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BOOK OF FULL PAPERS

Editors

Assoc. Prof. M. Veysel Kaya
Dr. Patrycja Chodnicka-Jaworska

ISBN: 978-605-80676-5-3

KADIR HAS UNIVERSITY

11-13 June 2019
Istanbul, TURKEY

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SRH University of Applied Sciences Berlin, Germany
"Challenges of Leadership in Service-Oriented Industries"

"Special thanks to keynote speakers"

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Influence the Innovation and Technology Transfer on the Country's Competitive Advantages

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Abstract

Growing competition in the world determines the importance in the technologic field are challenges for more frequent and more rapid innovations, with the end result in new products, processes and technologies. High-tech markets encourage the inventors to apply their inventions to commercial project. Many new trends on the world markets depend on factors that generate the ideas and their capacity to be absorbed. Innovation is the leading force of competitiveness, of growth, of profitability, as well as of the creation of durable values since it is well known that the competitive advantage, so much wished-for by any organization and country, which operates in a highly competitive environment, is volatile, hard to obtain. The technology transfer stand for aspect to which economies have lately, started to grant increased importance. This review attempts to provide in-depth discussion and enhance understanding on innovation technology and which the innovation influence have of the country's competitive advantage. We will try through this paper to highlight the innovation field through the following: Definition of innovation and technology transfer; their features; the influence of the innovation technology in realizing competitive advantage. Statistical indictors serve, as an excellent support is this research. These, together with the knowledge on background, which influences statistical data, give an opportunity for an in-depth and systematic analysis of the situation, causes and trends.

Keywords: Innovation, technology transfer, competitive advantage, countries.
JEL Classification: E60, F23, M21

Introduction

The world economic environment is characterized by rapid changes in all frameworks, especially the technological sides every country. Technology has become a key factor in maintaining competitiveness in the modern global economy. Innovative and technological development of countries in the world arena and the welfare of the population are determined largely by the competitiveness of their national economies. If to speak about developed countries they to developing through technological excellence own farms and innovation systems. And developing countries are deprived of the possibility of reduction of this gap through the intensification import of technologies that are critical to their development.

Innovation and technology transfer is considered to be an important determinant of performance at the country level. This view is supported by empirical evidence showing the importance of innovative activities on firm and industry performance and country growth rates. The majority of the world's R&D is concentrated in a handful of countries however, meaning that domestic innovation is of little importance for most countries.

Such countries can benefit from innovation conducted elsewhere however, if knowledge and technology is diffused across borders. The purpose of this paper is to identify trends in innovation and technology transfer and their influence on the country's competitive advantages. This is achieved through a combination of descriptive statistics and a literature survey.

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Theoretical Background and Literature Review

Analysis of the innovation becoming more open over time (Coombs, Harvey, & Tether, 2003, pp. 1126-1130), in turn associated with increasing levels of collaboration and outsourcing (Chatterjee, 1996, pp. 22-26; J. Howells, 1999, p. 18), has led the analysis to investigate more closely the role of the nodes and links in innovation process.

Innovation represents a way of developing the business and also a condition to survive for companies in case of a more and more merciless competition. On the other hand, innovation is a risky process, but it is also a necessary risk, as Brian C. Twiss wrote: "Successful businesses of the future will be those who learn to live with uncertainty and incorporate it into decision-making processes" (Brian C. Twiss, 1979, p. 30). Many studies carried out referring to innovation have demonstrated that by applying the management methods and techniques on the innovation process the risk of failure is considerably reduced (Brian C. Twiss, 1979; Gabriel Vlăduț, 2012; Joe Tidd, John Bessant, Keith Pavitt, 2005).

A review of literature on technology transfer reveals that technology transfer is a complex, difficult process even when it occurs across different functions within a single product division of a single company (Zaltman et al., 1973, p. 46; Kidder, 1981; Smith and Alexander, 1988, p. 241). Technology transfer is commonly acknowledged to be a complex process that needs time to evolve (Agmon and von Glinow, 1991, pp. 8-9). Past literatures have referred technology transfer as the transmission of know-how to suit local conditions, with effective absorption and diffusion both within and across countries (Chung, 2001; Kanyak, 1985, p. 37). Other early researchers for example (Baranson, 1970, pp. 437) defines technology transfer as transmission of know-how (knowledge) which enable the recipient enterprise to manufacture a particular product or provide a specific service.

In the context of developing countries, (Hoffman and Girvan, 1990, pp. 41-43) argue that technology transfer needs to be perceived in terms of achieving three core objectives: the introduction of new techniques by means of investment of new plants; the improvement of existing techniques and the generation of new knowledge. A successful technology transfer will eventually lead to a deeper and wider accumulation of knowledge (Sazali Abdul Wahab, Raduan Che Rose, Suzana Idayu Wati Osman, 2011, pp. 62-63).

In the past decades, the quantification of the national competitiveness level represented a continuous concern of some institutions and organizations that share global pursuits. Within such a framework, the International Management and Development Institute and the World Economic Forum stand out, organizations that undertook the establishment of a classification of the most competitive states, depending on the growth competitiveness index and of the business competitiveness index, the world states occupying certain places depending on certain criteria considered as significant in the general development of a country. For contextual analyses to better understand performance differences on the innovation indicators used in the main measurement framework, a set of contextual indicators was introduced to the country profiles (European Innovation Scoreboard, 2018):

1. Business R & D expenditure.
2. Non-R & D innovation expenditure.
3. Innovative SMEs collaborating with others.
4. PCT patent applications.
5. PCT patent applications in societal challenges.
6. Medium and high tech product exports.
7. Knowledge-intensive services exports.
8. Sales of new to market and new to innovations.
9. License and patent revenues from abroad.

Important are differences in economic structures, with differences in the share of manufacturing in GDP and in so-called high-tech activities in manufacturing and services being important factors that explain why countries can perform better or worse on indicators like business R&D expenditures, PCT patents, and innovative

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enterprises. Medium-high and high-tech industries have higher technological intensities than other industries. These industries, on average, will have higher R&D expenditures, more patent applications, and higher shares of innovating enterprises. Countries with above-average shares of these industries are expected to perform better on several indicators.

For example, for the EU28 on average, 85% of R&D expenditures in manufacturing are accounted for by medium-high and high-technology manufacturing industries. Also, the share of enterprises that introduced a product and/or process innovation is higher in medium-high and high-technology manufacturing industries compared to all core industries covered in the Community Innovation Survey (European Innovation Scoreboard, 2018).

The main difference between the developed economies and the poor ones derives from the fact that the former produce more and better goods and not from the fact that in some economies the consumption is greater than in other, as it is often considered (European Innovation Scoreboard, 2017).

In order to synthesize the information supplied by the two indexes of competitiveness (GCI and BCI), Growth Competitiveness Index and Business Competitiveness Index). The economic growth is determined by their special innovation capacity, that mainly depend, from the technological point of view, on the acquisitions in the field from abroad (Radu L., 2007, p. 73)

Europe makes up for the gap in the innovation field in comparison with the United States and with Japan, in the general classification within the EU, Sweden is in the first position, followed by Denmark, Germany and Finland, these four countries are the ones that invest the most in research and innovation (European Innovation Scoreboard, 2018).

Country codes/names was presented below in table 1, where are selected and presented 30 countries.

Table 1. Country codes/names

EU	European Union		
AT	Austria	IE	Ireland
BE	Belgium	IT	Italy
BG	Bulgaria	LT	Lithuania
CH	Switzerland	LU	Luxembourg
CY	Cyprus	LV	Latvia
CZ	Czech Republic	MT	Malta
DE	Germany	NL	Netherlands
DK	Denmark	NO	Norway
EE	Estonia	PL	Poland
EL	Greece	PT	Portugal
ES	Spain	RO	Romania
FI	Finland	SE	Sweden
FR	France	SI	Slovenia
HR	Croatia	SK	Slovakia
HU	Hungary	UK	United Kingdom

Sources: https://ec.europa.eu/eurostat/statistics-explained/index.php/Glossary:Country_codes

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Specifically, the Innovation Union Scoreboard, 2016 edition places the states members in four different performance groups:

1. Switzerland (CH), Sweden (SE), Denmark (DK), Finland (FI), UK (UK) and the Netherlands (NL) are "innovation leaders" innovation performance are well above the EU average.
2. Austria (AT), Belgium (BE), Cyprus (CY), France (FR), Germany (DE), Ireland (IE), Luxembourg (LU), Norway (NO), Slovenia (SI) are "innovation followers" with an innovation performance above average or close to the EU average.
3. Performance Croatia (HR), Cyprus (CY), Czech Republic (CZ), Estonia (EE), Greece (EL), Hungary (HU), Italy (IT), Latvia (LV), Lithuania (LT), Malta (MT), Poland (PL), Portugal (PT), Slovakia (SK) and Spain (ES) is below the EU average. These countries are "moderate innovators".
4. Bulgaria (BG), Romania (RO) and Ukraine (UA) are "modest innovators" with innovation performance significantly lower than the EU average.

Most innovative countries have good results and visible above the EU average in all areas: from higher education system and research, through innovative commercial activities and Intellectual assets, to innovation within SMEs economic effects, reflecting national research and innovation systems in balance.

Internationally, South Korea, USA and Japan go beyond the EU's performance in innovation. If the gap relative to the US and Japan has halved in recent years, the gap with South Korea increased. (Innovation Union Scoreboard, 2017).

Methodology

The research methods

Reviewing of current indicators new technology and innovation in the countries European Union. Research materials in this article comprise secondary sources of information such as data of Eurostat, Statista, European Parliament business reports and industry newsletters and publications. The research period was in the years 2010-2016. The work used a qualitative method – the indicators in the field to assess the transfer of technology and the level of innovation in the economy countries European Union.

Results and discussion

Indices of innovation and technology transfer in individual EU countries

It is important to assess the impact of technology transfer on strengthening innovation and investment processes in the economy, as well as to define the conditions that should lead to an effective attraction of foreign technologies and increase the efficiency of their implementation in the process of modernization of the economy.

Specific indicators achieved by individual countries presented and interpreted. The surveys contain statistics for 30 countries, available for the period 2010-2016. The main indicators characterizing the transfer of technology and innovation selected for research and analysis.

A comparative analysis of some of the indicators characterizing technology transfer and innovation is based on statistical data of the Central Statistical Office and the European Union.

To assess the transfer of technology and the level of innovation in the economy, it is necessary to use the previously described indicators.

The following definitions have been adopted for indicators:

P211 Business R & D expenditure.

P212 Non-R & D innovation expenditure.

P222 Innovative SMEs collaborating with others.

P231 PCT patent applications.

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P232 PCT patent applications in societal challenges.

P322 Medium and high tech product exports.

P323 Knowledge-intensive services exports.

P324 Sales of new to market and new to innovations.

P325 License and patent revenues from abroad.

The construction of individual indicators is as follows:

P211 is expenditure on R & D activities reported in relation to gross global product (GDP);

P212 is the remaining expenditure on innovation, in relation to GDP – for 2016;

P222 is the share of innovative small and medium-sized enterprises cooperating with other entities in the total number of innovative enterprises;

P231 – the number of patent applications in the industry and services of a given country in relation to the total number of patent applications on the patent market;

P232 – the number of patent applications filed in the social sphere in relation to all patent applications on the market;

P322 is the export of products with medium and high technology level to export in a given country;

P323 is the export of knowledge-related services to the GDP of a given country;

P324 is the sale of new products for the market and new products for companies in the total sales volume;

P325 is the value of licenses and patent income from abroad to the total value of exports.

Data on the significance of these indicators for the European Union (EU) and 30 individual countries are given in Table 2.

Table 2. Innovation and technology transfer rates for 2016

	EU	BE	BG	CZ	DK	DE	EE	IE	EL	ES	FR	HR	IT	CY	LV	LT	LU	HU	MT	NL	AT	PL	PT	RO	SI	SK	FI	SE	UK	NO	CH
P211	1.30	1.76	0.52	1.12	1.95	1.95	0.63	1.11	0.28	0.65	1.46	0.38	0.72	0.08	0.25	0.30	0.66	0.98	0.50	1.11	2.11	0.44	0.59	0.16	1.85	0.33	2.15	2.12	1.09	0.92	2.05
P212	0.69	0.60	0.49	0.73	0.37	1.35	1.55	0.39	0.87	0.31	0.37	0.95	0.57	0.58	1.38	1.10	0.14	0.70	1.20	0.18	0.46	1.04	0.60	0.30	0.48	0.79	0.37	0.79	0.30	0.24	2.01
P222	10.3	22.9	2.3	11.6	17.3	11.5	15.8	12.0	12.4	6.0	11.5	7.5	4.8	15.3	4.5	7.5	8.9	5.6	5.1	14.5	15.3	3.9	6.8	1.2	14.6	6.7	14.3	12.7	22.4	7.9	9.4
P231	3.53	3.17	0.48	0.91	6.24	6.26	1.00	2.40	0.55	1.48	3.77	0.54	1.96	0.63	0.82	0.60	1.39	1.19	0.62	5.57	5.06	0.51	0.66	0.17	2.73	0.65	8.17	7.99	3.30	2.56	6.70
P232	1.01	0.77	0.08	0.24	2.05	1.47	0.20	0.65	0.13	0.47	0.92	0.20	0.47	0.06	0.28	0.12	0.68	0.29	0.28	1.68	1.07	0.17	0.23	0.04	0.59	0.09	1.61	1.88	0.80	0.56	1.94
P322	56.1	48.5	31.2	64.0	47.7	67.4	42.6	52.1	22.7	47.7	58.5	37.9	52.3	43.0	32.1	34.4	52.1	69.5	56.7	48.0	57.4	49.6	36.7	52.8	56.0	66.6	44.6	54.7	54.8	13.6	49.9
P323	63.1	64.6	27.1	41.1	75.1	69.6	43.9	88.5	51.8	42.2	58.6	17.8	48.5	69.0	49.8	18.3	88.4	38.3	25.9	65.3	43.2	36.7	43.2	44.7	32.9	35.3	50.6	65.0	77.9	75.8	50.4
P324	12.4	11.2	4.2	13.4	22.1	13.0	7.8	9.3	11.8	14.3	13.5	10.0	11.0	11.4	5.0	5.5	7.9	9.7	10.2	11.8	9.8	6.3	12.4	3.7	10.5	19.6	11.1	6.1	14.1	5.2	16.1
P325	0.54	0.63	0.06	0.24	0.71	0.36	0.04	2.53	0.05	0.10	0.50	0.04	0.16	0.01	0.02	0.05	1.66	1.51	3.10	2.24	0.25	0.06	0.04	0.07	0.14	0.03	1.38	1.59	0.60	0.08	3.08

Source: own study based on data from the European Commission

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The ranking indicators for the development of selected nine parameters in the context of individual countries are presented in tab. 3. The following table shows a list of these countries ordered for each of these parameters, marked by the EU and Poland. The data was downloaded from tab. 1 and arranged from minimum to maximum

Table 3. Ranking of countries based on innovation indicators and technology transfer

	P211		P212		P222		P231		P232		P322		P323		P324		P325	
1	CY	0.08	LU	0.14	RO	1.2	RO	0.17	RO	0.04	NO	13.6	HR	17.8	RO	3.7	CY	0.01
2	RO	0.16	NL	0.18	BG	2.3	BG	0.48	CY	0.06	EL	22.7	LT	18.3	BG	4.2	LV	0.02
3	LV	0.25	NO	0.24	PL	3.9	PL	0.51	BG	0.08	BG	31.2	MT	25.9	LV	5.0	SK	0.03
4	EL	0.28	RO	0.30	LV	4.5	HR	0.54	SK	0.09	LV	32.1	BG	27.1	NO	5.2	PT	0.04
5	LT	0.30	UK	0.30	IT	4.8	EL	0.55	LT	0.12	LT	34.4	SI	32.9	LT	5.5	HR	0.04
6	SK	0.33	ES	0.31	MT	5.1	LT	0.60	EL	0.13	PT	36.7	SK	35.3	SE	6.1	EE	0.04
7	HR	0.38	DK	0.37	HU	5.6	MT	0.62	PL	0.17	HR	37.9	PL	36.7	PL	6.3	EL	0.05
8	PL	0.44	FR	0.37	ES	6.0	CY	0.63	EE	0.20	EE	42.6	HU	38.3	EE	7.8	LT	0.05
9	MT	0.50	FI	0.37	SK	6.7	SK	0.65	HR	0.20	CY	43.0	CZ	41.1	LU	7.9	BG	0.06
10	BG	0.52	IE	0.39	PT	6.8	PT	0.66	PT	0.23	FI	44.6	ES	42.2	IE	9.3	PL	0.06
11	PT	0.59	AT	0.46	HR	7.5	LV	0.82	CZ	0.24	ES	47.7	AT	43.2	HU	9.7	RO	0.07
12	EE	0.63	SI	0.48	LT	7.5	CZ	0.91	LV	0.28	DK	47.7	PT	43.2	AT	9.8	NO	0.08
13	ES	0.65	BG	0.49	NO	7.9	EE	1.00	MT	0.28	NL	48.0	EE	43.9	HR	10.0	ES	0.10
14	LU	0.66	IT	0.57	LU	8.9	HU	1.19	HU	0.29	BE	48.5	RO	44.7	MT	10.2	SI	0.14
15	IT	0.72	CY	0.58	CH	9.4	LU	1.39	ES	0.47	PL	49.6	IT	48.5	SI	10.5	IT	0.16
16	NO	0.92	PT	0.60	EU	10.3	ES	1.48	IT	0.47	CH	49.9	LV	49.8	IT	11.0	CZ	0.24
17	HU	0.98	BE	0.60	FR	11.5	IT	1.96	NO	0.56	IE	52.1	CH	50.4	FI	11.1	AT	0.25
18	UK	1.09	EU	0.69	DE	11.5	IE	2.40	SI	0.59	LU	52.1	FI	50.6	BE	11.2	DE	0.36
19	IE	1.11	HU	0.70	CZ	11.6	NO	2.56	IE	0.65	IT	52.3	EL	51.8	CY	11.4	FR	0.50
20	NL	1.11	CZ	0.73	IE	12.0	SI	2.73	LU	0.68	RO	52.8	FR	58.6	EL	11.8	EU	0.54
21	CZ	1.12	SE	0.79	EL	12.4	BE	3.17	BE	0.77	SE	54.7	EU	63.1	NL	11.8	UK	0.60
22	EU	1.30	SK	0.79	SE	12.7	UK	3.30	UK	0.80	UK	54.8	BE	64.6	EU	12.4	BE	0.63
23	FR	1.46	EL	0.87	FI	14.3	EU	3.53	FR	0.92	SI	56.0	SE	65.0	PT	12.4	DK	0.71
24	BE	1.76	HR	0.95	NL	14.5	FR	3.77	EU	1.01	EU	56.1	NL	65.3	DE	13.0	FI	1.38
25	SI	1.85	PL	1.04	SI	14.6	AT	5.06	AT	1.07	MT	56.7	CY	69.0	CZ	13.4	HU	1.51
26	DK	1.95	LT	1.10	AT	15.3	NL	5.57	DE	1.47	AT	57.4	DE	69.6	FR	13.5	SE	1.59
27	DE	1.95	MT	1.20	CY	15.3	DK	6.24	FI	1.61	FR	58.5	DK	75.1	UK	14.1	LU	1.66
28	CH	2.05	DE	1.35	EE	15.8	DE	6.26	NL	1.68	CZ	64.0	NO	75.8	ES	14.3	NL	2.24
29	AT	2.11	LV	1.38	DK	17.3	CH	6.70	SE	1.88	SK	66.6	UK	77.9	CH	16.1	IE	2.53
30	SE	2.12	EE	1.55	UK	22.4	SE	7.99	CH	1.94	DE	67.4	LU	88.4	SK	19.6	CH	3.08
31	FI	2.15	CH	2.01	BE	22.9	FI	8.17	DK	2.05	HU	69.5	IE	88.5	DK	22.1	MT	3.10

Source: own study

In order to better display data with different dimensions and ranges, the logarithmic scale of the coordinate axes is selected (Fig. 1, 2, 3). The most similar innovation indicators are Lithuania and Croatia, shown in Figure 1.

