid changes in the field of technology obliged the companies in the production sector to have a dynamic structure in terms of product innovation (Liu & Atuahene-Gima, 2018). When the results of the research are examined, the effects of independent variables on the dependent variable are supported. This means that both management capability and technology orientation have a positive impact on product innovation and operational performance. Therefore, it can be said that adaptation to technological innovations is of great importance. Otherwise, it will not be possible to exist in a competitive market. One of the results reached in the study is that managers show significant resistance to change, especially if they lack in managing change. Especially in H6 hypothesis; In the relationship between management capability and product innovation, the effect of techlogoy orientation mediation could not be supported. This situation was not supported in the analysis results because it creates a complexity according to our assumption. However, since it will not be possible to be totally opposed to the changes in today's conditions, the resistance of the managers will continue to a certain point. One of the results reached in the study is that managers show significant resistance to change, especially if they lack in managing change. The changes that occur in the processes of the enterprises have made the performances of the enterprises quite important. In this context, the examinations conducted under the title of firm performance have shown that quantitative and qualitative performance has become more important with the rapid change in the world of technology. This result, which appears to be a return of increasing competition conditions, has prevented the quantity of the qualities of the performances performed both at the individual and organizational levels. Researchers who want to do research in this field will be able to bring new concepts into literature by focusing on technology focus by sector and their impact on both innovation and organization.

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THE EFFECT OF SERVANT LEADERSHIP ON TRUST IN LEADER

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Abstract

Trust is an expected component in all business activities and it gives a dynamic and interpersonal link between people and organizations. Building trust within a business culture is a key foundation of leadership achievement. Employees trusting their leaders may feel more determined, more satisfied and more committed to their organization. Trust in leader also contributes to organizational and personal performance. After emphasizing the importance of trust in leaders in some research, the antecedents and the results of trust in leaders have been investigated in many studies. Servant leadership is expected to be one of these antecedents of trust in leader. So, the aim of this study is to investigate the relationship between servant leadership and trust in leader. For this purpose, a questionnaire was collected from 94 participants on a voluntary basis. The majority of the participants are from Istanbul and Kocaeli in Turkey, and most of them are employees working in the metal or financial sectors. The data collected in the study were analysed with the AMOS 21 statistical program. Confirmatory factor analysis, correlation analysis, and path analysis were applied to the data. According to the results of the path analyses, servant leadership positively affects the subordinates' trust in leader.

Keywords: Leadership, servant leadership, trust, trust in leader

1.Introduction

Trust is becoming a very interesting topic in the literature (Sendjaya and Pekerti, 2010), and since the 1980s, trust has become a very important issue among scholars (Smith, Montagno and Kuzmenko, 2004). Scholars have written much about trust in different disciplines (Sheppard and Sherman 1998), and a diversity of disciplines appears to agree that trust is very beneficial to the organizations (Dirks and Ferrin, 2001).

The significance of trust in leader has been recognized by scholars for a long time (Dirks and Ferrin, 2002). The leader's behavior is more vital factor for trust in organizations and trust in leaders Rezaei, Salehi, Shafiei and Sabet (2012). Bennis emphasizes that leaders should generate trust (Bennis, 2002; Dennis and Bocarnea, 2005). According to Blau's "social exchange theory"; the high quality exchange between a leader and subordinates reveals high degree of trust with each other (Blau, 1964; Chan and Mak, 2014). Trust in leader presents the effect on how subordinates act on the heartening of a leader. Servant leadership is in accordance with the view of serving other peoples which occur at subordinates' trust in their leaders (Chan and Mak, 2014). So, servant leadership can specify numerous positive outcomes in organizations (Jaiswal and Dhar, 2017), including trust in leader.

It can be said that servant leadership is one of the antecedents in the generation of trust in leader. When the literature on these issues is examined, it is seen that there are some studies examining the effect of servant leadership on the trust in their leader (Sendjaya and Pekerti, 2010; Chan and Mak, 2016; Rezaei et al., 2012; Joseph and Winston, 2005). However, there are no studies examining the relationship between these two variables in Turkish literature. So, by examining the sample in Turkey over the relationship between these two variables, we aim to contribute to the literature.

2.Literature Review and Theoretical Framework

2.1.Servant Leadership

Servant leadership is a concept that came to the fore with Greenleaf's article, "The Servant as Leader." In this article, Greenleaf says the leader is a servant (Greenleaf, 1977). And he said that leadership is mainly the result of personal characteristics rather than specific leadership styles (Greenleaf, 1977; Smith, Montagno and Kuzmenko, 2004). The unique characteristics of servant leaders lies in their intention and self-concept (Sendjaya and Sarros, 2002). Since Greenleaf's essay, many scholars have embarked on the construct of servant leadership (Barbuto and Wheeler, 2006).

According to Page and Wonk (2000), servant leader is "*a leader whose primary purpose for leading is to serve others by investing in their development and well being for the benefit of accomplishing tasks and goals for the*

common good". Servant leader according to Graham (1991); "*it is the leader who models service by humbly serving the led, rather than expecting to be served by them*". Servant leadership concept is based on the values of humbleness and respect for others; the main essential elements of servant leadership grow out of appropriate leadership values. In short, values in servant leadership are core elements (Russell, 2000). Servant leadership behaviour can be categorized into 6 dimensions: "*Voluntary Subordination, Authentic Self, Covenantal Relationship, Responsible Morality, Transcendental Spirituality, and Transforming Influence*" (Sendjaya, Sarros, and Santora, 2008).

2.2.Trust in Leader

Trust is an important factor in social relationships, and besides one of the most determining factors to an organization's performance (Guinalíu and Jordán, 2016). According to the Meyer, Davis and Schoorman (1995), trust is *"The willingness of a party to be vulnerable to the actions of another party based on the expectation that the other party will perform a particular action important to the trustor, irrespective of the ability to monitor or control the other party"*

Another definition to Sheppard and Sherman; "*Accepting the risks associated with the type and depth of the interdependence inherent in a given relationship"* (Sheppard and Sherman, 1998).

Trust in leader is a psychological condition to an employee and involving positive expectations about leader's intent with respect to oneself in position involving risk (Gao, Janssen and Shi, 2011). Trust in leader is an important concept for the success of organizations. Trust in leadership facilitates communication, learning, performance quality and quantity, and decreases turnover (Burke, Sims, Lazzara and Salas, 2007). If employees don't trust to leader, they will be dissatisfied (Rezaei et al., 2012).