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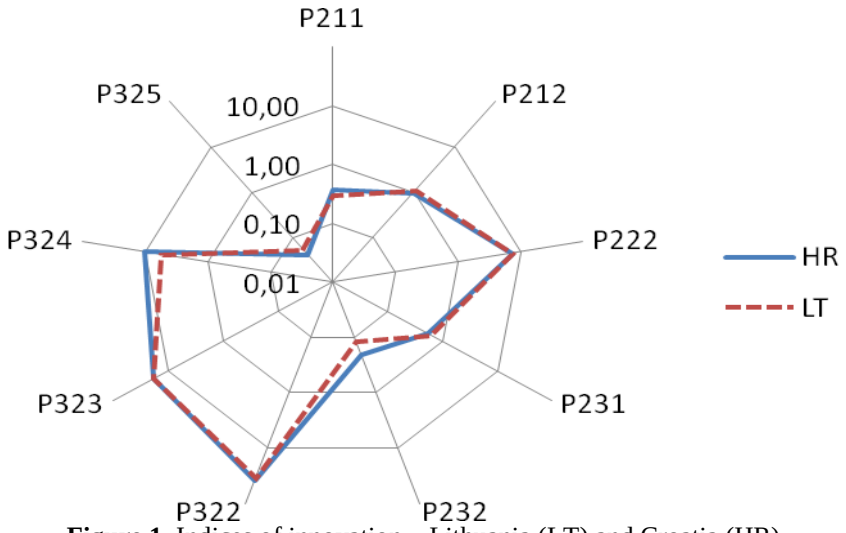


Figure 1. Indices of innovation – Lithuania (LT) and Croatia (HR)

Source: own study

In the second, Fig. 2 and third Fig. 3 of the case, we can see that parameter P212 has an inverse dependence on the general level of indicators describing innovation and technology transfer, it has been verified graphically.

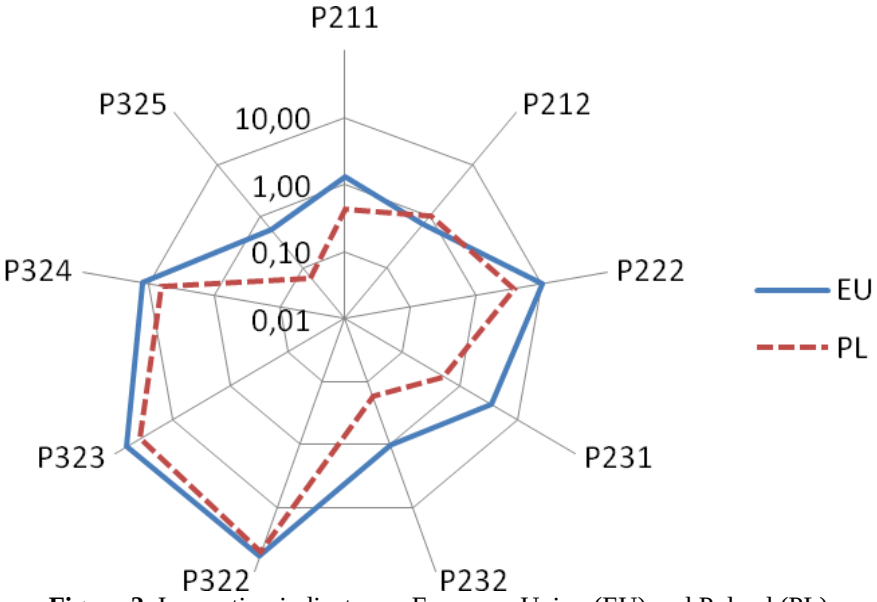


Figure 2. Innovation indicators – European Union (EU) and Poland (PL)

Source: own study

Similarly, the European Union (EU) and Poland found the greatest variability nature for indicators: P231 – PCT patent applications, P232 – PCT patent applications in the social sphere and P325 - licenses and patent income from abroad, characterized by a significant relative difference in Figure 3. Data is downloaded from the table 2, comparison of the closest countries.

Small relative differences can be seen in Fig. 2 and Fig. 4 by parameter P322 – export of products of medium and high level, as well as by the last figure through parameter P222 – Innovative SMEs cooperating with other entities.As you can see, the biggest difference between the graphs is practically on all indicators, observed in the

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third case.The above approach results from the proximity concept and is based on the association of similar objects in one cluster.

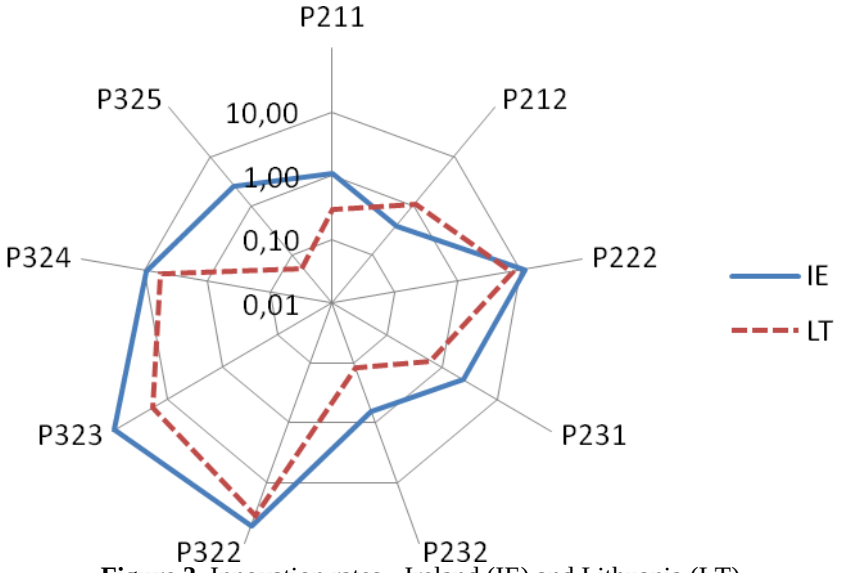


Figure 3. Innovation rates - Ireland (IE) and Lithuania (LT)

Source: own study.

Based on the analysis, it can be argued that the development of the process of innovation and technology transfer can lead to a new system of EU innovation indicators as the models of the most excellent countries specializing in selected indicators, which can be found in Figure 4.

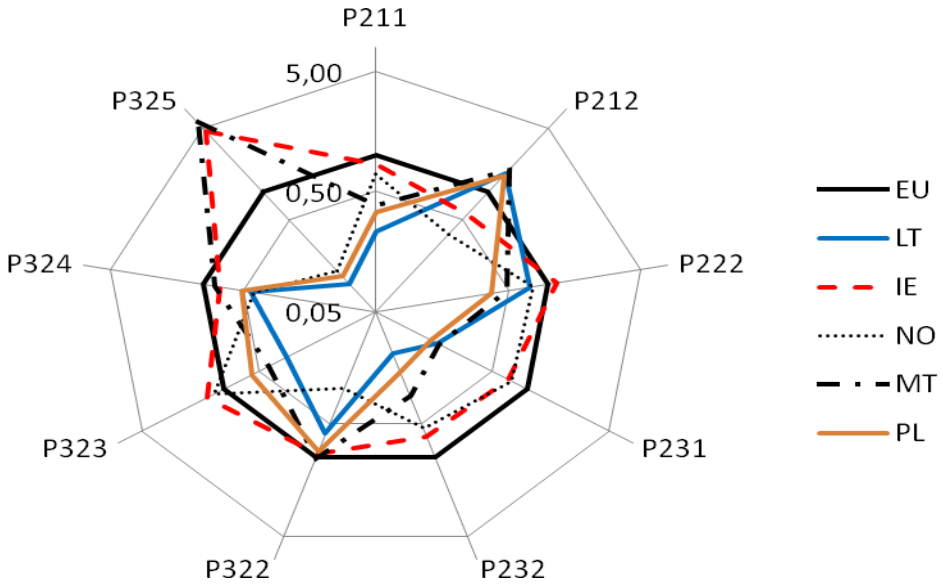


Figure 4. Countries, which are the maximum different from the selected system of innovation indicators, are characteristic for the EU

Source: own study

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As the graph analysis shows, from the general EU level, the countries: Malta (MT) and Ireland (IE) most differ in the high level of P325 – licenses and patent income from abroad.

For countries: Lithuania (LT), Norway (NO) and Poland (PL) lagging behind the average European level by all indicators, except for one (for LT and PL is P212, for NO – P323). Interestingly, among the indicators in question there are no ones that were ahead of the EU level for the whole group of indicators: P211, P231, P232, P322, P324.

Conclusions

The features of countries according to the picture of the distribution of their indicators are presented, which are interpreted as the country's innovation profile and displayed in diagrams (diagrams). For comparison, the indicators from based on data from the European Commission are used.

Poland occupies the central position of EU countries whose innovation and technology transfer rates have to be increased, which indicates the need to increase all indicators.

Basically conclusions formulated in terms of the goal and desired results was to identify trends in innovation and technology transfer and their influence on the country's competitive advantages. From analyzed countries, Poland occupies the central position of EU countries. Poland and Lithuania have only two competitive advantages where strong side : P212 Non-R & D innovation expenditure and P322 Medium and high tech product exports. Them innovation and technology transfer rates have to be increased, which indicates for her the need to increase the anothers indicators, such as:

P211 Business R & D expenditure.

P222 Innovative SMEs collaborating with others.

P231 PCT patent applications.

P232 PCT patent applications in societal challenges.

P323 Knowledge-intensive services exports.

P324 Sales of new to market and new to innovations.

P325 License and patent revenues from abroad.

Such a policy must start from stimulating innovation, research-development activities as instruments of the jump to other increase levels that shall finally turn these countries into countries with competitive economy.

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Brand Positioning Based on Web Search Traffic: A Research on Hotels[1]

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Abstract

Brand positioning, a business is consciously differentiation itself from rival's product. Positioning studies conduct following the market segmentation activity after a good market research and affect consumer's thought in a relation to the brand. That's the way it is a very important concept for brand management of businesses. Increasing in competition in terms of businesses requires to understand a strongly brand position and manage it. Consumers search on internet in relation to the product with some keywords before making a purchase decision. The searches give a chance both consumers and businesses for better understanding consumers. Consumers seeking to purchase a product make to only a single representative keyword, but generally they use two or more keywords to find related information. Consumers may conduct simultaneous search either to obtain information on the similarities and differences of two or more product brands or to conduct more detailed information on the characteristics of a specific brand. Web search traffic shows that the amount of simultaneous search using certain keywords increases when the relationship is closer to the consumer's mind. The creation of the relationship between each of the keywords and the evaluation of the relational data is possible through social network analysis. The purpose of this paper is to show that web hotel search traffic information can be used to derive relationships among hotel brands. Data obtained through Google Trends. The frequency of simultaneous searches of two hotel brands in web search traffic expressed as a network structure in which each hotel brand constitutes nodes and in this way the relationship between hotel brands analyzed. Social network analysis used to identify the relationship. The last one years of time series on web search traffic information used in the study. According to the results of Social Network Analysis (SNA); based on all degree centralization, the number of input and output links in the most densely visited hotels are Ramada, Hilton and Rixos hotels respectively. The hotels with the highest closeness degrees and the fastest connection to other hotels in the network are Hilton, Ramada, Rixos and Dedeman Hotels respectively. The hotels with the highest betweenness degrees, the strongest connections to other hotels, the network of bridges and the role of mediators by playing different groups in the network, are Ramada, Hilton, Rixos and Titanic hotels respectively. It can be said that the study differs from other positioning studies in terms of the perspective and contributes in terms of implementation.

Keywords: Positioning, Google Trends, Social Network Analysis, Web Search Traffic

Conceptual Background

In marketing research, a considerable amount of attention has been given to concept brand and brand positioning. Some of these are brand perception (Hudson and Others, 2016; Sultan and Others, 2019; Berger, Draganska and Simonson, 2007), search engine marketing and brand positioning (Wenyu and Others, 2010; Schultz, 2018), brand positioning and advertising (Dana and Others, 1999; Akaka and Alden, 2010; Kalra and

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Goodstein, 1998), brand positioning strategies (Tyagi and Raju, 2018; Blankson and Others, 2018; Coffie, 2018), positioning in different sector (Bartikowski, Fastoso and Gierl, 2019; Lee, Kim and Won, 2019; Lakshmi and Kavida, 2018). However, despite the interest, the studies generally conducted data by traditional data collection method and on very few organizations.

Brand is a valuable asset for any organization when managed by an integrative perspective (Mirzaei and Others, 2015) and also strong brands increase performance of businesses (Colucci, Montaguti and Lago, 2008). A brand creates perception and feelings in stakeholders (Batra, Ahuvia and Bagozzi, 2012). The prior research reveals that branding activities creates awareness and recognition among target market of business. Brand awareness is defined as the "strength of a brand presence in the consumers' mind" by Aaker (1996). This is important due to competitive market. Thus, positioning activities has been conducted by managers. Furthermore, brand management is a complex process and essential holistic perspective by managers (Mirzaei and Others, 2015).

Consumers create a perception in relation to business in mind by positioning activities and purchase according to this perception. There are five steps of consumer's purchase decision process. These; I) a need/want recognition, ii) information search, iii) evaluation of alternatives, iv) purchase decisions, v) purchase outcome. Consumers have not always same density process in a purchase decision. While some decisions are made very fast by consumers, others are made with search lengthy and time consuming. There are some components affecting this process. These; product purchase frequency, product complexity, product cost, perceived risks of purchasing behavior. If consumers purchase firstly a product that are expensive and highly perceived risks consumers search density information (Ferrell and Hartline, 2008; Gomez-Diaz, 2016). Consumers search information for reducing uncertainties in a purchasing situation and maximizing consumers' satisfaction. There are many ways of information search. One of them is the internet. Consumers search information on the internet to make not only more efficient decisions in terms of time and cost but also rational choices. Besides, especially online purchase decision, purchasing decision models in the marketing, web searches are important factor in purchasing of products (Micu and Pentina, 2015). Consumers' online information search behavior are focused on both academician and practitioners.

Google has given Google Trends service as regards to web search traffic information. Prior research was conducted into two fields in terms of web search traffic information. These are forecasting social phenomena (e.g. see Jun and Park, 2016) and observing consumer behavior (e.g. see Lee, 2012). The purpose of this study is to examine a hotel brand and the relationship between the brand and others in consumer mind. The originality of this study relates to examination of brand perception in web search traffic as regards to hotels. But the examination is not investigated in only one hotel context. In this direction, there are three research questions. These are:

1) Does the degree centrality differ on the social network?

2) Does the closeness centrality differ on the social network?

3) Does the betweenness centrality differ on the social network?

The study is organized as follows. First is presented the conceptual background and the research questions of the study. Second is presented the research methodology. The last section is discussed findings, limitations and future research directions of the study.

Research Method

The research population consists of hotels in Turkey. The research sample consists of 20 hotels within the intersection set of the companies with the highest number of rooms purchased and, the average number of nights stayed and, the highest number of hotel chains according to the data obtained from an online hotel booking company in 2018. Selection is based on searches not for the hotel branches, but the hotel brands. In the first section of the research, non-parametric statistical analysis methods are used to identify the general characteristics of 5087 hotels in Turkey and, to compare the channels preferred for hotel bookings (sales office, website etc.) based on the data obtained from an online hotel booking company in 2018. And in the second section of the research, the binary searches on Google for 20 hotels in 2018 were proportionally identified for the period of

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April-May 2019 with the help of *Google Trends* and, the search levels were obtained according to the option 'travel'. The searches were made bi-directionally and, an asymmetrical matrix of 20x20 was obtained since the binary search for the brands 'A' and 'B' may differ from the binary search for the brands 'B' and 'A'. Such hotels not included in the binary searches although they are at the top places in the list of hotels with the highest number of hotel chains or the highest volume of customer potential are excluded from the scope of analysis. Therefore, such hotels with at least one connection are considered. It is one of the constraints of the research is that some values may vary numerically due to the fact that the Google Trend provides proportional values and, that the research is limited to 20 hotels. On the other hand, it is another constraint of the research is that the general characteristics in Turkey are based on some data obtained from an online booking website and, the results are related to the sales through this website. The data obtained is analyzed with the help of the Pajek Package Software and, the brand positions are identified according to the degrees of centrality and, the binary searches for the hotel brands.

Results

General Characteristics

Based on the data obtained from an online hotel booking company in 2018, the general characteristics of the hotels in Turkey according to the sales through this company were analyzed in terms of the following variables: the number of customers, the number of nights stayed, the lead time (average number of nights stayed) and the amount paid for the accommodation (TL) and, compared with the help of the Kruskal-Wallis H Tests.

Table 1. General Features of the Hotels in Turkey

	Max.	**Mean**	**Standard Deviation**	**Skewness**	**Kurtosis**
The number of customers	20917	138,51	552,51	18,703	537,278
The number of night stayed	14999	115,44	403,75	17,354	480,850
Average number of night stayed	305,00	14,67	25,89	4,135	23,432
Amount	4094846,82	31155,69	107608,35	16,645	474,915

As seen in Table 1, the highest number of customers is 20917 and the average of customers is approximately 139. According to the number of nights accommodated; the maximum number of nights is 14999 and, the average number of nights is approximately 115. According to the average number of nights; the highest value is 305 and, the average value is 14.6. The highest income of the hotels is TL 4 094 847 while the average income is 31 155.

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Table 2. Hotels Distribution by Region

Regions	**N**	**%**
Marmara Region	1580	31,1
Aegean Region	1816	35,7
Mediterranean Region	1169	23,0
Central Anotolia Region	502	9,9
Eastern Antolia Region (Erzurum)	20	0,4
Total	5087	100

Table 2 shows the distribution of hotels by region. The Aegean Region (35.7%) is the region with the highest number of hotels in terms of hotels distribution by regions, followed by the Marmara, Mediterranean and Central Anatolia Regions respectively. Hotels in other regions are excluded from the research scope.

The number of customers, the number of nights stayed, the lead time (average number of nights stayed) and the amount paid for accommodation (TL) variables were examined according to the regions and, the results are shown in Table 3.

Table 3. Comparison of Variables Means by Region

Variables	**Regions**					χ^2	**p**
	Marmara	**Aegean**	**Mediterranean**	**Central Anatolia**	**Eastern Anatolia**		
	Mean/ Mean Rank	**Mean/ Mean Rank**	**Mean/ Mean Rank**	**Mean/ Mean Rank**	**Mean/ Mean Rank**		
The number of customers	238,55/ 2748,09	89,88/ 2376,49	73,56/ 2399,15	152,00/ 2824,67	108,45/ 3052,43	86,312	**0,000***
The number of night stayed	176,72/ 2663,09	85,26/ 2407,60	79,36/ 2517,13	116,75/ 2707,06	91,00/ 2999,10	34,581	**0,000***
Average number of night stayed	6,99/ 1967,06	18,29/ 2840,97	20,19/ 2828,10	13,01/ 2619,87	10,26/ 2647,95	363,968	**0,000***
Amount	42554,43/ 2630,83	26110,87/ 2458,78	27428,46/ 2515,27	22004,40/ 2631,15	36278,40/ 2914,28	15,133	**0,004***

Kruskal Wallis Test **p<0,05*

Table 3 shows that there is a significant difference between the number of customer's number of nights accommodated, the average number of nights accommodated and, the amount paid for accommodation according to the regions,

In order to see the meaningful difference between the variables and the regions from the pairs of groups, the groups were compared in paired with Mann Whitney U Test, and it was determined which groups were caused by the difference. According to the number of customers, the number of nights accommodated and, the amount of accommodation, the Marmara Region is significantly higher than all other regions. According to the average number of nights, the Mediterranean and Aegean regions are significantly higher than in all other regions.

According to Table 4, customers' preferred rates of booking tools were compared and, the following results were obtained.

Table 4. Comparing the Preferred Rates of Booking Tools

	Tools							
	Trivago	**Google AdWords**	**Trip Advisor**	**Call Center**	**Other Tools**	**Social Networks (Facebook-Instagram)**	χ^2	**p**
	Mean	**Mean**	**Mean**	**Mean**	**Mean**	**Mean**		
Preferred Rates	0,323	0,080	0,011	0,134	0,443	0,0003	14847, 128	**0,000***

One way Anova **p<0,00*

According to Table 4, when customers' preference of booking tools is compared, other tools are different from other websites, and Trivago is significantly higher than all other channels. Trivago is followed by a call center.

Social Network Analysis

The results of the 20 hotels included in the analysis were determined in proportion with the help of the Google Trends via Google in 2018 and their social network view is shown in Figure 1. As can be seen from Figure 1, some hotels are centrally located, while some hotels are located outside the network depending on the degree of weakness of the connections. In the figure, the connections are directional; for instance Dedeman and Ramada 1525, Ramada Dedeman has 1966 searches.

According to the number of incoming and outgoing connections in the network, the degree of centrality, betweenness centrality and closeness centrality values were calculated. The name of the hotel has been done in random order.

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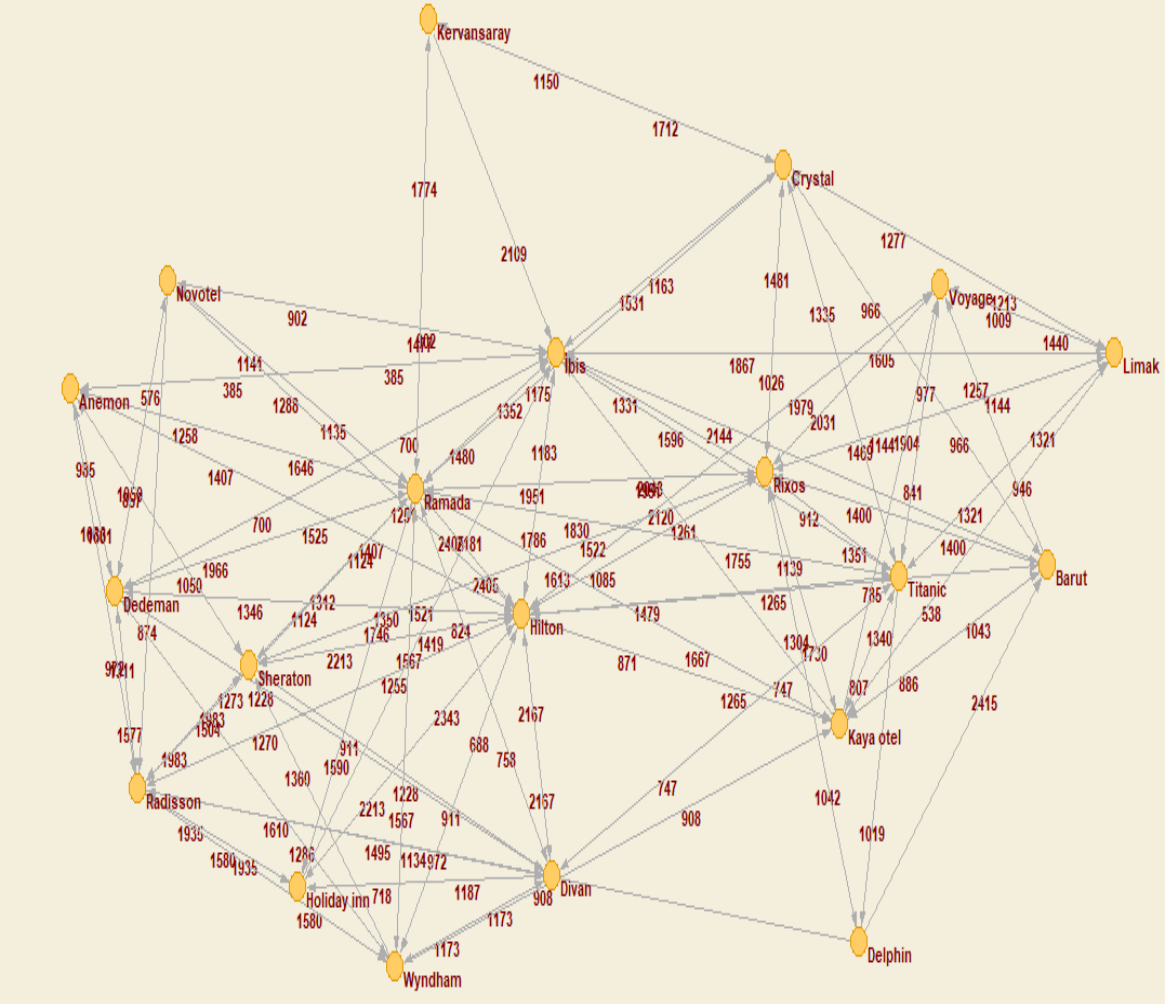


Figure 1. Social Network View of Binary Searches of Hotels

Table 4 shows that the hotels with the highest number of incoming and outgoing connections are Ramada, Hilton and Rixos Hotel respectively. Network density is close to 50 percent. Table 5 shows the betweenness and closeness centrality. When we look at the closeness centralizations in the Table 5, we see that the Ramada, Hilton and *Rixos* have higher closeness grade than others, respectively.

The closeness centralization is developed in order to reflect how one loop closes to other loops in a social network. The closeness and distance show how fast the actors establish the interaction with others. The closeness centralization of actors is a function of the shortest path distances of them for all other loops (Knoke and Song, 2008). Accordingly, the higher closeness means that the said hotels are related to other hotels with a less number of ways. Closeness and distance represent how fast the hotels could communicate with other hotels in the network. In a Social Network, the ideas of the nodes with a higher closeness centrality reach other people in the society faster than the ideas of the other ideas people with a higher average distance. Closeness in the communication networks is not significant by itself. It seems that the fact that the unit is on the shortest paths among the other unit pairs is more significant. These units take the control of the information flow on the network.

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Table 4. Input Degree, Output Degree and All Degree Values

	Input Degree	**Output Degree**	**All Degree**
1. Dedeman	8.00	8.00	16.00
2. Hilton	14.00	15.00	29.00
3. Ramada	15.00	15.00	30.00
4. Anemon	6.00	6.00	12.00
5. Rixos	10.00	11.00	21.00
6. Barut	5.00	5.00	10.00
7. İbis	13.00	5.00	18.00
8. Novotel	4.00	5.00	9.00
9. Radisson	10.00	8.00	18.00
10. Titanic	8.00	10.00	18.00
11. Kaya Otel	7.00	9.00	16.00
12. Divan	8.00	8.00	16.00
13. Delphin	2.00	3.00	5.00
14. Limak	5.00	6.00	11.00
15. Kervansaray	2.00	3.00	5.00
16. Wyndham	6.00	7.00	13.00
17. Crystal	6.00	7.00	13.00
18. Voyage	6.00	4.00	10.00
19. Sheraton	7.00	6.00	13.00
20. Holiday Inn	4.00	5.00	9.00
Network Degree Centralization	0,42	0,42	8,55

It is important to evaluate the centrality of closeness and betweenness. When we look at the betweenness centralizations in the Table 5, we see that the Ramada, Hilton, Rixos and Titanic have higher betweenness grade than others, respectively.

The concept of betweenness centralization is related to how the relationships between the dual elements that are not connected directly are controlled or how they are directed by other actors. The actor betweenness

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centralization measures the availability of other actors in the network in the shortest distance in which ratio with the actor pairs in the network. The betweenness centralization is an important indicator of excessive information change or source flow in a network (Knoke and Song, 2008). Accordingly, it could be said that the hotels with a higher closeness centrality serve as a higher degree of bridge in the network. It means that the hotels with a higher betweenness are the key players with a high degree activity and, connections at high degrees are established with these hotels. This is because the players with a higher betweenness value play a role for binding different groups and, act as an "intermediary".

Table 5. Closeness and Betweenness Centrality Values

	Closeness Centrality	**Betweenness Centrality**
1. Dedeman	0,633	0,013
2. Hilton	0,826	0,169
3. Ramada	0,826	0,205
4. Anemon	0,593	0,004
5. Rixos	0,703	0,091
6. Barut	0,612	0,009
7. İbis	0,700	0,047
8. Novotel	0,575	0,0009
9. Radisson	0,655	0,035
10. Titanic	0,678	0,057
11. Kaya Otel	0,655	0,032
12. Divan	0,633	0,017
13. Delphin	0,542	0,002
14. Limak	0,575	0,005
15. Kervansaray	0,513	0
16. Wyndham	0,612	0,007
17. Crystal	0,612	0,032
18. Voyage	0,575	0,006
19. Sheraton	0,612	0,032

Conclusion and Discussion

The research has proposed a method of as regards to perception in consumers' mind of hotel brands and was used social network analysis for brand map visualization based on web search traffic. Data was collected from Google Trends. Google Trends is a useful service because the access is free and it is an economic resource. The research contributes in terms of both literature and practice. This study has demonstrated that web searches are important factor in purchasing of products, especially purchase decision. For practitioners, this study is proposed a method for tracking perception of target market as regards to their brands. They can reveal consumer's brand perception with both simple and cost-effective analysis by the method.

An assessment of the social network analysis results in terms of the brand positioning reveals that Ramada, Hilton and Rixos are the key players, which are able to establish a connection with the other hotels in the network in a fast manner and, manage the network. And the high frequency in the comparison with the other hotels during the binary searches for the hotels indicates that these hotels are at a more central position than the other brands.

The study has some limitations. First, the study focuses on hotels in Turkey. Future research could examine different sectors or product groups and country. Second, future studies could carry out search on more hotels.

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The Impact of Working Capital Management on Profitability of the Listed Companies in Emerging European Countries

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Abstract

This paper analyzes the impact that efficiency in working capital management has on the profitability of the companies. We have created a sample of 720 companies from ten South-East European countries (Bosnia and Herzegovina, Bulgaria, Montenegro, Croatia, Greece, North Macedonia, Romania, Slovenia, Serbia, and Turkey). Using their financial data in the period 2006–2015, we applied a panel regression model, involving operating profit ratio as a dependent variable, and several independent variables that represent the various features of the companies' working capital, such as inventories turnover, days of collection of receivables, days of payment of accounts payable, and cash conversion cycle as a most comprehensive measure of the working capital management. In addition, we used a few control variables. The results of the model are expected to reveal which of these items, if any, have an impact on the profitability of the companies in the region. We found a statistically significant negative relationship of the profitability of the companies with the accounts receivable period and cash conversion cycle. Also, the relationship between the profitability and the inventory period is negative, but is not statistically significant. Profitability has a positive and statistically significant relationship with the accounts payable period. The companies of the SEE countries can increase operating profitability by shortening the period of collection of their receivables and the cash conversion cycle and by delaying their payments to creditors, taking care not to call into question good business relationships with them.

Keywords: Corporate profitability, working capital management, cash conversion cycle, emerging countries, South-East European countries

***JEL Classification*:** G30, G31, M41, O52

Introduction

The primary objective of modern financial management is the maximization of the shareholder's wealth. In that context, an efficient working capital management is recognized as an important aspect of financial management practices that can create additional value for their shareholders. The research in corporate finance throughout the decades has mostly been focused on issues such as capital structure, dividend policy, corporate governance, etc. Within the investment decisions, it is long-term investing that has preoccupied the attention of researchers and practitioners. On the other hand, these issues get the focus of company managers only occasionally, usually once in a few years, while the problems related to managing current assets and current liabilities, by their very nature, appear on their schedules on a daily basis.

Working capital management is a common term incorporating the majority of a firm's short-term financial decisions. It involves the management of receivables, inventories, cash and accounts payable. The crucial issue here is the cash conversion cycle (CCC), which is the time necessary for the company's cash outlays made to acquire inventories of raw materials to be returned to the company back in the form of cash inflows. The shorter the cash conversion cycle, the higher the overall turnover, which under normal conditions, means higher corporate efficiency and return on assets.

In a perfect world, there would be no need to be concerned with managing working capital. The receivables would be collected on time, the inventories would be kept at the level necessary to satisfy short-term production needs, the accounts would be paid by the end of the allowed trade credit period, etc. However, the world of

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business is far from perfect. It is often necessary to tolerate longer payment periods to avoid losing clients, the inventory levels are often far from their optimal volumes due to market shortages, price optimization decisions, poor production planning, the payment of accounts sometimes suffers as a result of low liquidity levels, etc. These divergences from the optimal figures could have a serious impact on the overall efficiency of the business, with the potential to generate irrecoverable damage if the mismanagement results in cash shortages, piling of receivables or obsolete inventories. Therefore, it becomes important for the company's financial management to pay appropriate attention to the management of the current assets and liabilities with the goal of maintaining their levels and structure to as adequate magnitudes as possible.

Most of the studies we have reviewed analyze the impact of working capital management (WCM) on the profitability of the company in order to find out which, if any, variables related to working capital items should be paid appropriate attention as part of the overall process of managing their finances. In this paper, we want to explore this issue in the case of ten South-East European countries, which share a common past and similar economic conditions. These countries have gone through a period of economic transition and their financial management practices are expected to be of similar quality. For that purpose, we have collected data from the financial statements of more than a thousand companies from several SEE countries. Using the variables that have commonly been used in research on this topic, we use a panel regression model on the data of 720 companies, with the goal of identifying which of the working capital items need to be managed most carefully in order to avoid the abovementioned possible negative impacts on profitability.

The structure of the paper is as follows. After the introduction, we provide a brief review of the existing literature on this topic. The next section contains elaboration on the data and methodology used in the study. The results of the panel regression are given and analyzed in the fourth section. The last part of the study contains our conclusions and recommendation for further research.

Literature Review

The existing literature on the topic predominantly explores the relationship between the profitability of the company and the elements of the cash conversion cycle. Most of these papers follow a similar format. They apply a regression analysis using profitability as a dependent variable, and the working capital elements as independent variables. The latter are used in the form of days of collection of receivables, days of inventory and days of payment of accounts payable. Negative relationships between the first two items, the days of collection of receivables and the days of inventory, and profitability and a positive between the days of accounts payable and profitability are expected to prove the benefits of proper working capital management.

According to the theory, extending longer trade credit periods should result in increased sales revenues and thus higher turnover. As turnover is an element of the so-called DuPont formula, it is expected to bring about higher returns on assets and equity. However, in economies suffering from lack of liquidity and financial discipline, these periods of collection often extend to durations which have an adverse impact on profitability.

One of the earliest attempts in this field is made by Shin and Soenen (1998). They use a very wide sample of companies and a very lengthy period covering 20 years and apply a regression analysis. Their findings are that shorter net-trade cycles of the companies are associated with higher profitability and higher stock returns.