3.Hypothesis Development

3.1 Servant Leadership and Trust in Leader

Validating the social exchange theory (Blau, 1964), with respect to Jaiswal and Dhar (2017) past studies have established that the leader who is concerned with the well-being of followers imbues a positive psychological state within them, which is reciprocated by followers in the form of gratitude and increased trust (Kelloway, Turner, Barling and Loughlin, 2012; Zhang and Zhou, 2014). The perspective of social exchange theory actually provides an important explanation on the basis of how servant leadership influences the relationship of subordinates to build on trust with their leader (Greenleaf, 1977). Servant leadership focuses on self-interest for the betterment of their subordinates. In return, subordinates respond with confidence in their leaders. A servant leader support subordinates to plan for future opportunities, which abundantly shared and build trust with subordinates. When subordinates feel that they are taking utility from the servant leader, they are motivated to trust their leader (Whitener, Brodt, Korsgaard and Werner, 1998).

Most research (Whitener et al., 1998; Brower, Schoorman and Tan, 2000; Dirks and Ferrin, 2002; Gillespie and Mann, 2004; Joseph and Winston, 2005) has emphasized the important link between leadership behavior and trust in organizations. However most of the articles in question did not examine the correlation between certain leadership behaviors and their followers' confidence in their leaders. To the best of our knowledge, this is one of the few studies that provides empirical evidence of the link between servant leadership and trust in the leader.

Lowe described the servant leadership philosophy as the foundation of trust-based relationships in the organization (Levering and Moskowitz, 2001). Lowe thought that a culture with high trust among employees provided an environment with the ability to respond to a constantly changing work environment without having to deal with constant internal resistance to change (Lowe, 1998).

While the notion of trust is not exclusively attached to servant leadership and may be considered a key element in all leadership models, servant leadership has been particularly considered as strongly associated with trust. In their study of leaders in for-profit and not-for profit organizations in America and West Indies, Joseph and Winston (2005) reported positive correlation between employees' perceived level of organizational servant leadership and leader trust.

A servant leader emphasizes the high-quality relationship with subordinates and as a result satisfies their needs and fosters their beliefs (Page and Wong, 2000). He/she provides an opportunity for subordinates to share their concerns, which builds strong trust in leader (Whitener et al., 1998). When subordinates feel that they are willing

to perform and develop career success, a servant leader is likely to encourage them. This encouragement of leadership effect can foster subordinates' job satisfaction. Neubert, Kacmar, Carlson, Chonko, and Roberts (2008) indicated the positive relationship between servant leadership and subordinates' behavior.

According to Farling, Stone and Winston, (1999) servant leaders have a vision for the growth and development of subordinates through which they gain credibility and trust, which in turn helps servant leaders bring out the best from subordinates. Farling et al.'s servant leadership transformational model found that vision, influence, trustworthiness, trust, and service were the outcomes of servant leadership.

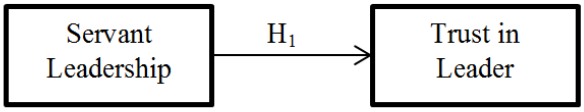
Greenleaf (1977) believed that servant leadership is an antecedent of followers' trust in their leaders. Consistent with this, scholars agree that building trust among followers is an integral component of servant leadership. Russell and Stone (2002) approved that trust was a functional attribute of servant leaders. Van Dierendonck (2011) acknowledged that "trust in leader" was inherent in "interpersonal acceptance," and found a close relationship between servant leadership and trust in leader.

Subordinates are motivated to improvement their job satisfaction when the relationship is based on trust in their leader (Spreitzer and Mishra, 1999). Joseph and Winston (2005) based on that servant leadership is highly correlated with trust in leader. Sendjaya and Pekerti (2010) on the other hand, detected that servant leadership was associated with trust in their leaders. Especially, the high level of servant leadership behaviors had a greater impact on trust in their leaders.

Tan and Tan's (2000) empirical research approved preceding result that leader's ability, benevolence, and integrity are certain antecedents of trust in leader. According to Sendjaya and Pekerti (2010), each of these three dimensions is part of servant leadership behaviors.

As a result, it can be defended that servant leadership is associated with the high-quality social exchange relationship (Dirks and Ferrin, 2002; Joseph and Winston, 2005; Sendjaya and Pekerti, 2010), which in turn influences subordinates' trust in leader. Based on the above arguments, it is expected that servant leadership would have a positive effect on subordinates' trust in leader.

H_1: Servant leadership is positively associated with subordinates' trust in leader.



4.Research Method and Analysis

4.1 Measures and Sampling

All the scales we used were adapted from prior studies. All scales were measured with a 5-point Likert scale. The 7-item "Servant Leadership" scale developed by Liden, Wayne, Meuser, Hu, Wu and Liao (2015) was used to measure servant leadership style, and the 5-item "Trust in Leader" scale developed by Rich (1997) was used to measure trust in leader.

Data was collected via survey questionnaire. The questionnaire was applied to 100 participants to learn their perceptions of trust in the leader and servant leadership. However, 6 of the 100 questionnaires were found to be incomplete and were not included in the analyses. Questions about trust in the leader and perceptions of servant leadership were asked to the same participant.

A total of 94 questionnaires were collected from different sectors. 77.7% of the companies are in the private sector. 52.1% of our respondents are men, and 47.9% of our participants have been working for less than 7 years.43.6% of the participants had a master's degree and 41.5% had a bachelor's degree. 50% of the participants were staff, 20% were middle-level managers and 14.92 % were low-level managers. While 56.4% of the participants stated that they were in the 30-39 age range, 30.9% of them stated that they were 20-29 years old.

4.2 Measure validity and reliability

The results of the confirmatory factor analysis (CFA) used to evaluate the validity and reliability are shown in Table 1.The results point out the adequate model fit(x^2/df= 1,357; CFI = .98; IFI = .98; NFI = .93; RFI = .90; RMSEA = 0,062). An item was removed from the servant leadership scale as a result of factor analysis (Table 1)

Table 1. The Results of CFA

Variables	Items	1	2
Servant Leadership	I would seek help from my leader if I had a personal problem	.616	
	My leader emphasizes the importance of giving back to the community	.742	
	My leader gives me the freedom to handle difficult situations in the way that I feel is best	.697	
	My manager gives priority to my career development.	.834	
	My leader puts my best interests ahead of his/her own.	.738	
	My leader would NOT compromise ethical principles in order to achieve success.	.599	
Trust in Leader	My manager would never try to gain an advantage by deceiving workers.		.641
	I feel a strong loyalty to my manager.		.969
	I have complete faith in the integrity of may manager		.822
	I feel quite confident that my manager will always try to treat me fairly.		.902
	I have a strong sense of loyalty toward my manager.		.932

Table 2 demonstrate that the correlations coefficients of our variables. AVE values (Average Variance Extracted) exceed the threshold level, besides CR values (Composite Reliability) exceed the .70 (Fornell and Larcker, 1981). Moreover, Cronbach's Alpha coefficients are over the 0.70, as Nunnally suggested (Nunnaly, 1978). As a result, these results affirm that the validity and reliability of our measures.