One of the most influential papers is the one by Deloof (2003). He investigated the relation between WCM and profitability using a sample of 1.009 Belgian companies in a period of 5 years. He found a negative relationship between profitability and the number of days accounts receivable, inventories and accounts payable. His conclusion is that the managers can increase corporate profitability by reducing the trade credit period allowed and the number of days inventories are held in stock. The relation between profitability and accounts payable indicates that for the less profitable companies it takes longer to pay their bills.

Lazaridis and Tryfonidis (2006) distinguish the importance of good WCM for operational profitability. Their conclusions are based on a sample of 131 companies listed on the Athens Stock Exchange. The sign of the CCC variable is negative, as expected, indicating that the companies can increase their profitability by shortening the CCC. The negative relationship between profitability and days of collection is understood as a tightening of the trade credit policy by the less profitable companies.

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Ganesan (2007) explores the efficiency of WCM in the telecommunications industry and concludes that good management has a positive impact on the profitability and liquidity of the companies, but also concludes that there are differences among the sectors, which might be a result of the different structure of their operating assets. Gill et al. (2010) use a sample of 88 US manufacturing firms, listed on the New York Stock exchange. They create a sample using financial data from the period 2005-2007. They find a negative relation between the days of collection and profitability, but no significant relationship between profitability and days of inventory and accounts payable. They find a positive relation between cash conversion cycle and profitability, which is dubious. Nevertheless, they conclude that faster collection of receivables and proper WCM are important for a company's profitability.

Garcia-Teruel and Martinez-Solano (2007) explore the impact of WCM on the profitability of small and medium enterprises. They conclude that the companies can increase their profitability by shortening the periods of payment of their debts, which is not the expected outcome. The same impact on profitability is also achieved by reduction of the inventories and shortening of the CCC.

Charitou et al. (2010) explore the same issue among the listed companies in the Cyprus stock market. Using multivariate regression analysis, they conclude that the cash conversion cycle, debt collection period, days of inventories and receivables are all negatively related to profitability. Most of these results are in line with the expectations, but the recommendation stemming from the days of debt payment is somewhat debatable, since it points that the longer the period of payment, the higher the profitability. A similar study was conducted by Mohamad and Saad for the Malaysian market, and its results support the expectations that proper management of current assets and liabilities is favorable for the success of the company.

Enqvist et al. (2014) in the case of Finland examines the impact of the business cycle on the relationship between profitability and working capital. They find a strong negative relation between the cash conversion cycle and firm profitability for a large sample of Finish listed firms for the 1990–2008 period. Their conclusion is that WCM is important and its importance increases during periods of economic downturns, compared to periods of economic booms.

Pais and Gama (2015) in the case of Portugese SMEs, and Cristea and Cristea (2016) in the case of Romanian companies, confirmed the existence of a negative relationship between profitability, measured through return on assets, and the cash conversion cycle. Svitlik and Poutnik (2016) analyzed the relationship among working capital, liquidity ratios and profitability ratios in the Czech Republic, and found a statistically significant correlation between profitability (measured by ROA) and working capital turnover for most of the years, most of the economic sectors, both consolidated and unconsolidated data and very large firms.

Some recent studies are focused on determining the optimal working capital level at which firms' profitability is maximized. Thus, Baños-Caballero et al. (2012, 2014) have examined the linkage between working capital management and corporate performance for a sample of non-financial UK companies, and have detected an inverted U-shaped relation between investment in working capital and firm performance. Afrifa and Padachi (2016) investigated the relationship between working capital level, measured by the cash conversion cycle and profitability of small and medium enterprises (SMEs), and found a concave relationship between working capital level and firm profitability. Botoc and Anton (2017) in the case of high-growth firms from Central, Eastern, and South-East Europe also found an inverted U-shape relationship between working capital level and firm profitability.

This brief review clearly illustrates that the general conclusion is that the companies are supposed to take due care of the process of managing working capital in order to increase their profitability. However, there are also papers that come up with opposite conclusions (Sharma and Kumar, 2011), which is a motivation for us to further explore this issue in the case of several economies which have not been subject of similar studies so far.

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Data and Methodology

The data for this research relate to listed companies in ten emerging South-East European countries: Bosnia and Herzegovina, Bulgaria, Montenegro, Croatia, Greece, North Macedonia, Romania, Slovenia, Serbia, and Turkey for the period 2006-2015. The data was obtained from Thomson Reuters Eikon from standardized financial statements. The reason why only quoted companies are selected is primarily because of the reliability of the financial statements, which are audited and are subject to public observation. The companies that are subject to analysis are from the fields of manufacturing, construction and trade. In accordance with Deloof (2003), banks and financial institutions, insurance, some commercial and service companies and some other non-manufacturing companies, such as energy companies, should be left out due to their specific asset structure.

From Thomson's database, we collected data on more than a thousand companies from these ten countries for analysis. In order to ensure the accuracy of the data, a large number of filters were applied. So as to provide a balanced sample, all those companies that lack data for any year were first removed. Thus, only companies that contain all data for all years are subject to analysis. During the monitoring of firms with anomalies, such as negative values in total assets, current assets, capital, etc., they were eliminated. Companies that had negative values on days of receivables, inventories and obligations to suppliers were also eliminated. Finally, the firms with 5% outlying values and for number of days accounts receivable, number of days inventories, number of days accounts payable, net operating income and gross operating income were left out. The observation of the balance sheet items and the profit and loss account that turned out to be contrary to the reasonably expected were removed. Thus, a balanced panel set of 7,200 firm-year observations was obtained, with observations of 720 firms over the 2006-2015 period. The variables that were applied are as follows:

- Profitability is defined as Gross Operating Profit Ratio (Sales – Cost of Sales + Depreciation and Amortization) / (Total assets – Financial assets) (Deloof, 2003); - Financial assets are all long-term financial investments of the company that contribute to their operations and which carry the company inoperative earnings as inflows from interest, dividend, etc.;
- Accounts Receivable Collection Period is calculated as Accounts Receivable / Sales x 365;
- Inventories Conversion Period is obtained as Inventory / Cost of Goods Sold x 365;
- Accounts Payable Period is calculated as Accounts Payable / Cost of Goods Sold x 365;
- Cash Conversion Cycle is calculated as Accounts receivable collection period + Inventories conversion period – Accounts payable period.

In addition to these key variables, the following control variables were taken into account in the analysis. *The size* of the company is obtained as a natural log of the amount of sales revenues. *Sales growth* is calculated as a percentage of annual sales revenue growth (this year sales – previous year sales) / previous year sales. *Financial Debt Ratio (Leverage)* is obtained as (short-term loans + long-term loans) / total assets. *Fixed Financial Assets Indicator* is derived from the ratio: fixed financial assets / total assets.

Results of Analysis

Table 1 presents the descriptive statistics of the analyzed data. Gross-operating profit ratio on average was 27.32% (median 23.61%). The number of days of collection of accounts receivable, which was on average 91.19, is far lower than the average accounts payable period, amounting to 118.11. Given the economic conditions, however, the maximum days are abnormally large (1,379.15 days in receivables from customers and 2,761.16 in payables to suppliers) and it can be concluded that many companies have a problem of collecting receivables and paying off their liabilities. Of course, this applies to a small number of companies that have remained after the sample has been immensely purified. The conversion of inventories lasts on average 127.82 days. The average operating cycle lasts 219.02 days, which to a lesser extent stems from the receivables collection period and to a greater extent is due to the inventory conversion period. The average cash conversion cycle lasts 100.91 days. Sales revenue growth is pretty much high and averages 7,6%. The companies in the

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sample have a small volume of indebtedness of 23,7%, indicating that they are more reliant on their own capital in their financing. Fixed financial assets on average amount to 6,8%.

Table 1: Descriptive statistics

	Mean	Median	Maximum	Minimum	Std. Dev.
Gross-operating profit ratio	0.273	0.236	2.037	-0.615	0.193
Accounts receivable collection period	91.19	66.61	1,379.15	0.01	90.00
Inventory conversion period	127.82	79.88	2,110.83	0.01	161.40
Accounts payable payment period	118.11	78.44	2,761.16	0.14	139.15
Operationg cycle	219.02	166.65	2,254.18	1.19	196.39
Cash conversion cycle	100.91	74.67	1,373.71	-1,223.35	192.92
Company size	18.66	18.62	25.04	11.95	2.12
Sales growth	0.076	0.041	20.161	-0.996	0.506
Financial debt ratio	0.237	0.192	7.237	0.000	0.258
Fixed financial assets ratio	0.068	0.013	0.941	0.000	0.124

Source: *Author's own calculations*

Table 2 shows the Pearson coefficients of correlation between the observed variables, from which the first impression of the influence of variables of WCM on profitability can be obtained. It is obvious that there is a negative correlation (albeit very low) between the gross operating profit and the measures of the WCM (accounts receivable collection period, operating cycle and the cash conversion cycle), and a low and positive correlation with the inventory conversion period and accounts payable period. The negative relationship of GOPR with the days of receivables is logical, since the sooner the company collects the receivables, the sooner it will invest cash in new production and new stocks and sales, and thus generate new sales revenue. A positive relationship with the accounts payable period is consistent with the usual view that companies need to delay the payment period in order to use their resources to generate additional investments in new production and new sales to increase profitability. We should have expected a negative relationship of the profitability with the inventory conversion period, since the smaller inventories carry lower maintenance costs, and thus increase profitability, which is typical for developed economies, as it is in Deloof (2003). It seems that the most of the companies in the SEE countries hold a large inventory and run a generous trade credit policy in order to encourage higher sales. Moreover, a larger inventory reduces the risk of stock-outs and in circumstances where SEE companies do not yet have advanced inventory management systems developed, it appears that a greater volume of security supplies makes it possible to achieve greater profitability. The negative relationship of operating profitability and the cash conversion cycle is consistent with the view that the time gap between expenditures for raw materials purchases and revenue collection from sold finished products may be too long, so reducing this gap increases profitability. However, a shortcoming of Pearson correlations is that they do not allow to identify causes from consequences. This means that the interpretations of these addictions can be completely reversed, i.e. how profitability affects certain variables.

Table 2: Pearson correlation coefficients

	Gross-operating profit ratio	Accounts receivable collection period	Inventory conversion period	Accounts payable payment period	Operating cycle	Cash conversion cycle	Company size	Sales growth	Financial debt ratio	Fixed financial assets ratio
Gross-operating profit ratio	1									
Accounts receivable collection period	-0,192	1								
Inventory conversion period	0,024	0,151	1							
Accounts payable payment period	0,026	0,276	0,298	1						
Operating cycle	-0,069	0,586	0,889	0,372	1					
Cash conversion cycle	-0,089	0,394	0,685	-0,345	0,743	1				
Company size	0,107	-0,210	-0,197	-0,096	-0,258	-0,192	1			
Sales growth	0,074	-0,090	-0,070	-0,054	-0,098	-0,060	0,082	1		
Financial debt ratio	-0,134	0,046	-0,054	0,052	-0,023	-0,061	0,048	-0,023	1	
Fixed financial assets ratio	-0,015	-0,028	0,002	-0,001	-0,011	-0,011	0,006	-0,017	-0,001	1

Source: Author's own calculations

In order to evaluate the effectiveness of the working capital management on the profitability of the company, profitability is modeled as a function of the three basic measures of the management of the working capital besides the other characteristics of the company. Consistent with Deloof (2003) and Raheman and Nasr (2007), the gross-operating profit is taken as an indicator of the profitability of the company. Given that the arithmetic mean of GOPR is 27.3% and is greater than the median 23.6%, there is a skewness to the left on the distribution of GOPR. To control this skewness, four control variables are employed in the analysis: size of the company, growth in sales revenue, leverage and ratio of fixed financial assets. Five regression models have been implemented and the results are presented in tabular form. The regression models are as follows:

$$GOP = f\{ARP, IP, APP, CCC, CS, SG, FDR, FFAR\}$$

Model 1: $GOP_{it} = \alpha_0 + \beta_1 ARP_{it} + \beta_2 CS_{it} + \beta_3 SG_{it} + \beta_4 FDR_{it} + \beta_5 FFAR_{it}$

Model 2: $GOP_{it} = \alpha_0 + \beta_1 APP_{it} + \beta_2 CS_{it} + \beta_3 SG_{it} + \beta_4 FDR_{it} + \beta_5 FFAR_{it}$

Model 3: $GOP_{it} = \alpha_0 + \beta_1 IP_{it} + \beta_2 CS_{it} + \beta_3 SG_{it} + \beta_4 FDR_{it} + \beta_5 FFAR_{it}$

Model 4: $GOP_{it} = \alpha_0 + \beta_1 ARP_{it} + \beta_1 APP_{it} + \beta_1 IP_{it} + \beta_2 CS_{it} + \beta_3 SG_{it} + \beta_4 FDR_{it} + \beta_5 FFAR_{it}$

Model 5: $GOP_{it} = \alpha_0 + \beta_1 CCC_{it} + \beta_2 CS_{it} + \beta_3 FDR_{it} + \beta_4 FFAR_{it} + \beta_5 SG_{it}$

Here, GOP is a Gross Operating Profit Ratio, ARP is an accounts receivable collection period, IP is a period of conversion of inventories, APP is accounts payable period, CS is the company size, SG is growth in sales revenue, FDR is the rate of financial debt (leverage), FFAR is the ratio of fixed financial assets.

The analysis is done on a balanced panel of data. At the very least, using the Hausman test, we examined which regression model was most appropriate. The results showed that the fixed effects model is best for the given data sample. According to Deloof (2003), fixed effects estimation assumes firm specific intercepts, which capture the effects of those variables that are particular for each firm and are constant over time. A disadvantage of fixed effects estimation is that it eliminates anything that is time-invariant from the model.

Table 3: The relationship between working capital management and profitability

Independent variables	Dependent variable: Gross Operating Profit				
	Model 1	***Model 2***	***Model 3***	***Model 4***	***Model 5***
Constant	-0.6481*** (0.05849)	-0.8161*** (0.05796)	-0.8407*** (0.05759)	-0.6777*** (0.060340)	-0.7731*** (0.0563)
Accounts receivable period	-0.0002*** (0.00002)			-0.00022*** (0.000022)	
Inventory period		-0.0000039 (0.000014)		-0.00000843 (0.0000148)	
Accounts payable period			0.000017 (0.000012)	0.0000445*** (0.000013)	
Cash conversion cycle					-0.0000615*** 0.0000105
Company size	0.0506*** 0.00308	0.0585*** 0.00306	0.0598*** 0.00304	0.0520*** 0.003160	0.0566*** 0.002987
Sales growth	0.01851*** 0.00244	0.01964*** 0.00245	0.01971*** 0.00245	0.0185*** 0.002440	0.0192*** 0.00245
Financial debt	-0.09350*** 0.008926	-0.09672*** 0.00898	-0.0973*** 0.00898	-0.0949*** 0.008932	-0.0985*** 0.00896

Fixed financial assets	0.18736*** 0.01957	0.19592*** 0.01968	0.1960*** 0.01967	0.1866*** 0.019559	0.1926*** 0.01963
R^2	0.76755	0.76444	0.76452	0.76798	0.76567
Adjusted R^2	0.74156	0.7381	0.7382	0.74196	0.73947
F-statistics	29.531	29.023	29.035	29.512	29.223
Prob (F-statistic)	0.0000	0.0000	0.0000	0.0000	0.0000

*Note: Standard errors in parentheses. * means significant at 10%, ** significant at 5%, *** significant at 1%. The results were obtained by applying the fixed effect OLS model for estimation.*

Method: Panel Least Squares. Period 2006 - 2015. Cross-sections included: 720. Total Panel (Balanced) Observations: 7,200

Source: Author's own calculations

In the first regression model, a regression of the accounts receivable period against the gross operating profit was carried out. In the second one, we regressed the gross operating profit against the period of conversion of inventories; in the third one, we regressed the accounts payable period; in the fourth one, we regressed all three WCM variables against the profit; and in the fifth one is the cash conversion cycle as a comprehensive WCM measure. The control variables in all models are the same, those are the size of the company, the financial indebtedness (leverage), the fixed assets, and the growth in sales revenues.

The agency theory suggests that managers can manage working capital versus set targets, and thus deceive the company's shareholders. As Deloof (2003) states, developing countries have underdeveloped capital markets, and the availability of information and advocacy issues are particularly insufficient.

Table 3 provides the results of the regression analysis that provide more detailed information about the relationship between management of the working capital and profitability. From the table it can be seen that all the components of the working capital are statistically significant, except the inventory, which is not significant at all.

Consistent with Deloof (2003), Raheman and Nasr (2007), Shin and Sonen (1998) and Garcia-Teruel and Martinez-Solano (2007), there is a negative link between the period of collection of receivable and profitability. For each increase of the collection period for 1 day, profitability will decrease by 0.02%. This suggests that the firm can improve profitability by reducing the days of collection of receivables. Namely, the sooner the company collects the receivables from customers, the more cash that will be available for investing in new stores and realizing new sales, which leads to the realization of new revenues and greater profitability of the company.

Besides the above-mentioned, we found a positive correlation, and in regression 2 and 4 we found a negative, but insignificant relationship between inventory management and operating profitability of the companies. The existence of a negative significant relationship between GOPR and the inventory period has been found in several studies, such as Deloof (2003), Lazaridis and Tryfonidis (2006), Padachi (2006), Sharma and Kumar (2011) etc., but some have found a positive relationship (Mathuva, 2010). There are some possible explanations for this outcome. First, we need to keep in mind that the inventories are a diverse category consisting of raw materials, semi-finished and finished goods. If the range of products of a company is wider, with the goal to improve profitability, it naturally increases its stock of inventories with a possible impact on lengthening the period the goods are held in stock. Also, in order to obtain lower prices, the companies are prone to purchase raw materials in larger quantities, which might extend the period of conversion of these materials. Mathuva (2010) states that the firms that maintain sufficiently high inventory levels reduce costs of possible interruptions in the production process and loss of business due to scarcity of products. This reduces the firm supply costs and protects them against price fluctuations. But, on the other hand, keeping a high level of inventories expose the firm to a wide range of costs, as are the storage costs, management costs, security costs, insurance costs, and cost of tying up cash. This cost lowers the profitability, therefore the negative relationship we have found is very logical.

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In model 3, the accounts payable period is a positive and statistically significant variable. For each delay of the payment to the suppliers for one day, the profitability of the companies is increased by 0.0017%. This is not consistent with Deloof (2003), Raheman and Nasr (2007) and others, who found a negative link that can hardly be explained. Namely, it is logical to get a positive relationship, meaning that waiting longer to pay off the obligations to the suppliers will increase the profitability as a result of the interest-free financing obtained this way. It would be consistent with the basic rule in the working capital management that firms should endeavor to delay their payments to creditors, taking care not to call into question good business relationships with them.

In model 4 we regressed the three basic WCM variables together against the operating profit and we can conclude the same as in the separate regressions, where we can also confirm the negative and statistically insignificance of the inventories.

Model 4 provides the relationship between the cash conversion cycle and profitability. The CCC is a fairly popular measure of working capital management because it unites three other measures. The CCC is in fact the time lag between expenditures for supplies of raw materials and the collection of receivables from the sold finished products. The longer the time gap, the greater the investment in working capital. A larger cash conversion cycle can increase profitability, as it leads to higher sales (Deloof, 2003). However, according to the same author, profitability could be reduced by CCC if the costs for larger investments in working capital are rising faster than the benefits of owning a larger volume of inventory and/or granting a higher volume of trade credits to buyers. Shin and Sonen (1998), investigating the relationship between profitability and CCC in the case of a large sample of US companies in the period 1975-1994, found a significant negative link. Deloof (2003) found a negative, but statistically irrelevant relationship. In the case of our sample of companies listed on the SEE stock exchanges, the relationship between CCC and GOPR is negative and statistically significant. Albeit rarely, there are other researchers who have found a positive relationship, such as Padachi (2006), Sharma and Kumar (2011) and Abuzayed (2012). Many authors, like Shin and Soenen (1993), have argued that it is important for firms to shorten the CCC, as managers can create value for their shareholders by reducing the cycle to a reasonable minimum (Sharma and Kumar, 2011).

According to the relationships of the other control variables in the models, it can be concluded that the increase in sales revenues, the size of the company and the fixed financial assets have a statistically significant positive relationship with profitability. They are statistically significant and positive in all five models. The financial debt is a statistically significant relationship with the profitability of the company, but has a negative relationship in all four models.

F-statistics is highly significant in all four models, indicating a good specification of the model since the adjusted coefficient of determination of 73% indicate that the variables of working capital management greatly explain the profitability of the company.

Conclusions

Corporate financial managers are aware that the profitability of the company is derived in a great manner from the way in which the working capital is managed. This paper shows that working capital management is an issue deserving high attention by the companies in the observed countries. We analyzed the data from 720 listed companies from 10 South-East European countries for a period of 10 years (2006-2015) in order to examine the relationship between the working management components and the profitability. Thus, using this large sample of a balanced panel set of 7,200 firm-year observation we came to relevant findings.

We used the gross operating profit before depreciation and amortization as a relevant measure for profitability since it is mostly determined by the way the operating capital is managed. We regressed the operating profit against the accounts receivable period, inventory conversion period and accounts payable period as separate determinants of WCM, and with the cash conversion cycle as a more comprehensive measure of working capital management.

This first insight indicated relatively high average periods of receivable collection, payable payment and inventory conversion. The existence of such extremely long stages in the conversion cycle clearly indicates disruptions in the normal operations of the companies.

All of the independent variables showed a relation with the profitability according to the theoretical expectations. The relationship of profitability with the accounts receivable collection period is negative and statistically significant, meaning that the companies that collect their receivable faster are able to generate more profit due to the higher speed of circulation of their assets. A positive and significant relation of the profitability with the accounts payable period exist in the SEE companies. This means that more profitable companies are waiting longer to pay off their obligations to suppliers. In this way, in a longer period they have available cash to finance new inventories that will lead to new sales and growth of the operating profit. This result is consistent with the basic rule in the management of working capital that firms should endeavor to delay their payments to creditors as much as possible, taking care not to call into question good business relationships with them.

The profitability is negatively affected by the inventory holding period, but the relationship we found is not statistically significant. It is obvious that the companies in the SEE countries do not manage with the inventory in the appropriate manner as it is in the developed countries.

The relationship of the profitability and the cash conversion cycle is negative and statistically significant. Lowering the cash conversion increases the operating profitability of the SEE companies. Corporate financial managers can create value for their shareholders in the SEE countries by reducing the cash conversion cycle to a reasonable minimum.

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The Establishment of the Energy Regulatory Commission of Republic of North Moacedonia and Its Role in the Energy Sector as an Independent Commission

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Abstract

In order for any social system to function more easily as a whole, certain regulatory bodies and agencies are formed, aimed at facilitating the functioning of individual social branches. These regulatory bodies and agencies are independent in their work and often participate in the formulation of legislation in certain areas.The questions which arise as the basis of this paper are: "What is the role of the Energy Regulatory Commission of the Republic of North Macedonia in the development of the energy sector?"; "Is the Energy Regulatory Commission truly independent in its work and is it free of all kinds of pressures?"; "How has the Energy Regulatory Commission developed over the years since its inception until today?".This paper aims to briefly answer these questions. The aim is to present the real picture of the functioning of the Energy Regulatory Commission and its important role for the electricity sector in the market environment. In practice, it seems that the independence of the Energy Regulatory Commission is increasingly questioned year after year. Although presented as an independent body, its work is influenced by certain political and business streams. This paper will try to provide directions and proposals aimed at strengthening the independence and autonomy of the Energy Regulatory Commission. In accordance with the competences of the Energy Regulatory Commission, and according to the fact that it directly participates in the formation of the price of electricity, it is apparent that its role in terms of the formation of the electricity market, and therefore in the energy sector, is of high significance. Hence, the proper functioning and role of the Energy Regulatory Commission should be a guarantee for quality, safe and uninterrupted supply of electricity to consumers.

Keywords: Energy, Regulatory, Commission, Electricity

Introduction

In every social system certain regulatory bodies and agencies are involved in the role of facilitating the functioning of separate social branches. These regulatory bodies and agencies are independent in their work and often take part in the formulation of legislation in certain areas. For instance, in the USA, as a source of law, there are the regulatory agencies among which is the Environmental Protection Agency that deals with renewable energy as a way of producing electricity. The Congress delegated to Agencies such certain powers as to create rules that will regulate the conduct of business as well as to regulate the workforce in certain areas. This is done for the benefit of the public interest, convenience and necessity. Some lawmakers were concerned about delegating so much power to bodies without elected representatives, so their governing processes are particularly open to open public cooperation. (Kubasek and Silverman,2008, p.12)

The Law on Environment is classified as a branch of administrative law, implying that these laws are supervised by a body known as administrative agency and that many of the specific regulations in this area are founded by this agency. (Kubasek and Silverman,2008, p.79)

However, independent regulators can be discussed at several levels. There are numerous issues for which there is room to lay in the direction of: what is the legal basis, constitutional and legal for their establishment; what is their position in the system of state administration and what is their attitude toward other state bodies; who have the powers and how they draw them; which rules of conduct regulate their actions and decision-making; who and how it controls the decisions they make; whether it is justified and based on them to apply the general rules for administrative and inspecting supervision etc. However, the practice shows that there is an inability to give a general definition to independent regulators. It can only be said that independent regulators are independent and

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independent bodies with public authorizations established for the purpose of arranging and supervising the performance of liberalized activities of public interest.

Moving forward and expanding into one society, it is pays great attention in the field of energy law. Because energy law is a separate branch, regulatory bodies, commissions and agencies that serve to control and balance the energy law are established in this system. (Kubasek and Silverman,2008, p.16) In some countries, energy law and energy are so high that the bodies and agencies are not established only for control in the area of electricity etc., but there are regulatory bodies established that take care of environmental protection, as is the case with the USA, and of course the environment and the energy are interrelated. So, for instance, in Croatia there are several bodies with public authorizations being establish, which are in charge of regulating and overseeing the market of activities, the activities of which are considered as activities of general economic character (for example, energy delivery, telecommunication activities, etc.). Indeed, the definition of independent regulators equates to the definition of agencies, regulatory agencies, regulatory committees and regulatory bodies. Namely, in the Republic of Croatia, the Agency for Regulation of Energy Activities is defined as an independent, standalone and non-profit public institution, established for the purposes of establishing and implementing the regulation of energy activities. (Petrovic, 2008, pp. 6-7)

The undertaken reform in the electric power industry, which have the main task of introducing market elements in the operations of this sector, imply deregulation of so far, in essence, the regulated functioning of the sector, as well as its restructuring that should open the doors of liberalization and the establishment of the open electricity market in countries in the region and worldwide.

The life-giving of the new regulation in this sector is in the hands of an independent expert body that in different countries carries different names: agency, committee, council, forum etc. However, the most common name for such a body that must include a highly qualified and experienced staff of several profiles – engineering, economic and legal profile – is primarily a commission. In any case, this body must be independent in its work and to work on the principles of expertise, competence, objectivity, transparency and non-discrimination.

Energy Regulatory Commission of the Republic of North Macedonia

Establishment of the Energy Regulatory Commission

In the aspiration to introduce liberalization of the electricity market in the Republic of North Macedonia and its entry into the open electricity market in the region of Southeast Europe and the European Union, as well as on the basis of the commitments undertaken in this regard, arises the need to change the way of work in the power system of North Macedonia. One of the fundamental changes that have been made in the structure of the power system, with the aim of following the European trends and improving the energy sector, is the introduction and establishment of independent Energy Regulatory Commission. At the core of its formation lies the need to adopt and implement the regulation for the new role and task of the power sector in the market environment. Such a thing was a guarantee for quality, safe and uninterrupted supply of electricity to consumers.

In fact, the establishment of the Energy Regulatory Commission is the most important reform made by the Republic of North Macedonia in the field of energy and the energy sector.

This also fulfilled the requirements of the Directive No. 53/2003 of the Parliament and the Council of the European Union of July 26, 2003, something that was expected from the Republic of North Macedonia and which successfully implemented it.[1] In its work, the Energy Regulatory Commission of the Republic of North Macedonia adheres to the provisions of the European Regulation (of them, above all, the Directives: No. 96/92 EC, No. 2003/54 and No. 2003/55), as well as to the Athens memorandums for the establishment of regional electricity market for Southeast Europe in 2002 and 2003. (Bushi, 2004, p. 117)

Applying such rules implies the establishment of an independent regulatory body that will take care of:

- Secure, safe and quality supply of energy to consumers,

[1]http://www.erc.org.mk/

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- Protection of the environment and nature,

- Consumer protection,

- Protection and promotion of the position of the employees in the energy sector and

- Introduction and protection of a competitive energy market on the principles of objectivity, transparency and non-discrimination.

The Energy Regulatory Commission takes part in the work of the Committee for Regulation of the Market in the Southeast Europe, which was established by the regulatory bodies of the member countries of Southeast Europe. Within its framework, the Energy Regulatory Commission of the Republic of North Macedonia contributes to the establishment and functioning of the regional electricity market for Southeast Europe, and therefore its integration into the internal market for electricity for the European Union.[2]

The Energy Regulatory Commission of the Republic of North Macedonia was established in 2002 by the Law on Amending the Energy Law ("Off. Gazette of the Republic of North Macedonia" no. 94/02, 38/03 and 40/05), which strengthens the position of the Energy Regulatory Commission of the Republic of North Macedonia.[3] It was established in order to perform the tasks related to regulating the issues related to the performance of the energy activities determined by the Energy Law and regulating the issues related to the prices of the energy activities. (Petrovic, 2008, p.7)

Independence of the Energy Regulatory Commission

The Energy Regulatory Commission is one of the most important regulatory bodies whose decisions directly affect citizens' pockets because it exactly this regulatory authority that determines the prices of electricity, oil derivatives, water, and because of this fact, one of the most important issues that arise is the question for its independence, that is, is it really this regulatory body in North Macedonia independent in its work. The main question is how the party and business streams affect the operation and functioning of the Energy Regulatory Commission. Is the Energy Regulatory Commission insulated from party influences? How much a regulatory body, such as the Energy Regulatory Commission, is truly independent can be demonstrated by the manner in which members are elected, the manner of financing, the decision-making, and to whom the regulatory body reports for its operations.[4]Hence, the actual independence of a regulatory body arises. It seems in practice that the independence of the ERC from year to year is increasingly being questioned. Namely, if some former, current or future members of the ERC have established itself as members of a political party or have been a member of the family who is in a managerial position in one of the energy companies in the country, the independence of the regulatory body is really brought into question. However, with the renouncing of the party affiliation, the party influence in their work does not completely cease, which is the main problem. It's hard to get out of the party constraints. But, the pressure that can come from the energy companies that perform regulated activity is not less as well. It is debatable and difficult to prove that when making a decision a member of the Commission did not have been pressured, influenced or conflicted in the interest. While it is contradictory to accept the interests of companies, they still succeed in influence the decision-making. In order to be completely independent of the functioning of the ERC, it is necessary for it to employ professionals who know their work in the field of energy. One of the most important conditions for independence is financial security, but the integrity of each member and the respect of the rules is also important. In order to prevent the abuses that were noted in the past, among other things, a scheme of rotation of the commissioners in the ERC is proposed.[5]

The ERC must remain resistant to all political and party influences, and given that it is one of the most important and crucial independent institutions that form the energy market and the way the energy sector functions in general. However, the functioning of this institution so far has shown that it is not completely independent and transparent in its work. This is especially important at the moment because the ERC's independence is part of the European directives, and this is especially relevant with the adoption of the new Energy Law, which is also drawn up in accordance with the European guidelines.

[2] analytics "Investments in the energy – North Macedonia as an example" , Skopje, September 2009
[3] Law on Amending and Supplementing the Energy Law, Official Gazette of the R. of North Macedonia, no. 94/02, 38/03, 40/05
[4] https://makfax.com.mk/ekonomija/116634/
[5] http://meta.mk/angushev-vo-momentov-regulatornata-komisija-za-energetika-e-zavisna-od-opozitsijata/

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Because of the importance of this body and the key role it plays in the implementation of the energy policy in the country, it is necessary that despite the current practice, the results of the work to be presented at the press conferences, and they should be published so that everyone can see them.

The Regulatory Commission mainly operates in open sessions convened by the President of the Energy Regulatory Commission and it manages them. Decisions shall be taken by a majority of votes and shall be published in the "Official Gazette of the Republic of North Macedonia". For its work, the Energy Regulatory Commission informs the Government and the Assembly of the Republic of North Macedonia at least once a year.

Namely, decisions taken by the ERC need to be carried out exclusively in accordance with the Rulebooks, without waiting for additional opinion regarding the decisions made.

In this context, as a way to present and strengthen the ERC's independence, the ERC will be completely free from political and company constraints and will make decisions in the direction of lowering the prices of oil, electricity and steam. Just as important is the existence of a cheap daily electricity tariff. As this is the one of the ways to protect the end consumers and citizens.

North Macedonia must continue with the reforms of the price system, which means a larger role of the ERC in the liberalization of the price of electricity, and therefore it is necessary for the ERC to be completely independent.[6] It is important to note that the introduction of a market price of electricity is also a constant recommendation to the Government by the World Bank.

Financing of the Energy Regulatory Commission

The Energy Regulatory Commission of the Republic of North Macedonia is financed from funds provided from two sources:

from compensation of the realized total income of the economic entities that perform energy activity. This fee is determined every year in the Assembly of the Republic of North Macedonia, and on the proposal of the Energy Regulatory Commission, it cannot be more than 0,1% of the total income of the companies' bonds.

- from the collection of issued licenses

The Regulatory Commission undertakes to submit to the Parliament of the Republic of North Macedonia no later than October 1 of the current year, a proposal for the financial plan of the Regulatory Commission for the next year for adoption, which shall contain all revenues and expenses of the Regulatory Commission, including the salaries of the members of the Regulatory Commission and the employees, as well as the compensation for the members of the Complaints Commission and their deputies.[7]

Within the framework of the proposal of the financial plan, and on the basis of the planned revenues for the current year of the companies that perform energy activity, the Regulator Commission determines the compensation for the next year by determining the same percentage of engagement from the realized total income of the companies, subject to consent by the Assembly of the Republic of North Macedonia and cannot be more than 0.1% of the total income of the companies.

The Company that carries out an energy activity shall pay the compensation, according to the determined percentage and the realized income in the previous year,at the account of the Regulatory Commission in two equal parts, the first part by April 30 and the second part by September 30 at the latest, within the current year. The unused funds of the Regulatory Commission from the previous year are carried forward for use in the next year and the compensation is reduced accordingly.

[6] analytic, "Investments in Energy-North Macedonia as an example", Skopje, September 2009
[7] http://www.erc.org.mk/pages.aspx?id=62

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Organizational structure of the Energy Regulatory Commission

Composition of the Energy Regulatory Commission

At the outset, the Energy Regulatory Commission of the Republic of North Macedonia, after its establishment, consisted of five members, working on a professional basis. Three of the members of the Commission were experts in the power industry, one legal expert and one expert in economic matters. (Bushi, 2005, p.116)

However, the Energy Regulatory Commission of the Republic of North Macedonia, in accordance with the Energy Law ("Official Gazette of the R. of North Macedonia" no. 16/11, 136/11, 79/13, 164/13, 41/14, 151/14, 33/15, 192/15, 215/15, 6/16, 53/16, 53/16 and 189/16) consists of seven members, one of whom is president.[8]

They are appointed and dismissed by the Assembly on the proposal of the Government of the Republic of North Macedonia. Except for the members of the first composition, the term of office of the members of the Regulatory Commission is five years, with the possibility of re-election for one more term at most.

When appointing the members of the Commission, the appropriate and equitable representation of the members of all communities is taken into consideration.

As member of the Energy Regulatory Commission may be appointed a citizen of the Republic of North Macedonia who has acquired at least 240 credits according to ECTS or completed VII/1 degree in the field of electrical engineering, mechanical engineering, technology, construction engineering-hydro, economics and law; prior to appointment, the individual to be appointedhas to have at least ten years of experience in the field of energy, i.e provision of water services; two years prior to the appointment, the individual to be appointment must not have been a member of any management body or supervision body of a company that performs energy activity, i.e activity related to water services and at the moment of appointment, the individual to be appointed must not have been imposed a penalty or misdemeanor sanction – a ban on performing a profession, activity or duty.[9]

The organizational structure and competencies of the Energy Regulatory Commission are compatible with the regulatory bodies in the neighboring countries and the region and correspond to the requirements for fully and competently fulfilling its obligations, as well as the level of development of the energy markets in the Republic of North Macedonia.