Table 2. Correlation Coefficients, Validity and Reliability Values

	Servant Leadership	Trust in Leader
Servant Leadership	1	
Trust in Leader	.868	1
Cronbach's Alpha	.848	.932
AVE	.502	.742
CR	.857	.934

4.3 Hypothesis testing

SEM (Structural Equation Modelling) is used to test the hypothesis. According to the results, our conceptual model is fit the data (x^2/df = 1,357; CFI = .98; IFI = .98; NFI = .93; TLI = .97; GFI = .90; RMSEA = 0,062). And according to the results obtained (Table 3), servant leadership is positively related to trust in leader (β=.895; p<0.01). So, our hypothesis is supported.

Table 3. Path Model

Hypotesis	Path	Path Coefficient	Result
H_1	Servant Leadership→Trust in Leader	.895***	Supported
	(x^2/df = 1,357; CFI = .98; IFI = .98; NFI = .93; TLI = .97; RMSEA = 0,062)		

***p<0.01

5.Conclusion and Discussion

This study examines the effect of servant leadership on trust in leader. This study contributes to the literature by examining the sample in Turkey over the relationship between servant leadership and trust in leader.

According to the results of the analysis we conducted; Servant leadership is positively associated with subordinates' trust in leader. ($p<0.01$). Our results are consistent with previous studies (Joseph and Winston, 2005; Van Dierendonck, 2011; Sendjaya and Pekerti, 2010; Tan and Tan, 2000). So, in Turkey, as well as earlier studies done in other countries, it can be stated that the servant leadership effect on subordinates' trust in leader. Hence, it can be stated that the altruistic behavior of the leaders, who are not being self-centered, and pay attention to the goals and potentials of their subordinates' can increase the trust in their leader.

Similarly to all other empirical studies, we have some limitations in our study. We said that the generalizability of the sample can be expressed as a limitation. And also this research conducted on mainly metal and finance industries in İstanbul and Kocaeli in Turkey. So, the results of any research may be different with in different sectoral or regional conditions.

Nevertheless, further research is needed in terms of the generalizability of these results. So, we can recommend researchers who want to work on this subject should work in different contexts, sectors and even in different countries between servant leadership and trust in their leader. In addition, since the personality traits of the subordinates' may be effective in this relationship, the moderator effect of the personality traits can be examined. Moreover, future researchers may be advised to examine whether the relationship between Servant leadership and trust in the leader varies by gender, level of education, age etc. of the participant.

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LEADERSHIP PERSONALITY MODELS: COMPLIANCE WITH FLIGHT ATTENDANTS AND PILOTS

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Abstract

Airline companies try to minimize the errors in flight process which is the most critical phase of airline operations. Pilots and flight attendants are trained with Crew Resource Management (CRM) systems, since human factor is generally known root cause of accidents and incidents. Personality factor of crew involved in all stages of flight has characteristics that will negatively affect the success of crew resource management. The airline companies measure the personality of the pilots with different tests as DLR (Deutsche Luft-Reederei), however it is not used to flight crew assignment process. In the first part of the research, the concepts of personality, conflict and leadership are given through literature review. Airline crew concept and crew resource management are explained by international aviation authorities' rules, in the second part. In the last part of the research, "Other in the Self Scale" adapted to compliance with flight attendants and pilots. Aron's "Other in the Self Scale" asks how the person sees himself / herself in relation to his / her partner. How the person positions himself / herself with the team is examined based on this scale. A survey was conducted with 60 pilots and flight attendants. Suggestions were made for crew assignment according to leadership personality models.

Keywords: Crew resource management, leadership, personality models

1.Introduction

It was observed that more than one factor had an impact on the occurrence of accidents in the aviation sector. However, as a result of these studies, the most influential factor among these factors was the human being. When the effects of accidents in the sector are considered, it is important to control these human factors. In every part of the flight phase, people have the potential to threaten flight safety as well as reduce flight efficiency. Therefore, correct and efficient use of this resource is of great importance in preventing accidents.

Every human being has different characteristics due to its their structure. Businesses should not ignore this when planning their existing human resources. Because human behaviours can be formed according to their personal characteristics and the society culture. It is very difficult to ensure that everyone behaves in the same way within the organization due to these features. For this reason, nowadays, businesses try to provide their current employees with standard skills by using a skill acquisition training program called Crew Resource Management. However, as in airline study, the qualifications of this program have begun to be questioned. While giving these skills to their employees, they ignore the personality structure of their employees. This situation causes each individual to perceive the desired skill differently and not to create a standard behaviour pattern during the flight. Businesses should first examine the personalities of the resource they own and then assign them to their duties.

Aviation industry is a team work. All activities within the sector are carried out within the framework of teamwork. Therefore, team work is important for businesses. However, since human factors are one of the main factors causing accidents, some points need to be taken into consideration while forming a team. In this study, whether people are suitable for the team work, how they will behave in the team, and the applicability of the decisions taken by the team leader to the team are among the issues that are considered.

Today, the demand for human resources is constantly increasing due to the increase in aviation activities and the high turnover rate of the employees in the sector. Businesses are constantly recruiting employees to meet their demands. However, some points are ignored during these purchases. Above we have said that aviation activities consist of teamwork, so if the companies pay attention to some points related to the individual in recruitment, the selectivity increases and then the skills they want to acquire with the CRM programs are obtained more healthily. In addition to the suggestion of comprehensive personality analysis, the necessity of the individuals forming the team to be formed from individuals with a harmonious personality structure is another issue examined in the study. It is argued that team performance will increase as a result of the selection of individuals with compatible personality structure and the benefit obtained from the team work will be maximized. In

addition, communication between individuals of similar personality structure will be better than the other situation. When the accidents in the sector are examined, it is seen that there are errors due to communication. In this way, this situation can be prevented.

As a result, businesses should pay attention to the above-mentioned situations when assigning team members to their duties on the flights to be performed. The fact that each team member has a similar personality structure allows them to exhibit substantially similar behaviour patterns. This has a similar perception and allows them to make similar decisions.

2.Literature Review and Theoretical Framework

Personality factor of crew involved in all stages of flight has characteristics that will negatively affect the success of crew resource management. Among these characteristics, the most influential are the personality factors of the team members. In the crew assignment processes, the personality characteristics of each member of the crew will be determined and the assignment is not made. However, bringing together pilot and flight attendant with harmonies personality characteristics will increase flight safety and efficiency. Individuals with a harmonious personality structure will be able to exhibit similar behaviour's when endanger safety situations. ICAO (International Civil Aviation Organization) human factors; physical, physiological, psychological, psychosocial and other variables that affect the performance of personnel in the field of aviation. Human factor includes state reasoning, identifying priorities in task performance, attention intensity, communication, decision-making and coordination. The supporting crew member with personality model can be established in the decisions taken and communication within the team can be provided well. Bringing together different personalities means forming a flight crew and matching different personality traits to form a group identity (Bayram, 2013).

2.1.Personality

Personality is the distinctive image of the factors that affect a sense of person, thinking and behaviour (Ford, 2019). Personality, constantly under the influence of internal and external stimuli, includes all biological and psychological, hereditary and acquired abilities, motives, emotions, desires, habits and all behaviours of the individual (Yelboğa, 2006). Human development is a complex process consisting of various basic dimensions such as physical, mental, social and moral development, and there is a mutual relationship between each dimension (Pettitt & Dunlap, 1994). Personality characteristics make the individual different from others. In other words, personality traits are distinctive. Individuals who exhibit many differences in physical, mental and emotional aspects, as a result, interpret events and phenomena differently. These differences form the basis of personality (Birgören, 2015). Costa and McCrae, one of the contemporary theoreticians who brought a dimensional approach to personality, first developed a five-factor personality model that included only the concepts of Neuroticism, Extroversion, and Openness, and then added the concepts of Agreeableness and Conscientiousness to these concepts (Costa & McCrae, 1997). It is seen that personality model is accepted model in many fields, especially psychology and social psychology (Terzioğlu, 2007).

2.2.Conflicts

The conflict comprises a series of human affective states such as: anxiety, hostility, resistance, open aggression, as well as the types of opposition and antagonistic interaction, including competition (Beheshtifar & Zare, 2013). Conflicts on which they are based on contrast, dispute, incompatibility and contradiction can be defined as a conflict arising between two or more persons or groups from various sources. Conflict generally refers to behaviours and emotional situations that arise as a result of difficulties in individuals encountering unwanted situations in various social environments (Erkuş & Tabak, 2009).Also, Conflict, competition between two independent persons or parties arising from differences in need, purpose or opinion (Gençoğlu, 2012). The behaviours of individuals during conflict (conflict management styles) can be influenced by many different variables such as the person himself, the current situation, the subject of the conflict, and the level of mutual relations (Trubisky, Toomey, & Lin, 1991).

2.3.Leadership

In general terms, leadership can be defined as the process by which a person can influence and direct the activities of others to achieve certain personal or group objectives under certain circumstances (Barker, 1997). Leader is the person who provides motivation in the team members, leads the way of doing the work, is not feared, respected, not hesitated to consult, but makes people hesitate to make mistakes. The leader has achieved his position with his qualifications, experience and expertise in his business (Önen & Kanayran, 2015).

2.4.Crew Resource Management

It is preferred to reduce costs, increase employee productivity, or team work due to job requirements (Campion & McClelland, 1991). There are many national and international standards and rules for flight crew planning. There are two different crews to serve in the flight. The first is the cockpit crew and the second is the cabin crew. The number of flight crew members required for flights varies depending on the size of the aircraft, flight time, start time during the day and the level of service to be provided (Orhan, Kapanoğlu, & Karakoç, 2010). Crew planning becomes a complex optimization problem constrained by international rules and the company's own rules on the one hand and the ever-changing human needs and problems (Akyurt & Toplu Yaşlıoğlu, 2018). The deterministic crew scheduling model is an approximation of crew scheduling under uncertainty with the assumption that all pairings will operate as planned (Schaefer, Johnson, Kleywegt, & Nemhauser, 2005). The quality of crew scheduling is important not only for costs but also for flight safety (Çetin, 2008). The Institute of the US National Aeronautics and Space (according to NASA) of a survey which was conducted consequences, occurred between the years 1968-1976, in which a plane crash took place in Turkey in 1972, in 60 accidents, major problems arising from the team coordinating a role has been determined (Birgören, 2015). CRM aims to make the most effective use of its crew and flight attendants activities under stress and time. CRM aims to prevent mistakes by increasing team crew's positive attitudes and behaviors, thus increasing flight safety (Şekerli, 2006). In the studies investigating the relationship between social culture and CRM, power distance, individualism-collectivism and uncertainty avoidance dimensions were emphasized (Mengenci, 2010).

3.Research Method

The research is based on Crew Resource Management in airlines. To maximize flight safety, Professor Dr. Based on the Other in the Self scale by Arthur Aron (Weidler & Clark, 2011), a proposal to improve the crew matching process at airlines. The scale of Arthur Aron asks how the person sees himself / herself in relation to his / her partner. Based on the fact that the relationship within the crew should be positive in terms of increasing safety, the research argues that the personality factors of the members of the team to be formed should also be taken into consideration.

4.Findings

4.1.Year in Civil Aviation Sector

Table 1. How many years have you been working in the civil aviation industry?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1-5 years	31	47,0	47,0	47,0
	6-10 years	22	33,3	33,3	80,3
	11-15 years	8	12,1	12,1	92,4
	16-20 years	3	4,5	4,5	97,0
	More than 20 years	2	3,0	3,0	100,0
	Total	66	100,0	100,0	

47% of the participants have 1-5 years of experience. In the remaining distribution, 33.3% of them are pilots and cabin officers with 6-10 years of experience, 12.1% are employees with 11-15 years of experience and 4.5% are pilots and cabin officers with 15-20 years of experience. The smallest portion is 3% pilots with more than 20 years of experience. According to these results, it can be said that the participants are mainly newcomers but each sector is represented.

4.2.Duties in the flight

Table 2. What is your duties

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Flight Attendant	6	9,1	9,1	9,1
	First Officer	28	42,4	42,4	51,5
	Captain	32	48,5	48,5	100,0
	Total	66	100,0	100,0	

48.5% of the respondents are in the rank of captain pilot in the airline where they work. While the ratio of co-pilots was 42.5%, 9.1% were cabin officers. In pilot status, there is a balanced distribution between captain pilot and co-pilots, while cabin officers are lower than the number of pilots. From these results we can see that the answers are mainly from the pilots. In addition, both pilot and cabin officers were included in the survey and the study was evaluated from the point of view of the flight crew.

4.3.Flight Efficiency and Crew

Table 3. I feel nervous and stressed during flight

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly disagree	39	59,1	59,1	59,1
	Somewhat disagree	15	22,7	22,7	81,8
	Neither agree nor disagree	12	18,2	18,2	100,0
	Total	66	100,0	100,0	

It was evaluated whether the flight crew members felt irritable or stressed during the flight. In this evaluation, a 5-point Likert scale was used. It was evaluated whether the flight crew members felt irritable or stressed during the flight. In this evaluation, a 5-point Likert scale was used. 59.1% of the answers are absolutely disagree with 37.9% of the undecided answers.