The function of a member of the Energy Regulatory Commission is performed professionally and is incompatible with the performance of another public office or function in a political party or workplace. A member of the Energy Regulatory Commission shall cease the public function or function in a political party by force of law on the day of its appointment. If the member of the Energy Regulatory Commission was in employment before the appointment, his/her employment is suspended.[10]

Internal division of the Energy Regulatory Commission

The internal organization and systematization of jobs and tasks is determined by a special rulebook adopted by the Regulatory Commission. The Rulebook on internal organization and systematization of the jobs and tasks of the Regulatory Commission determines the organizational units, temporary and permanent working groups, as well as the total number of enforcement agents by sectors and services. In this way, organizing the performance of the expertise and the administrative and technical matters in the Energy Regulatory Commission are organized in:

- Sectors and services as permanent organizational units and

- Temporary working groups for performing specific tasks and duties under the competency of the Energy Regulatory Commission requiring multi-sectoral approach.

[8] Energy Law, Official Gazette of the R. of North Macedonia, no. 16/11, 136/11, 79/13, 164/13, 41/14, 151/14, 35/15, 192/15, 215/15, 6/16, 53/16, 53/16, 189/16
[9] Energy Law, "Official Gazette of the R. of North Macedonia" no. 96/2018, Art. 17 p.3
[10] Energy Law, "Official Gazette of the R. of North Macedonia" no. 96/2018, Art. 17 p.5

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According to the Rulebook, organizational units for performing expert work for the needs of the Regulatory Commission are:

- the Sector for technical and energy works in the area of electricity

- the Sector for technical and energy works in the field of natural gas, liquid fuels, thermal and geothermal energy,

- the Economic Affairs Sector,

- the Legal Affairs Sector,

- the Sector for Monitoring of Energy Markets,

- the Sector for Administrative, Financial and General Affairs

- the Sector for Information Technology and Statistics.

At the very beginning, after the establishment of the Regulatory Commission, only three sectors (technical and energy sector, economic affairs sector and the legal affairs sector) functioned. (Petrovic, 2008, p. 7) The work of the individual sectors is managed by the head of the sector, and the work of the service is managed by the head of the service. The head of the department, that is, the head of the service, ensures organization and carrying out of the work in the sector i.e the service and is reports for its work to the Energy Regulatory Commission.

Competencies of the Energy Regulatory Commission

The Energy Regulatory Commission of the Republic of North Macedonia governs the issues related to the performance of energy activities determined by the Energy Law. The Energy Regulatory Commission is independent in its operations and decision-making within the competencies determined by the Energy Law. The Energy Regulatory Commission has the capacity of a legal entity that is separated and functionally independent in terms of organization and decision-making from the state and local government bodies and energy service providers.[11] It adopts the Statute subject to approval by the Assembly of the Republic of North Macedonia. The operation and adoption of the acts of the Energy Regulatory Commissions, as rulebooks, rules, decisions, instructions and solutions is regulated by the Energy Law, the by-laws of the energy field, as well as the Statute and the Rules of Procedure.

Under the Energy Law, the Energy Regulatory Commission performs the following tasks:

* takes care of safe, continuous and quality supply of energy;
* takes care of promoting a competitive energy market;
* prescribes conditions for supplying certain types of energy;
* prescribes a methodology for the formation of prices for certain types of energy;
* prescribes tariff systems for certain types of energy,
* makes decisions on the prices of certain types of energy, in accordance with the Methodology for pricing, the tariff systems of certain types of energy and other legal regulations;
*issues, changes, subtracts and monitors the execution of licenses for performing certain activities in the field of energy;
* prescribes rules for connection to the electric grid;
* ensures improvement of the protection of the rights of energy users;
* initiates an initiative for the adoption of laws and other regulations in the field of energy;
* takes part in the resolution of disputes and proposes measures in relation thereto;
*submits a proposal to the competent bodies for undertaking measures in accordance with their competence and in a procedure prescribed by law to the entities that perform the activity contrary to this Law;
* adopts the Rules of Procedure and other acts of the Regulatory Commission and performs other activities determined by Law

[11] Energy Law "Official Gazette of the R. of North Macedonia" no. 96/2018, Art. 16 para. 3

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In the performance of its competences, the Energy Regulatory Commission cooperates with the competent state bodies, organizations and institutions, in particular with the Ministry of Economy, the Energy Agency of the Republic of North Macedonia, the State Inspectorate for Market Inspection, the State Inspectorate for Technical Inspection, the Ministry of Environment and Spatial Planning, the Commission for Protection of Competition, the Economic Chamber of the Republic of North Macedonia, the Association of Chambers of Commerce of North Macedonia, the Council for Consumer Protection, the Public Procurement Bureau, the Methodology Bureau, the State Environmental Inspectorate and the Association of Local Self-Government Units.[12]

The representatives of these entities, depending on their competencies, are regularly invited to attend the preparatory meetings of the Energy Regulatory Commission. In this context, for the performance of the activities under the competence of the Regulatory Commission, upon its request, the state bodies the bodies of the local self-government units and the companies that perform the activities in the field of energy , shall be obliged to provide the necessary documents, data and information.

Conclusion

The establishment of the Energy Regulatory Commission of the Republic of North Macedonia was one of the most significant reforms that were made in the energy sector. The Energy Regulatory Commission as an independent, transparent Commission is one of the most significant in the Republic of North Macedonia. In that context, the functioning of the entire energy sector will be improved in parallel with the way it operates and the performance of its operation. The Energy Regulatory Commission receives a significant role in terms of liberalization of the electricity market, and under thethe new Energy Law of May 2018. More specifically, under this Law, the role of the ERC is envisaged. Subsequently, in order to be successful in practice, it is necessary to work seriously on the independence of the Energy Regulatory Commission. Therefore, it is necessary to improve the capacity of the Energy Regulatory Commission by selecting the members and their expertise and knowledge very carefully in the field of energy law as the most important feature. It is necessary to organize continuous trainings for employees in order to improve the efficiency of the Energy Regulatory Commission. From the aspect of independence of this key institution, independent professionals and experts should be employed therein, which would not occupy any sides, but rather implement the energy policy consistently, professionally, expertly and without any pressure and influence. Although independence is envisaged in accordance with the Energy Law, it is still necessary to work on its strengthening and reducing the influence of the party and business streams. This is because under the competencies of the Energy Regulatory Commission, and according to the fact that it directly takes part in formation of the electricity market price, it arises that its role is very important in terms of formation of the electricity market, and with it the energy sector. Only in this way, the provisions of the Energy Community Treaty would not be violated and the basic goal would be achieved, and it is for the Republic of North Macedonia to be step closer to the European Union. In general, the ERC needs to operate independently, professionally, in accordance with the competencies it derives from the Energy Law, as well as the by-laws, free from pressures, and solelyin the interest of the citizens.

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Role of Artificial Intelligence in Human Resources

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Abstract

In today's competitive world, developments in information technology, particularly those involving artificial intelligence, have significant implications for human resources. Assessing these impacts will be crucial to develop policies that enhance the efficiency of the human resources function for the benefit of workers, employers and society as a whole. This paper introduces the concept of artificial intelligence and reviews studies that link artificial intelligence to human resources issues, including processes that already use artificial intelligence as well as potential future applications. The paper also reviews studies of the impact of artificial intelligence on the labour market, noting the distinct usage preferences of artificial intelligence in various industries and emerging and declining job roles, as well as the skills required to deal with the changes resulting from the use of artificial intelligence. The main objective of this conceptual paper is to study the role of artificial intelligence in human resources, based on secondary sources. Published literature and websites are used to review both empirical and analytical aspects of the potential role of artificial intelligence in human resources.

Keywords: Artificial Intelligence, HR, labour market.

Introduction

When an emerging technology is mentioned, questions come to mind about how different sectors will develop in the future, as modern technologies open new horizons for change. Technological innovations, including artificial intelligence, will interact with other socio-economic and demographic factors to create a perfect storm affecting business models in all industries. Such disruptive change could lead to significant shifts in labour markets, where new categories of jobs will appear and other jobs will end. The specific skill sets required in both old and new jobs will also change in most industries.

With the remarkable development of information technology during the second half of the 20th century, many applications and systems emerged, which were designed to help manage human resources. These applications have contributed and are still contributing to the effective management of human resources functions in most workplaces. Various algorithms and methods have been adopted starting from record-keeping, statistical and analytical processes and now reaching to artificial intelligence algorithms, knowledge exploration mechanisms and future prediction.

Based on the rapid development of artificial intelligence and its direct impact on these activities and processes, this study highlights the role of artificial intelligence in human resources. In addition to examining the direct impact of artificial intelligence on human resources processes, the final section of the paper aims to shed light on the role of artificial intelligence in human resources in terms of the functions and skills required as businesses confront this technological revolution.

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Artificial intelligence

Human intelligence is known as the ability or skill required to develop solutions to problems using symbols as well as various methods of research and also the ability to use experience as the basis for new insights that lead to solutions to problems in a given field. The level of intelligence varies among individuals, and collective human intelligence is responsible for the development and creativity of all civilisations.

In view of the importance of human intelligence, humanity has always been seeking to define the nature of this intelligence, how it can be measured and eventually how to simulate its methods in the form of software using computers. The study of human intelligence had been limited to the field of psychology, but rapid progress in all branches of science in the last half-century has led to the collaboration of many sciences including physiology, biology, mathematics, physics, computers, philosophy and linguistics in the study and simulation of human intelligence systems and their development. Researchers aimed to transfer the methods of innate intelligence and human experience to computer programming so that they could be used in many different fields where a degree of intelligence and experience is required to keep pace with the development of industrial, agricultural and commercial applications. The use of computers in the identification of shapes, symbols and various models led to the emergence of artificial intelligence systems, characterised by the transfer of part of the methods of human intelligence to computer programming systems, which in turn contributed to the building of expert systems that incorporate some human experience.

The concept of artificial intelligence was first suggested as the topic of a conference by John McCarthy in 1956. The aim of the conference was to summarize and intensify further research on thinking machines. The definition of artificial intelligence is nuanced based on the goals different researchers bring to the field. Merriam-Webster defines artificial intelligence as: (1) a branch of computer science dealing with the simulation of intelligent behaviour in computers; (2) the capability of a machine to imitate intelligent human behaviours. The Encyclopaedia Britannica states, 'artificial intelligence, the ability of a digital computer or computer-controlled robot to perform tasks commonly associated with intelligent beings'. Luo (2018) presents a narrow definition of artificial intelligence: 'It is used to study how the computer can do the intelligent work that only the talents can do.'

Research in artificial intelligence is characterised by two approaches. The first tries to shed light on the nature of human intelligence and tries to imitate it, with the intention of copying or matching it or perhaps exceeding it. The second approach attempts to build expert systems that exhibit intelligent behaviour, regardless of its similarity to human intelligence.

Artificial intelligence and Human Resources departments

At present there are a number of human resources processes that are carried out through advanced software, such as Payroll Administration, Benefits Enrolment, Employee Data Management, Claims Management, Application Tracking, and Routine Query Management. Human resource management applications integrated with artificial intelligence techniques can provide the best solution to process data related to human resources operations. For example, data mining can be considered one of the most technologically advanced techniques: building models, loading data, and discovering patterns and dynamic rules between data elements. This is relevant for human resources operations as a way to determine tendencies, identify trends and support planning for the future. So, will artificial intelligence become a larger part of human resources departments in the near future?

To answer this question, a survey by Lemke (2018) suggested that some managers in human resources are still not on board with the technology, or their operations are just too small to make use of it effectively. Also, a 2017 survey from the Human Resources Professional Association revealed that 52 percent of respondents said they were unlikely to adopt artificial intelligence in their departments within five years (HRPA, 2017). In addition, the consulting firm Deloitte observed that human resources is an area of business where artificial intelligence implementation is lagging: just 22 percent of 'high-performing' organisations have implemented artificial intelligence technologies in human resources; that number drops to 6 percent among low-performing organisations (Deloitte, 2018). On the other hand, in a survey of 6,000 executives performed last year by IBM, 66 percent of respondents said they believe cognitive computing can drive significant value in human resources. Another 50 percent said they believe cognitive computing has the power to transform key dimensions of human resources; 54 percent believe cognitive computing will affect key roles in this domain (IBM, 2017).

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Others believe that artificial intelligence is most commonly used for talent acquisition. Forty-nine percent of respondents to the 2018 Annual Employer Survey by the law firm Littler said they use artificial intelligence and advanced data analytics for recruiting and hiring. But artificial intelligence is not limited to talent acquisition. According to Lisa (201I), survey respondents are also using big data to:

- Make strategic and employee management decisions (31 percent).
- Analyse workplace policies (24 percent).
- Automate certain tasks that were previously done by an employee (22 percent).

The goal of artificial intelligence is not to replace human resources management departments. Instead, it will be a useful resource for staff analysts, and providing projections and supporting recommendations to improve productivity and healthy workplace culture. Artificial intelligence is simply another tool that helps to make the most informed decisions possible, whether it is to hire employees, or to give raises based on performance. Here are some of the processes that can be improved and simplified using artificial intelligence (Light, 2017):

Automated Hiring Process: It is difficult to imagine a machine learning algorithm that would make all appointment decisions for a company, but it can perform initial research when job opportunities arise. By scanning resumes, artificial intelligence can eliminate poorly qualified candidates and create a shortlist to look through. Also, the shortcut menu can be grouped based on specific skills, keywords, or recruitment dates. Artificial intelligence can help to predict the level of fit with workplace culture based on those qualities or other skills featured in the resume.

Recommend Training Methods: Artificial Intelligence can analyse data from employee interactions, saving professionals the burden of doing it themselves, and allowing them to use this information to better design training sessions.

Data-driven Performance Reviews*:* Artificial intelligence can help remove natural bias from certain performance measures, as necessary. When employees are not holding their own, the data will display these cases, and artificial intelligence can formulate an unbiased measure of their performance.

Predictable Turnover and Attrition: Using employee participation data, whether through pulse surveys, brand promotion or performance demonstration, artificial intelligence can determine the level of interest of employees and predict the likelihood of them trying to change positions.

These processes based on artificial intelligence may seem abstract, but they are becoming more practical as machine learning and deep learning continue to grow their business applications. By automating certain tasks, human resources functions will increasingly rely on intelligent applications with integrated artificial intelligence capabilities to help manage human resources. Ultimately, artificial intelligence will allow an increase in the quality of company culture, training and overall performance.

Veena and Sharma (2018) believe that the development of future human resources capacity will include additional applications of artificial intelligence, as follows:

- Limiting the number of interviews required to fill positions.
- Revealing optimal organisational size and department size.
- Better managing of departures.
- Creating an optimised on-boarding agenda for an employee's first four days of work, promoting productivity levels.
- Post-hiring monitoring.
- Tracking employee behaviour and making appropriate recommendations to improve performance.

Artificial intelligence and labour markets

Artificial intelligence will have a significant impact on labour markets as it will lead to changes in employment strategies and diversity requirements within two general scenarios, job transformation and job replacement (Sharma, 2018):

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Job transformation

When artificial intelligence is introduced into the workplace, staff can be concentrated in non-routine jobs. In most cases, institutions will retain their staff, rebuilding existing skills to align to new roles and responsibilities. There will also be a need for redeployment, to maintain competitiveness in cases where staff cannot be trained in other roles.

Job replacement

Public and private institutions will find it necessary to review their employment strategies, as there will be a shift from employing low-skilled labour to recruiting more skilled and efficient professionals. Partnerships with global and regional engineering and technology institutions can assist with this realignment.

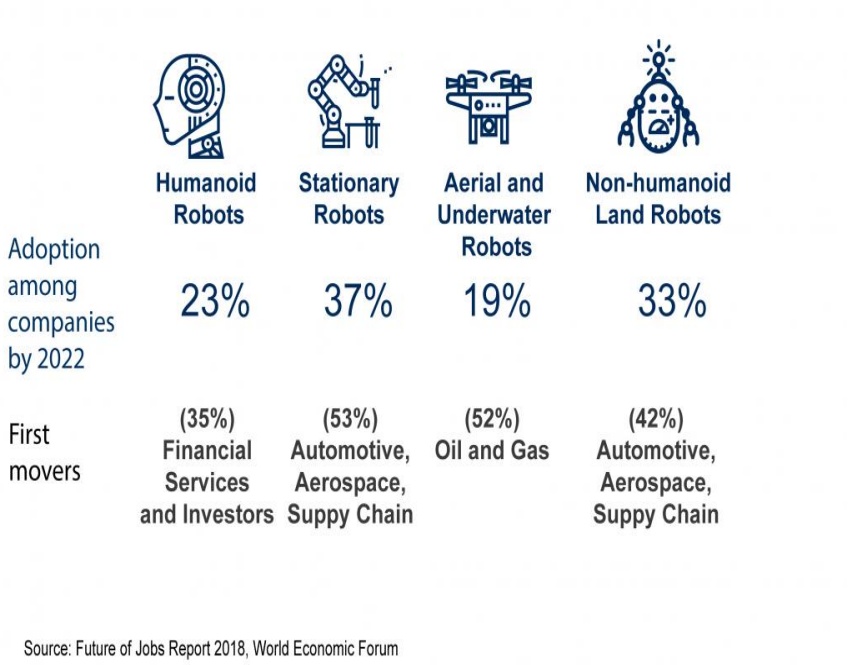
Some researchers have argued that artificial intelligence is likely to increase the overall wealth of humanity as a whole, substantially (Brynjolfsson and McAfee 2014). Manyika et al. (2013) believe that significant parts of the economy, including financial, insurance, actuarial and many consumer markets, could be disrupted by the use of artificial intelligence techniques to learn and predict human and market behaviour.