Table 4. I am avoiding falling with the flight crew

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly disagree	3	4,5	4,5	4,5
	Somewhat disagree	11	16,7	16,7	21,2
	Neither agree nor disagree	16	24,2	24,2	45,5
	Somewhat agree	24	36,4	36,4	81,8
	Strongly agree	12	18,2	18,2	100,0
	Total	66	100,0	100,0	

The pilots and cabin officers who participated in the survey were asked which of the types of leadership they were most likely to encounter during the survey. In order to better answer the question, the captain pilots were asked to respond on the basis of flight operation managers, and the co-pilot and cabin officers were asked to respond with the captain in charge of the flight. The question includes multiple choice answers. While 39.4% of the participants had the highest number of B-type leaders, 36.4% generally worked with type-A leaders. While the probability of encountering the C-type leader is 19.7%, the D-type leader has the lowest rate with 4.5%. The fact that working with A and B leaders in leadership types generally indicates the presence of captain pilots and flight operation managers in autocratic and dominant leadership types in the sector. This situation causes the communication to be restricted during the flight and the insistence attitude cannot be exhibited by the team members. Therefore, the efficiency of pilots and cabin officers on board can be negatively affected. In addition, prevention of accidents and unsafe situations can be adversely affected and cause irreversible errors.

Table 5. Which type of leadership do you encounter the most

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Type A Leader	24	36,4	36,4	36,4
	Type B Leader	26	39,4	39,4	75,8
	Type C Leader	13	19,7	19,7	95,5
	Type D Leader	3	4,5	4,5	100,0
	Total	66	100,0	100,0	

It shows the type of leader with which pilots and cabin officers work on their most recent flight. While 34.8% of the participants work with the C-type leader, this type is followed by the B-type leader with 33.3%. The A-type leader is 27.3%, while the last D-type leader is 4.5%. When the results of this question are compared with the previous question, it is a contradiction that although the A and B type leaders are more in the sector, the participants have worked with the latest C and D type leaders.

Table 6. Which type of leadership model did you fly with on your last flight

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Type A Leader	18	27,3	27,3	27,3
	Type B Leader	22	33,3	33,3	60,6
	Type C Leader	23	34,8	34,8	95,5
	Type D Leader	3	4,5	4,5	100,0
	Total	66	100,0	100,0	

They were asked which of the participating pilots and cabin officers most preferred to work under. When the results are considered, C type leader is the most preferred type with 51.5% and D type leader is the closest with 33.3%. With a rate of 15.2%, the B-type leader had the lowest rate, while the A-type leader was not preferred at all. This shows that type A, autocratic leaders, is not preferred in the sector. However, given the last two questions regarding leadership types, the presence of captain pilots with A type leadership in the sector is above average. The C-type leadership captains are required to work together.

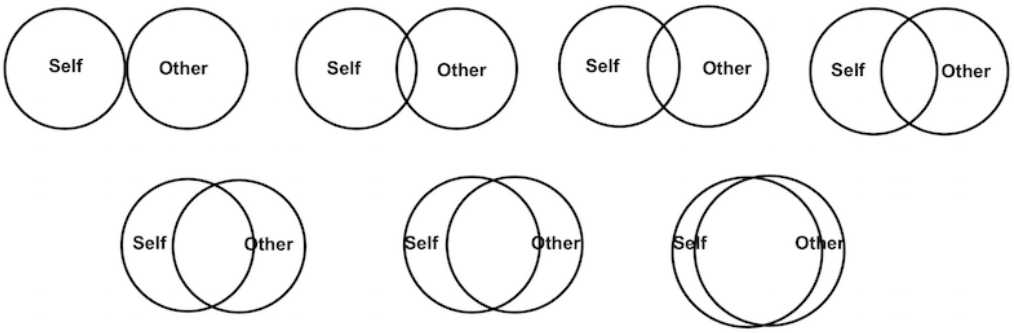


Figure 1: Other in the Self scale by Arthur Aron (Weidler & Clark, 2011)

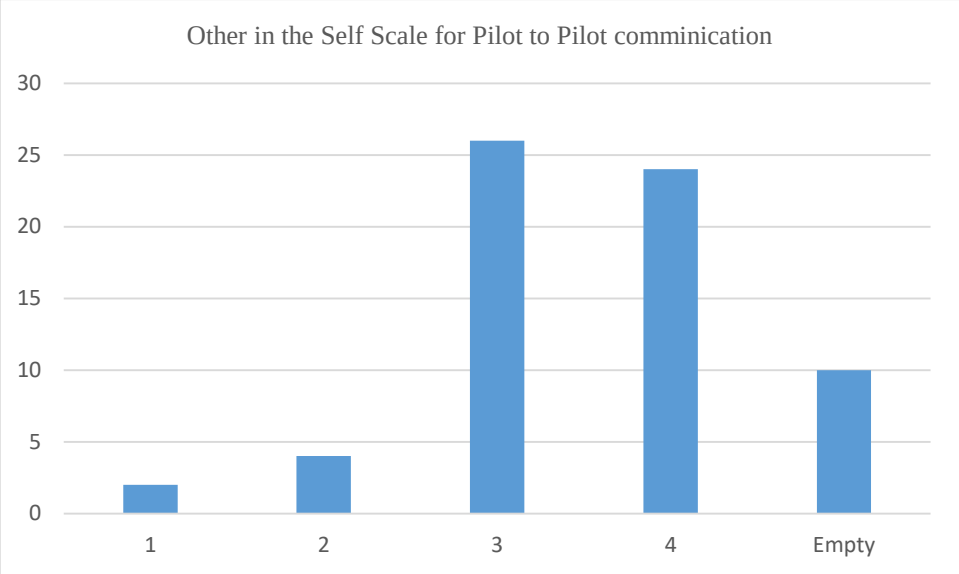


Figure 2: Other in the Self scale answers by pilots

Communication models were presented to the participants. It is tried to measure how the person positions himself / herself with the team and how much communication they have. In order to answer the following questions, communication models were presented to the participants as follows. It is tried to measure how the person positions himself / herself with the team and how much communication they have.

The graph examines how the pilots see themselves with the individual cockpit crew. In the answers given, the 4th model, the model in which the team and the person are most intertwined, predominates. It is predictable that Model 4 will have a large proportion due to the necessity of making critical decisions for flight within the cockpit and mutual trust. When we look at the other answers, we see that the responses are ranked in descending order from the nested situation to seeing each other in very different positions. The percentage of pilots who think they have no communication with other team members in the cockpit is 10%. In the study, what causes the lack of communication among human factors in the elements that threaten safety is explained. Therefore, 10% is a rate that should be taken into consideration.

5.Conclusion and Discussions

The main subject of the study was the human factors and the insufficiency of CRM programs in preventing unsafe incidents and accidents in flights. In the research, various suggestions were made for increasing CRM skills and reducing human errors and supported by surveys.