Morikawa (2016) conducted a survey of Japanese firms to investigate the impact of artificial intelligence and robotics on business and employment. Respondents regarded the impact of the development and diffusion of artificial intelligence and robotics on future business prospects with a general enthusiasm – positive responses (27.5%) far surpassed negative responses (1.3%). In contrast, the perception of the impact of artificial intelligence and robotics on employment is negative – 21.8% of firms responded that the development and diffusion of new technologies would decrease the number of employees, and the share of firms expecting positive effects on their employment is was very small (3.7%). He found that firms with relatively low-skilled employees were likely to be affected negatively by the new industrial revolution, while those with highly skilled employees would tend to reap benefits.

A study on the Future of Jobs done for the World Economic Forum (2018) looked at trends expected in 2018–2022 in 20 economies and 12 industry sectors. They said companies need to be ready for the following (Ratcheva & Leopold, 2018):

Automation, robotisation and digitisation look different across different industries

Companies are expected to adopt new technologies between 2018 and 2022. Many will also look at automated learning and enhanced and virtual reality as opportunities for investment. Investment in robotic techniques will rise rapidly. Robots are likely to be the most widely adopted of these innovations by 2022, but different industries have distinct preferences.



Source: Future of Jobs Report 2018, World Economic Forum

There is a net positive outlook for jobs – amid significant disruption

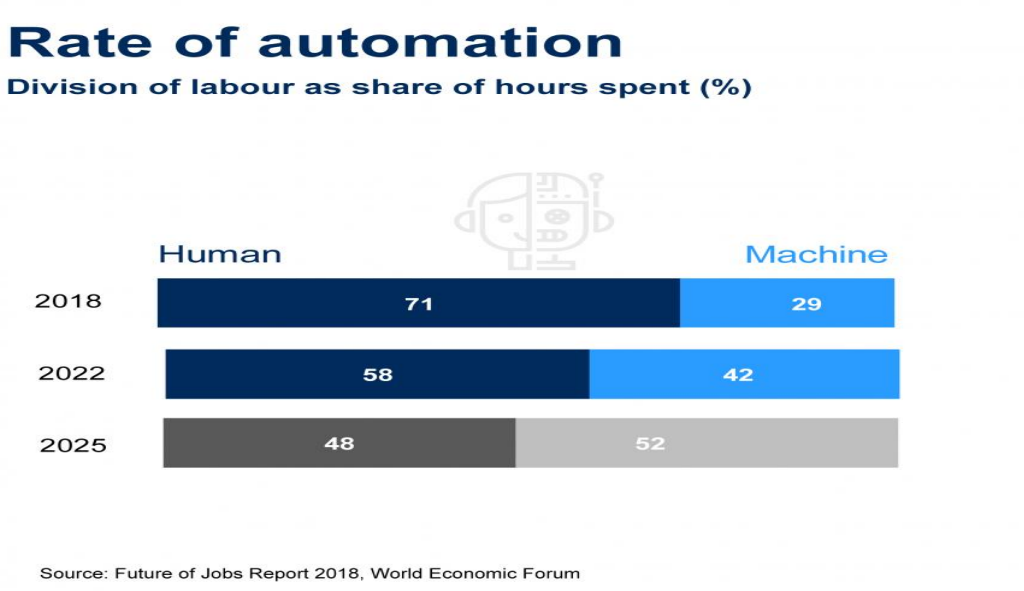
In purely quantitative terms, 75 million current job roles may be displaced by the shift in the division of labour between humans, machines and algorithms, while 133 million new job roles may emerge at the same time.

Top 10 emerging roles by 2022:	Top 10 declining roles by 2022:
1. Data Analysts and Scientists	1. Data Entry Clerks
2. AI and Machine Learning Specialists	2. Accounting, Bookkeeping and Payroll Clerks
3. General and Operations Managers	3. Administrative and Executive Secretaries
4. Software and Applications Developers and Analysts	4. Assembly and Factory Workers
5. Sales and Marketing Professionals	5. Client Information and Customer Service Workers
6. Big Data Specialists	6. Business Services and Administration Managers
7. Digital Transformation Specialists	7. Accountants and Auditors
8. New Technology Specialists	8. Material-Recording and Stock-Keeping Clerks
9. Organisational Development Specialists	9. General and Operations Managers
10. Information Technology Services	10. Postal Service Clerks

The division of labour between workers, machines and algorithms is shifting fast

Employers expect a major shift in the division of labour between human workers and machines. At present, humans perform 71% of total work hours, compared to 29% by machines. By 2022, this average is expected to shift to 58% human working hours and 42% from machinery.

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New tasks at work are driving demand for new skills

By 2022, the skills required to perform most jobs will have shifted significantly. The growing skills will be as following:

1. Analytical thinking and innovation
2. Active learning and learning strategies
3. Creativity, originality and initiative
4. Technology design and programming
5. Critical thinking and analysis
6. Complex problem-solving
7. Leadership and social influence
8. Emotional intelligence
9. Reasoning, problem-solving and ideation
10. Systems analysis and evaluation

We will all need to become lifelong learners

By 2022, everyone will need an additional 101 days of learning. Half to two-thirds of companies' staff are likely to become external contractors, temporary employees and freelancers to address skills gaps. A comprehensive approach to workforce planning, reskilling and upskilling will be the key to positive and proactive management of these trends.

Unlike the previous review, in this case the road is long and the impact of artificial intelligence on the labour market is unclear. John Markoff believes that innovation in the domain of artificial intelligence is very difficult. Robotics still faces the challenge of Moravec's paradox, which states that tasks that are difficult for humans to perform, such as pointing at a welding spot with precision, are easy for robots, while easy that are tasks for humans, such as lifting dishes from the dining table, are very difficult for robots. This is often due to the complexity inherent in the mechanisms of friction, collisions and communication. Calculating an asteroid's path is much easier than predicting the trajectory of a cup of coffee when pushed on a table top.

Conclusion

The success of industrial applications of artificial intelligence, from manufacturing to information services, has produced an increasing impact on the economy, although there is disagreement about the exact nature of this outcome and how to distinguish between the effects of artificial intelligence and other information technologies. Many economists and computer scientists agree that research is urgently needed to determine how to maximise the economic benefits of artificial intelligence while mitigating its negative effects, which could include increased inequality and unemployment. In the long run, some roles and functions will become less important and even disappear. in most cases, artificial intelligence will play a supportive role by enabling the human element to perform better in dealing with complex and critical situations that require judgment and creative thinking. In parallel there will be many new roles and disciplines with a focus on technology and science. Artificial intelligence techniques are expected to revolutionise business management and have a major impact on employee working methods, especially in human resources functions and departments. Artificial intelligence has successfully carried out simple human resources activities, but to what extent it can address the complex issues of human resources, we have to wait for the results of research in this regard.

In summary, artificial intelligence has the potential to bring great benefits to humanity; it is better to start now to determine how to maximize these benefits while avoiding potential risks. Taking the time to understand the benefits and pitfalls of different scenarios is just as important as building the right algorithms and data infrastructures. The end result will provide many benefits for companies that wish to make the best decisions as they apply artificial intelligence. It is a long journey to use artificial intelligence applications effectively within human resource functions, but it is the effort and the price that is necessary for success.

Acknowledgement

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Prospects of Electric Vehicles in Pakistan Considering Force Field Analysis

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Abstract

It is generally believed that electric vehicles (EVs) are not suitable for adoption in an energy deficient country marred by blackouts. In reality, there may be some forces which can trigger or resist the implementation of EV technology. In this regard, face to face interviews were conducted to enlist and evaluate the barriers and opportunities for the prospects of electric vehicles in Pakistan. It was evaluated if favourable policies are adopted there could be successful propagation of hybrid electric vehicles (HEVs) and electric two-wheelers (E2Ws) in Pakistan. For electric cars or electric four-wheelers (E4Ws), the situation could be favourable when these vehicle would offer a lower sticker price and lower cost of infrastructure.

Keywords: Electric vehicles; Developing countries; Force field analysis; Opinion of the experts

Introduction

Electrification of mobility offers numerous benefits such as independence of oil dependency and benefit to the environment (Sierzchula, Bakker, Maat, & van Wee, 2014). Electric Vehicles (EVs) emit zero tailpipe emissions and are highly energy efficient greenhouse gases (GHG) (Faria, Baptista, & Farias, 2014). Electric cars have largely been praised for their better performance against their counter part gasoline cars but potential of electric two-wheelers (E2Ws) and hybrids electric vehicles (HEVs), has been rather underestimated (Weinert, Ogden, Sperling, & Burke, 2008). There remains a question of whether EVs can be implemented in energy deficient countries. There are many forces which push and pull the equilibrium state of the established market for different mobility vehicles such as gasoline saving. The resisting forces for the adoption of EVs include high sticker price and limited range etc. (Carley, Krause, Lane, & Graham, 2013; Egbue & Long, 2012; Newbery & Strbac, 2016). In this study, a comparative analysis is performed for the understanding the three type of EVs in the context of Pakistan. To achieve that, face to face interviews were conducted from the experts. It should be noted that only HEVs exist in Pakistan with small numbers

The current state of energy and electric mobility in Pakistan

The current energy state in Pakistan is fossil-based (Ra, Rehman, & Asia, 2017). Currently, only 31% of electricity is clean due to its production from hydropower (Mirjat et al., 2018). It clearly indicates that despite electric vehicles' promise of zero-emission, it needs a clean energy mix.

Considering the presence of E2Ws and E4Ws, the market is nonexistent. On the contrary, there is a small market for HEV, it can be estimated that less than 1% of the total cars in Pakistan are HEVs. The contemporary mobility situation in Pakistan is predominated by gasoline motorcycles. The lower income strata of people are gazing for an alternative in two-wheel transportation mode, which has an affordable price and low operational cost than a conventional gasoline based two-wheelers. Considering the limitation speed and range, E2Ws that offers a price lower than gasoline based two-wheeler may garner appeal among masses.

Methodology

According to (Breidert, Hahsler, & Reutterer, 2006) the opinion of the expert seems to be the best practice when there is no market of customers for an innovate transportation product. As there is no market for E4Ws and E2Ws in Pakistan, the opinion of the experts is taken to understand the barriers and opportunities for the prospects of EVs in Pakistan.

Kurt Lewin was the pionner to indrroduce FFA in 1950. It is directed to understand the forces of change in an environment that may include technology, people and structure. In social science, instead of precise measurement, subjective evaluation of these forces is performed. These forces clarifies the equilibrium state

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influenced by the forces of change, The FFA methodology enlightens prospect of the new technology creating change (Jonathan Weinert et al., 2008).

Study	**Year**	**Focus of study**	**Organization/ Region**
(Ismail Salaheldin, 2003)	2003	Total Quality Management (TQM)	Egypt
(Baulcomb, 2003)	2003	Management of change	UK
(Weinert et al., 2008)	2007	Future of electric two-wheelers and electric vehicles	China
(Watts & Selman, 2004)	2011	Conservation of biodiversity	UK
(Swanson & Creed, 2014)	2014	Analysis of organizational case examples and related methods	Australia
(Toves, Graf, and, & 2016, n.d.)	2016	Synthesis of a force field analysis and theories of change	Private organization
(Capatina, Bleoju, Matos, & Vairinhos, 2017)	2017	Leveraging intellectual capital through force field analysis	Romania

Table 1 Various studies undertaken considering force field analysis

According to (Breidert et al., 2006) the judgment of the expert seems to be the best practice when there is a small or non-existent market of customers. As there is no market for E4Ws and E2Ws in Pakistan, the force field analysis is validated by the opinion of the experts. Their opinions are collected to formulate a judgement for the prospects of the EVs in Pakistan. A decision by simple majority force will be used to evaluate the driving and resisting forces considering the opinion of the experts. In this case, the ideal experts would be people having knowledge of the local market of Pakistan as well as advanced knowledge in road transportation-related fields. The opinion of the experts was obtained by web-based stated preference survey and face to interviews. The survey was designed and disseminated through the platform of Qualtrics.

Results

The opinion of the experts was obtained by face to face interviews. Majority of the people had previous experience as city planners and almost all of them had advanced degrees in transportation science. A total of 27 participants contributed to the survey. The mean age of the participants was 31 years. Most of the experts were belonged to the universities working as Professors and Researchers. Other experts belonged to variety of industry such as Transportion experts, urban planners and city planners.

Overview of driving and resisting forces by the experts

At first, the forces were enlisted by the magnitude and likelihood of occurrence in Pakistan. Later, the experts evaluated these forces. The forces were denoted from Low (L), Medium (M), and High scale (H). Each of the force was given a point score from 1 to 3. The exact quantification of the driving and the resisting forces is not feasible, as it requires perfect knowledge of the market, industry and regulatory system. The table in each following section represents the weight of the driving and the resisting force for E2Ws, HEVS and BEVs

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respectively. The arrows of the graph tend to represent the direction and the magnitude of a particular force. These arrows tend to get thick by the magnitude of that force.

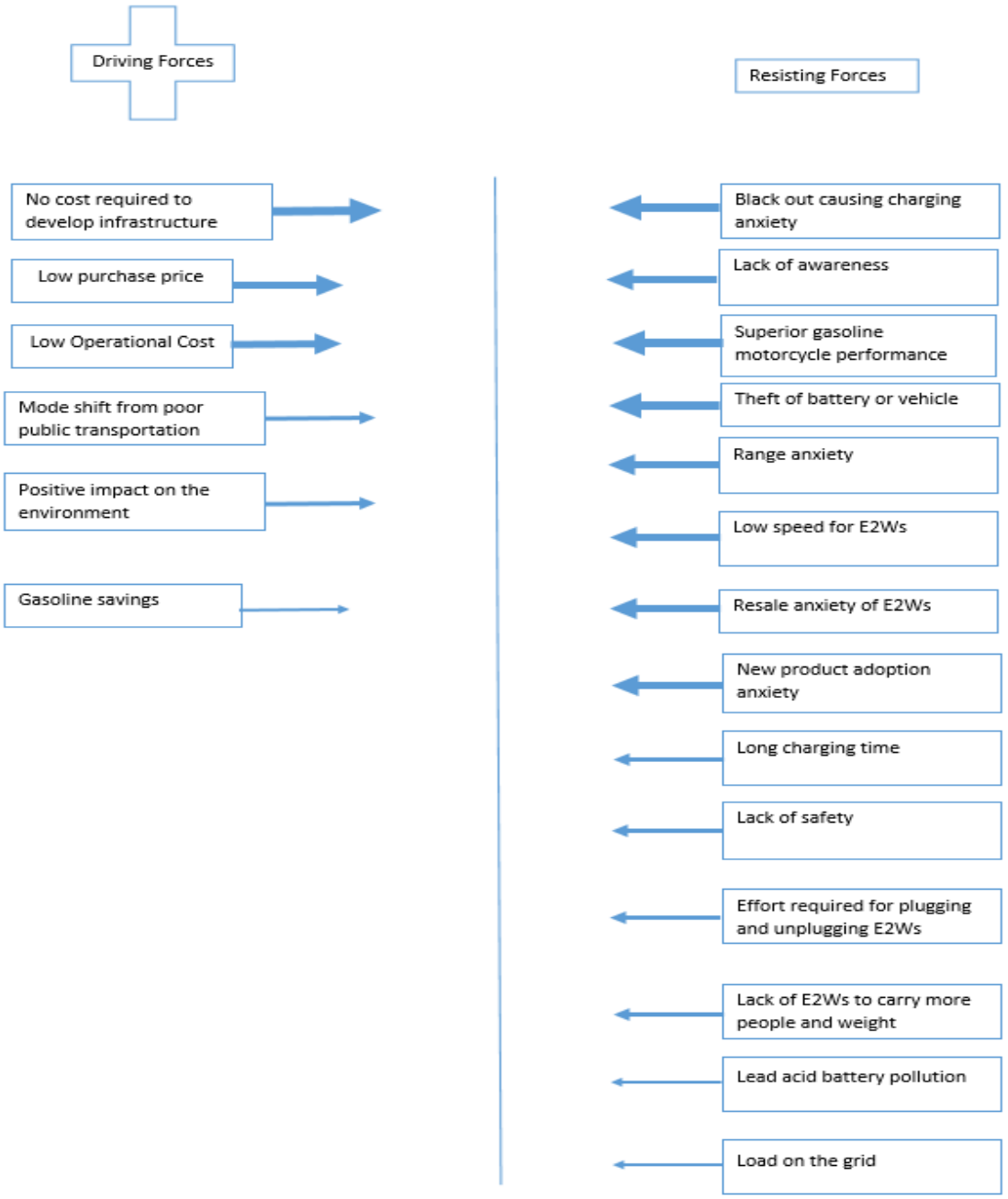


Figure 1 Driving and resisting forces for E2Ws

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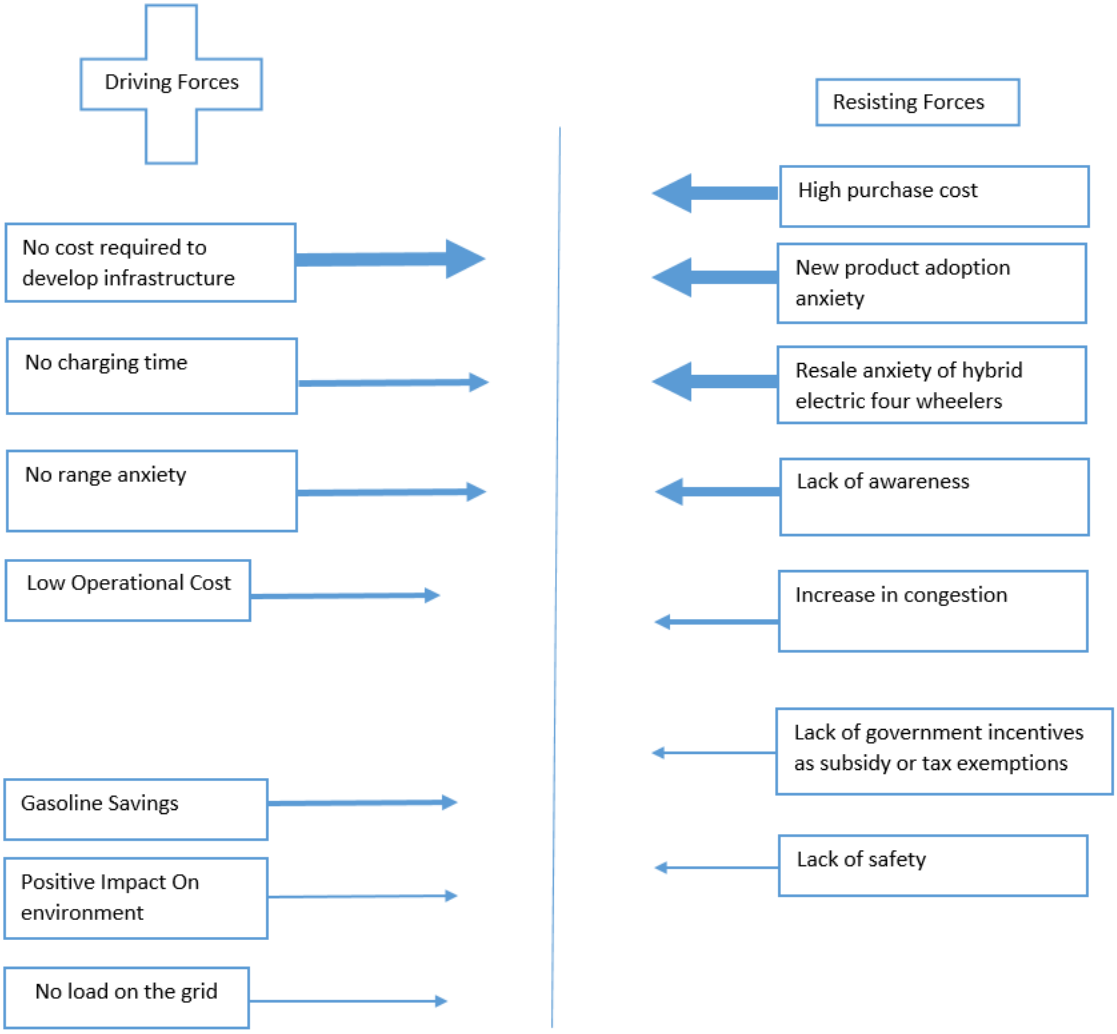