The time spent in the aviation sector varies from 1 to 10 years. It was seen that the participants of the survey were mainly captains and co-pilots.

When the flight efficiency and crew section are examined, the emotions and the way of behaviours of the participants during the flight are examined. Based on the participants, it was observed that professionalism was in the forefront in the aviation sector and that a discussion within the team was threatening safety.

When the leadership types are examined, it is seen that the most common type of leadership in the sector is the type B leader, followed by the rate of type A leader is very high. Based on this information, we can say that the pilot style of the pilot in charge of the flight crew is autocratic and has a dominant attitude. However, when we look at the type of leadership they encountered in the last flight, we see that the ratio of the C type leader is higher than the others. It is seen that the standards of the captain pilots in the sector in leadership styles cannot be achieved. As mentioned in the study, personality factors have an important place among the reasons of this situation. Another question was asked what kind of leadership is desired to work under the leader and as a result of the C-type leader was answered. In face-to-face interviews with a certain group of participants, it was seen that the D-type leader could not be possible in this sector where decisions should be taken quickly and accurately. As a result, the study proposes that the formation of the team that will take part in the flight phase from individuals with harmonious personality structure will increase safety.

In terms of flight safety and efficiency, airline operators should be careful when selecting members of the flight crew. To facilitate this selection, businesses were advised to pay attention to personality traits when building team members. As a result of the survey, the answers of the captain pilot, co-pilot and cabin officers who participated in the survey were considered to support this suggestion. It has been observed that flight safety and efficiency will be increased by forming team members with compatible personality structure.

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THE EFFECT OF GLOBAL AND CORPORATE INNOVATION STRATEGIES ON RESEARCH & DEVELOPMENT PROCESSES

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Abstract

During the implementation of the innovation strategies of the enterprises, various factors are introduced. The process of producing and developing new ideas is a difficult and costly phenomenon. Frugal innovation strategy that has an impact on costs, innovation value chain development strategy, open source innovation strategy are becoming prominent. This study aims to evaluate the effects of these strategies on R & D processes, global information networks and new initiatives in the light of previous models. It also proposes a model and aims to consider the importance of examples.

Key Words: Innovation Strategies, Costs, R & D, Open Innovation

1.Introduction:

The effects of the R & D systems on the innovation strategies of enterprises cause very rapid acceleration in today's conditions. The growing importance of available information, the unrestricted development of information technologies, the interactions of product and process development, new sectors, regions and international exchanges lead to the formation of partnerships and the rapid transformation of the innovation system (Wengel and Shapira, 2004:10-20). This situation also contributes to the R & D systems of enterprises. This digital communication system, which is defined as the internet of things, provides effective communication of all services, devices and systems with each other. Thanks to this system, which connects everything to everyone, it will be possible for companies that have contributed to the strategy of sectoral innovation systems approach and those who have gained technological talent to open new opportunities, especially R & D (Tunalı, 2016:53-57).

A wide range of factors need to be introduced during the implementation of the innovation strategy. These factors often require intensive and ongoing learning. The generation of new ideas and the setting of new goals requires the development of an environment that supports innovation. Barsh et al. evaluates this situation in their book 'Leadership and Inovation' with four factors (Barsh et al., 2008: 1-3). These factors may be summarised as: A-goal integration of innovation, B- addressing innovation as a whole, C- Strong communication resources, D-Developing trust environment. There are subsystems that need to be interacted in this process. Reporting from Arıan et al., Enginoğlu connects the interaction of these talent dimensions with learning, R & D, production, marketing, organization, resource use and strategy formation (Enginoğlu, 2015: 69).

When we see the Porter's cost reduction strategy with an innovation perspective, the Blue Ocean Strategy developed by Prof. Chan Kim and Renee Mauborgne (2004) over the Red Ocean Strategy in recent times of intense competition with competitors suggests that new market areas should be created using new creative strategies. Limits and competition rules are defined in the red ocean strategy. However, the other emphasizes to provide this with unopened new market areas, creating new demands, high profitable growth opportunities, value renewal and emphasis (Kim et al., 2011:12).

2.Literature Review and Theoretical Framework

The frugal innovation strategy is to minimize the use of increasingly difficult resources, such as capital, time, labor and energy, and to create more economic and social value. In fact, Radjou and Raideep Prabhu received great attention in their work, Frugal Innovation, with books based on the results of a four-year study, Jugaad Innovation (Jugaad is an Hindi word which means innovative remedy and improvisation solution born out of practical intelligence and resourcefulness.), published in 2012. In this study, they actually describe how to bring innovation systems to a completely radical transformation by achieving certain gains in cost, efficiency, speed and flexibility that Downing cites in Change Engineering (Radjou N. and Prabhu Jaideep, 2015: 2-9). They state that frugal innovation is more than a strategy. The writers propose that stretching assets, creating sustainable solutions, shaping customer-oriented behaviors, including customers are elements of a frugal innovation strategy, and in this way the frugal innovation is more than a strategy.

Innovation value chain development strategy is one of the important strategies of the present day, like Michael Porter's value chain for converting raw materials into finished goods, the three stages of the chain are to produce ideas; transform ideas, select them, develop them into products and applications; and thirdly to disseminate these products and applications. (Hansen and Birkinshaw, 2011: 110-117).

When the innovation strategies are analyzed in terms of R & D, it is evaluated how the decision-making process in R & D investments can contribute to the R & D of the company's business and similar strategies.

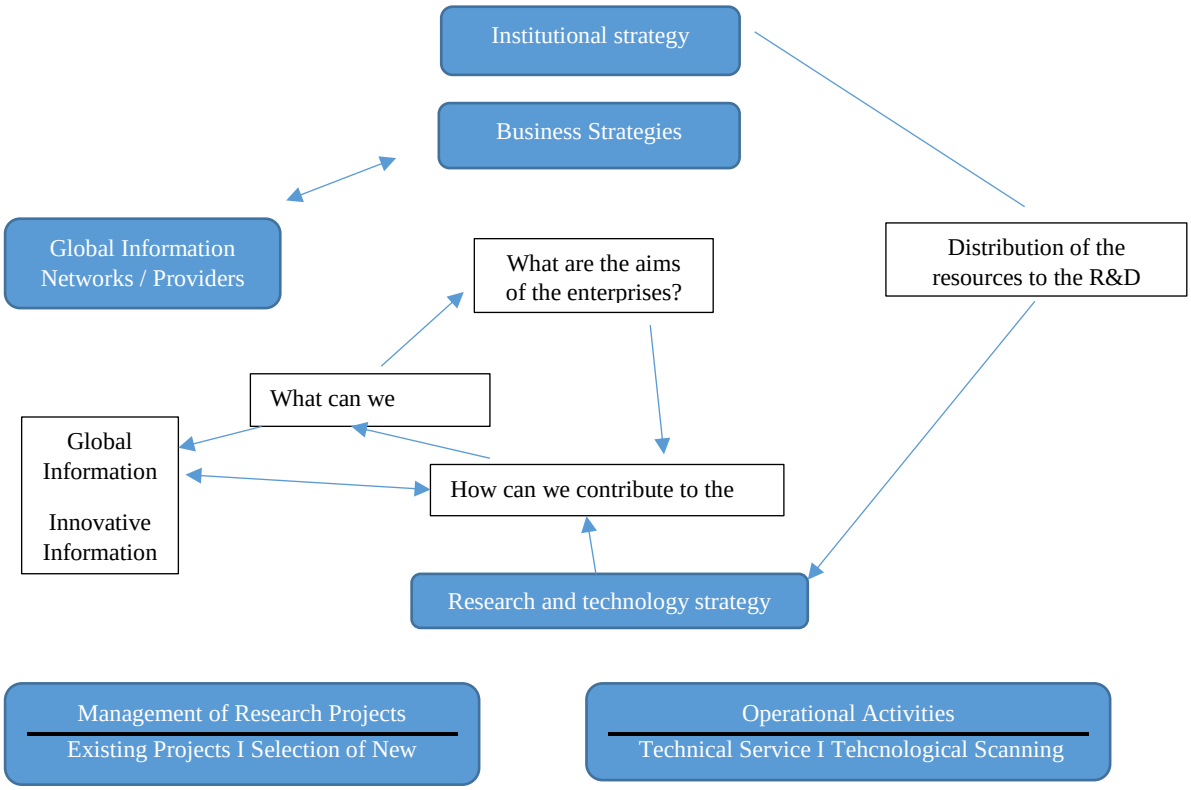


Figure 1.The Effects Of Global Informatıon Networks On R & D Investment Decısıon Makıng Process (Reference: Adopted from Trott, 2008:268.)

The fact that senior management adopting open source innovation strategies is a factor that increases the power of interaction. Follow-up of technical literature. Integration of laboratories (various academic and private).

Connect & Develop can be a good example for this. Procter & Gamble R & D laboratories can be given as examples for this case. Working with a variety of integrated networks, these laboratories have achieved success that is widely appreciated. The Company achieved fifty percent growth by achieving the target set for its segment, while reducing R & D costs by 25 percent. Today, it has developed the swiffer, and has expanded Febreze, each of which is a billion dollar brand (Satel, 2017: 156).

The open-source innovation strategy greatly increases Procte & Gamble's competitiveness. But for the development of this process, it is even more important that the basic research in the portfolio of the innovation matrix of the enterprise is not well defined.

2.1. Globalisation And The Concept Of Innovation

While executives at the global level strive to develop innovation primarily within their own units, they need a management level to carry out both activities together while implementing change programming within the company (Yılmaz, 2015:24). In this case, innovation is applied by firms as a tool that can provide a competitive advantage in the global competition environment compared to its competitors (Porter and Ketels, 2003).

In the globalization process, it can be thought that small and medium-sized enterprises are more prone to innovation activity (Acs and Gifford, 1996: 204). The process of globalization triggers change, which in turn leads to innovation, but in fact, change is also the result of innovation. Another factor that increases the effect of

innovation on the R & D process in the globalization phenomenon is the acceleration of the use of creativity for a commercial purpose. However, the radio was found in 1887 but commercialized in 1922, the delay is 35 years. Insulin was found in 1889 but commercialized in 1922 (33 years). The automatic transmission was found in 1904 and commercialized in 1939 (35 years), and nylon was found in 1927 and commercialized 12 years later, in 1939 (Alexopoulos and Cohen, 2009). However, in today's conditions, the commercialization process of an invention has been considerably shortened. Today's development in communication is so effective that IBM commercializes its first R & D laboratory in Africa, which is also known as Silicon Savana, by instantly adapting mobile phone technology.

2.2. The Purpose, Questions, Hypotheses And Importance Of The Research

Businesses need to understand emerging trends that affect them and the consequences of a competitive environment. The phenomena of globalization increase this need further. While the innovation strategies of the enterprises are involved in this process, there are frequent and radical changes in the focus of R & D.

Q1- How does development occur in R & D intensive firms with innovation strategies? Q2- How are service or industrial sectors affected by innovative strategies according to company categories and size? Q3- What are the effects of innovation strategies (enterprise strategies of enterprises) on the decision-making process of global information networks R & D investments? Q4- What are the effects of product innovation (existing and new projects) and process innovation strategies (operational activities, technical service, etc.) on the R & D process and the pressure of senior management?

The aim of the research is to examine the answers of these problem sentences. In the context of these problem sentences, the research hypotheses are:

H0- The effects of institutional innovation strategies on R & D strategies are high in the globalization process.
H1- The effects of corporate innovation strategies on R & D strategies in the globalization process is low.

2.3. Corporate Innovation Strategies And R & D Strategies

Innovation strategies are often regarded as competition strategies. However, this situation can simplify the phenomenon of innovation. Innovation strategies should not only be considered as competitive strategies, but also in line with the strategies of the enterprise. In the literature, innovation strategies are examined by different authors such as the concept of innovation by making different classifications (Balaban, 2019: 182). The most well-known of these are Freman's innovation strategies that emphasize the timing and speed of the enterprise's entry into new technological fields that are the aggressive, defensive, imitating, traditional, dependent, opportunistic strategies. For example; Those who implement the aggressive strategy start their R & D activities with basic researches and then turn to competitive advantage with their applications. In this case, R & D activities do not have positive results in enterprises as a result of long and costly studies and cannot monitor the changes in customer needs. Imitating enterprises are the ones that do not allocate much resources to R & D. Generally, they have a strategy based on the license etc. of the products of the leading enterprises. The dependent strategy is often a subcontractor. They are enterprises that have no initiative in product design and there are no R & D facilities. Traditional strategy is focused on traditional professional skills, not on scientific study. Their adaptation to the high-tech environment is difficult. The monitoring strategy, which can also be called an opportunity assessment strategy, focuses more on the weaknesses of the opponent, as in military strategies. Undoubtedly, innovation encompasses a wide range of technologies, products, processes, and business ventures, each completed on its own requirements.

In books, such as Tom Peters and Bob Waterman's "In Search of Excellence", Kanter's "Change Masters" and Gilford Pinchot's "Intrapreneuring", they emphasize the concept of free strategy, eliminating bureaucratic constraints, but emphasizing the need to focus on the future by protecting most revenue streams from existing jobs that pose a danger to current success. This situation brings with it a dilemma in R & D studies.

2.4. Literature Review And Findings

Globalization is also changing the impact of product and process innovations on R & D. Product innovation relates to the development of a new or substantially different version of a product or service and its introduction to a market. Process innovation refers to significant improvements in support activities such as purchasing,

accounting, maintenance, repair and programming (Polder et al., 2010). The requirements created by the process increased with globalization. In many cases related to the innovation process, it is emphasized that interrelated creative processes, including marketing, manufacturing, design and R & D of different learning areas, are developed. Griffith et al. believe that higher R & D investment per employee for developed economies in the European Union has the chance to improve investments for an innovator firm. They emphasize that financial presence is significant on the determination of firms entering R & D to be more innovative (Griffith et al., 2006: 485).

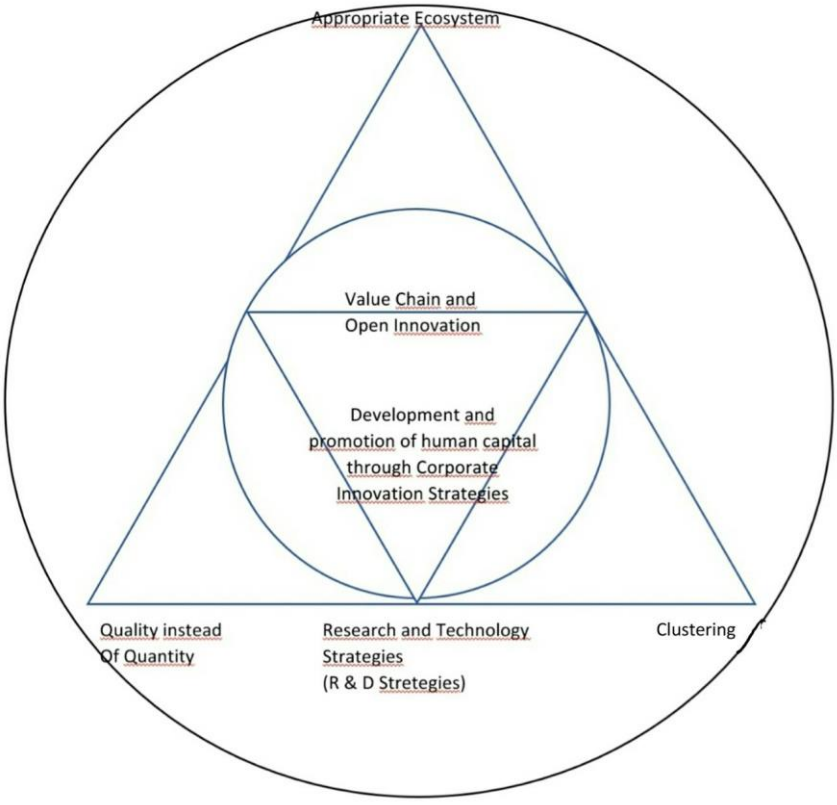
In some researches, there are findings that deny the place of R & D among strategic innovation sources. For example, in a research conducted by IBM with more than 750 company leaders and senior executives (by telephone interview), it has been found that 76% of managers saw the most important sources for the company to acquire new ideas as partnership with another company and cooperation with customers.

It was found that only 14% of them saw applying R & D activities within their preferred company as a source of new ideas (Yılmaz, 2015: 457).

In another study, there is a similar finding. It was concluded that the innovations stem from the ideas obtained from the company (28.4%), suppliers (26%), customers (25%), competitors (24.9%) and fairs (24.6%), and other innovation sources such as universities and other non-profit R & D institutions were found to be 3.7% and 2.9% (De Ridder, 2008).

3.Research Method Suggestion Of A Model

In this model, maximizing the input scale means that the innovative outputs are maximized. Both global and financially negative impacts on innovation, the combination of specific innovation strategies and the selection of the appropriate ones, and the cost opportunity can be demonstrated through an approach that blends the organization's current capabilities and previous experience (with R & D and technology strategies). The three pillars of our strategy triangle should be; an appropriate ecosystem, to emphasize quality rather than quantity, and to determine the way they act together when necessary.



3.1. Quality Instead Of Quantity

When it comes to innovation, sometimes quality is emphasized and even rewarded instead of quantity. Today, R & D functions are typically measured according to the quantity of inputs (R & D expenditure) and outputs (new special products and patent numbers). In fact, the success of a company depends not on how much it invests in R & D but on how well it uses them (Radjou and Prabhu, 2015: 42).

3.2. Appropriate Ecosystem

Financing is not the only requirement for the emergence and success of R & D and innovative projects. In order to develop, mature and produce results in regional and national R & D and innovation activities, the most appropriate ecosystem should be established (Özkurt, 2017: 336). When an appropriate ecosystem is not established, innovative ideas cannot develop, cannot be realized or realized, and cannot be successful because there is no demand even if it is implemented.

3.3.Clustering

R & D and innovation-oriented studies are often risky. One of the strategies that affect R & D processes in order to minimize this risk and maximize the benefit is clustering. The structures created by coming together in order to accelerate and improve R & D and innovation activities and to increase pre-competitive cooperation between similar companies are called clusters. Clustering, which triggers and encourages inter-firm cooperation, enables the efficient use of financial resources.

When the findings of the studies are evaluated, it is concluded that the costs are important. It is seen in the literature that many authors emphasize that there is a synergy between internal R & D expenditures and alliances formed (with information providers), and that the company's strong R & D capability enables the development of the corporate strategies development cycle which will have benefits in the future.

The fact that enterprises do not concentrate on R & D activities due to high costs is seen as an obstacle to innovation. Instead of defining the strategies of the companies by the environment, it may be suggested that they develop new value chains in line with the global ecosystem and develop a strategy capable of identifying their innovative environment with open innovation strategy etc. (together with the blue ocean strategy).

Corporate innovation strategies should be developed and integration with global information network providers should be assimilated and carried out together with R & D strategies. This situation may also affect the decision-making process (product and process innovation) of R & D investments positively. This situation will have a positive impact on the R & D cost mechanism. Establishing a system of interconnected value chains will change their perspective of innovation in 90% of small and medium-sized enterprises and make them more innovators. The development and change created by the globalization process necessitates this. The finding that the effects of institutional innovation strategies on R & D strategies in the globalization process and their high impact is supported by the H0 hypothesis, and the multiple innovation systems monitored can reduce this effectiveness, the organization needs to choose the appropriate ecosystem from the quality rather than the quantity, and increase the benefits of impacts by acting together (the clusters).

4.Conclusion and Discussions

As a result, managers should be able to convert unpredictability costs into opportunity costs by choosing the one that suits them and instead of using every possible leverage they face and by linking the commitment between different innovative structures. This situation will increase the innovation potential and positive interactions of small and medium-sized companies that cannot invest and develop R & D, especially in our country.

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