Figure 2 Driving and resisting forces for HEVs

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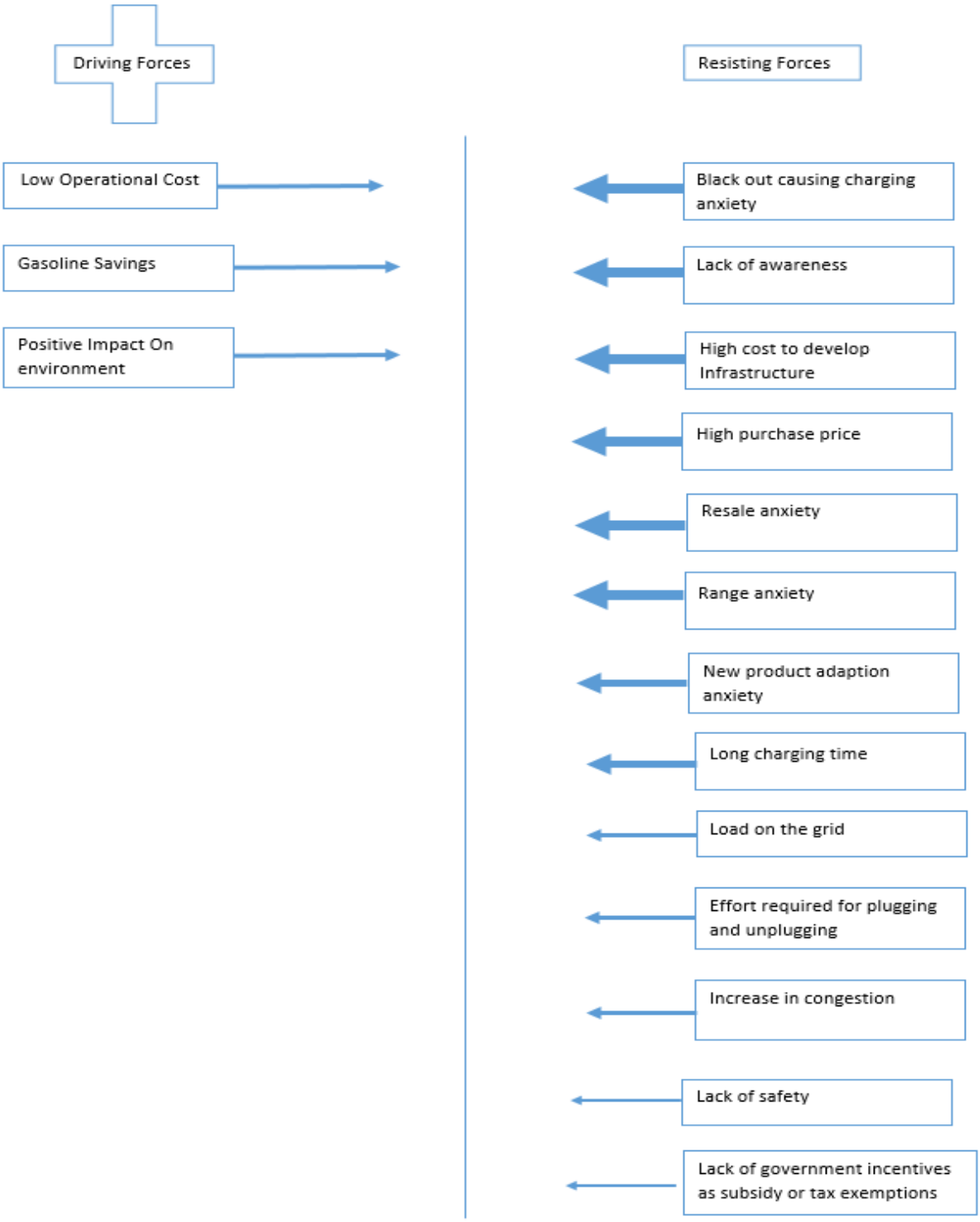


Figure 3 Driving and resisting forces for E4Ws

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Discussion

Each of the above resisting and driving forces has been mentioned below attached with its primary and root causes. Forces which have a reverse action are present in the red arrow. For instance, strong gasoline based motorcycles decrease the prospects of the use of E2Ws. In another example considering HEVs, lack of awareness would have a negative consequence on resale anxiety.

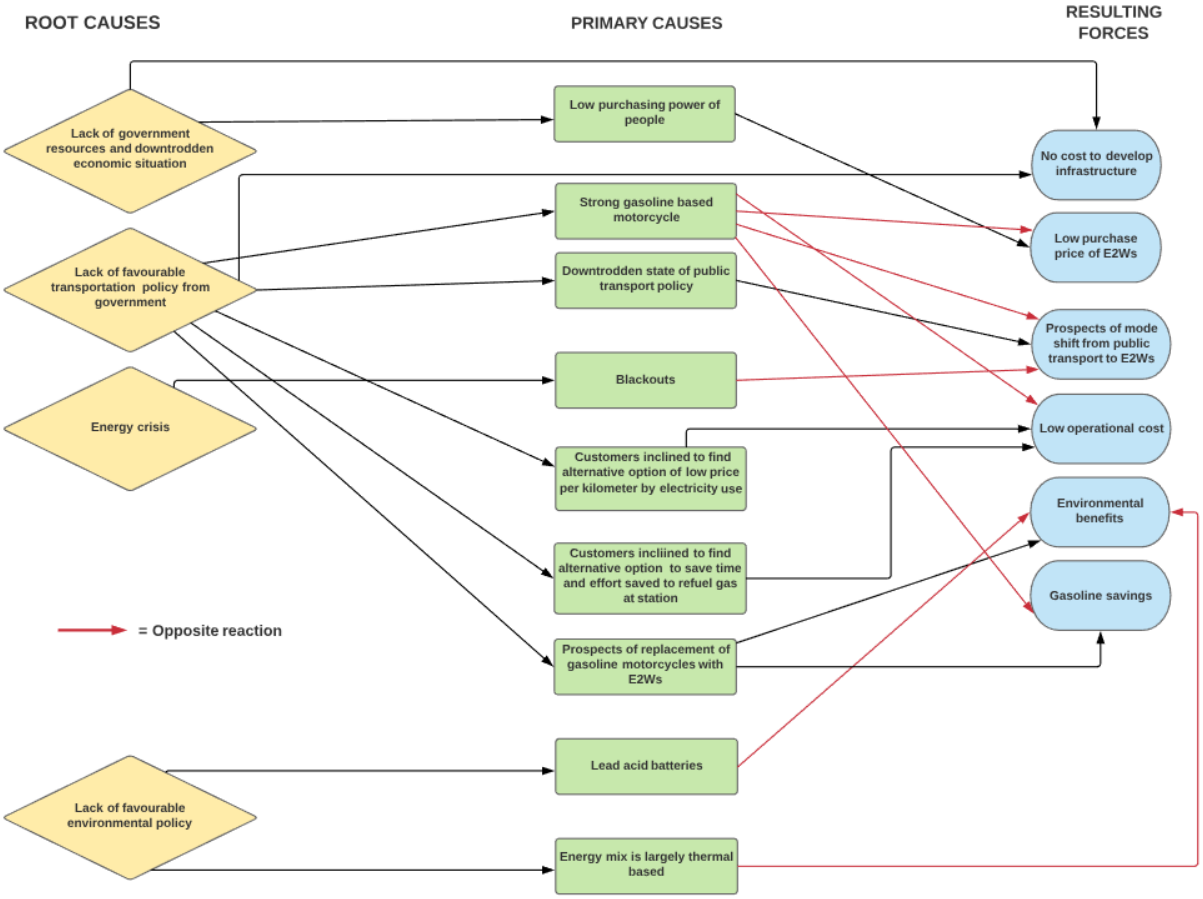


Figure 4 Driving forces in E2Ws

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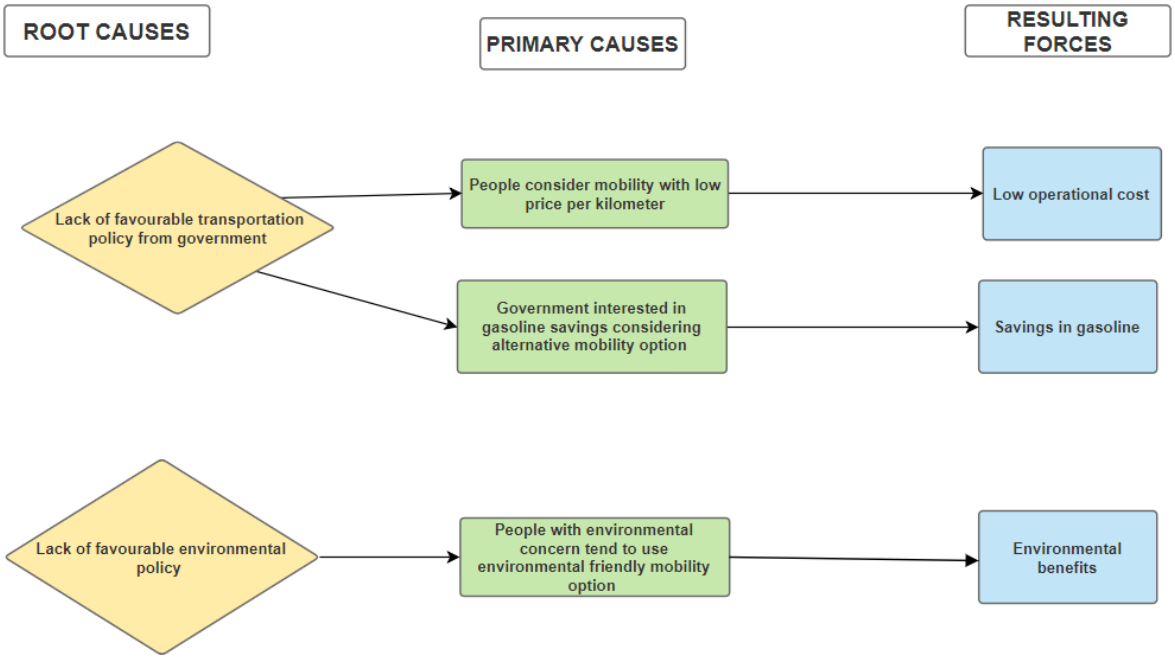


Figure 5 Driving forces for E4Ws

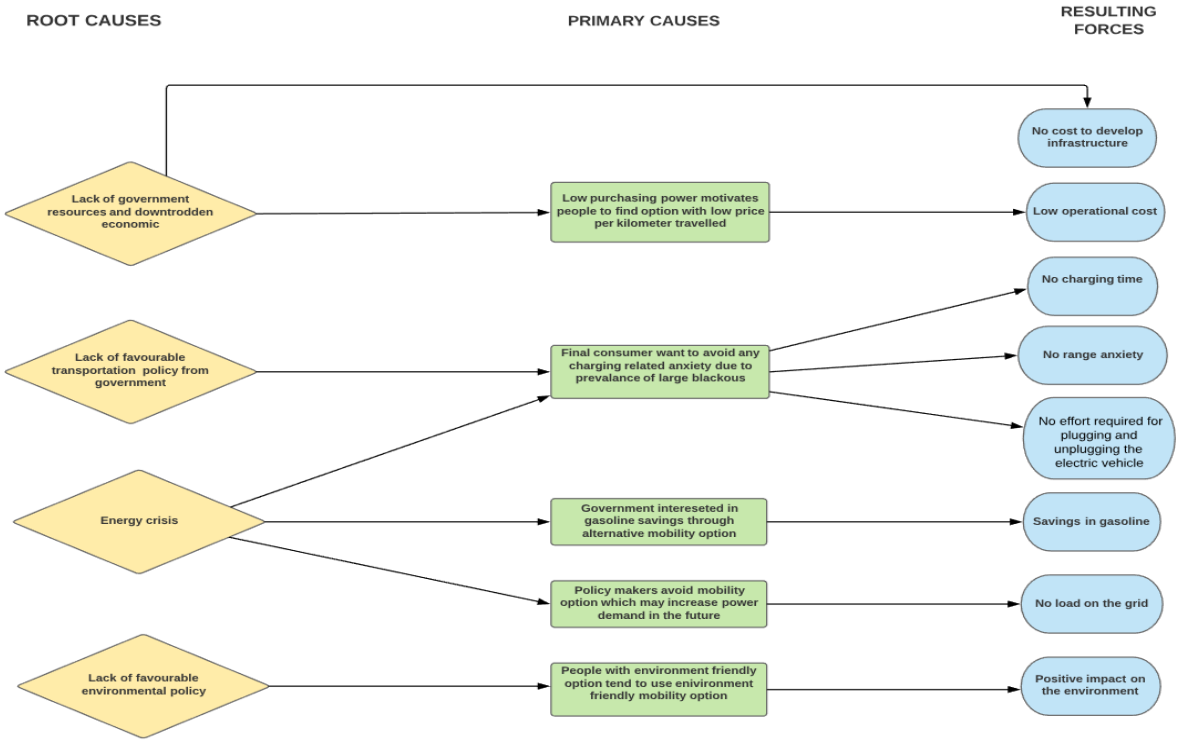


Figure 6 Driving forces for HEVs

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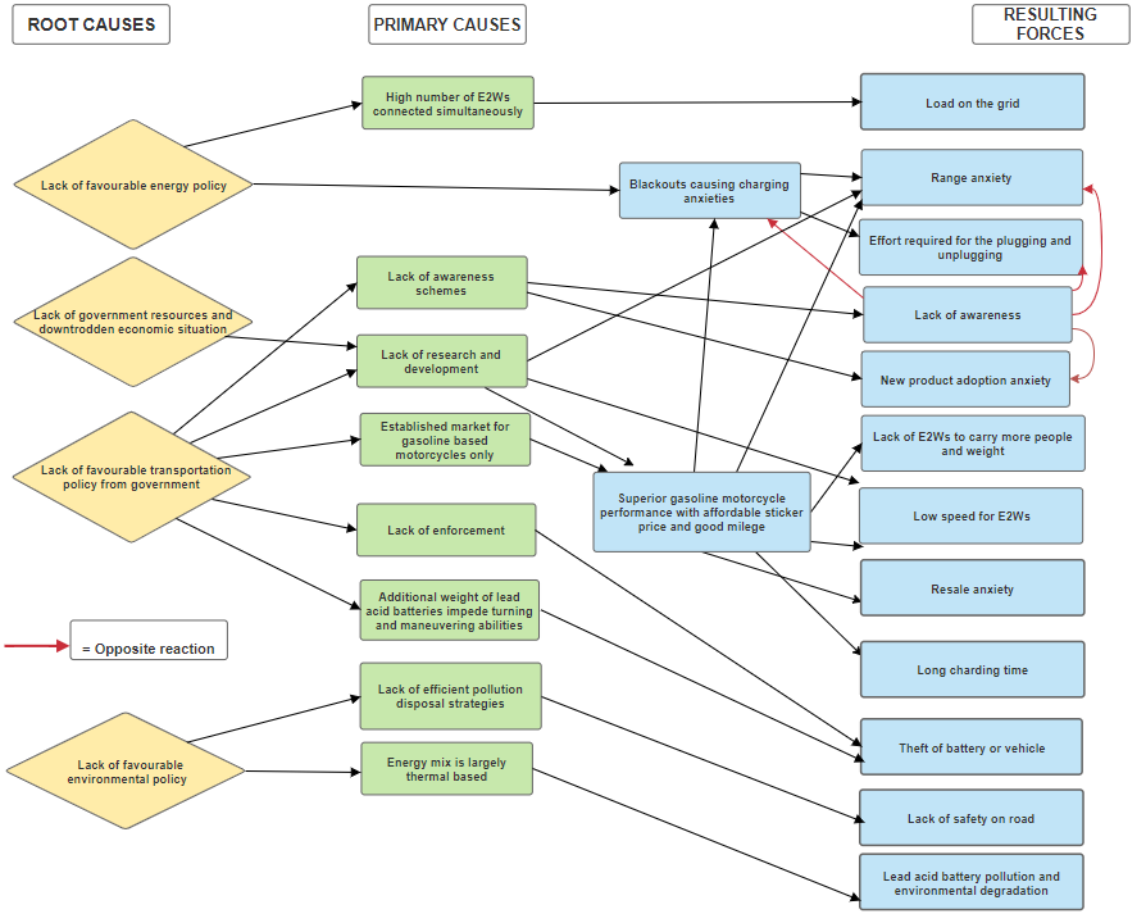


Figure 7 Resisting Forces for E2Ws

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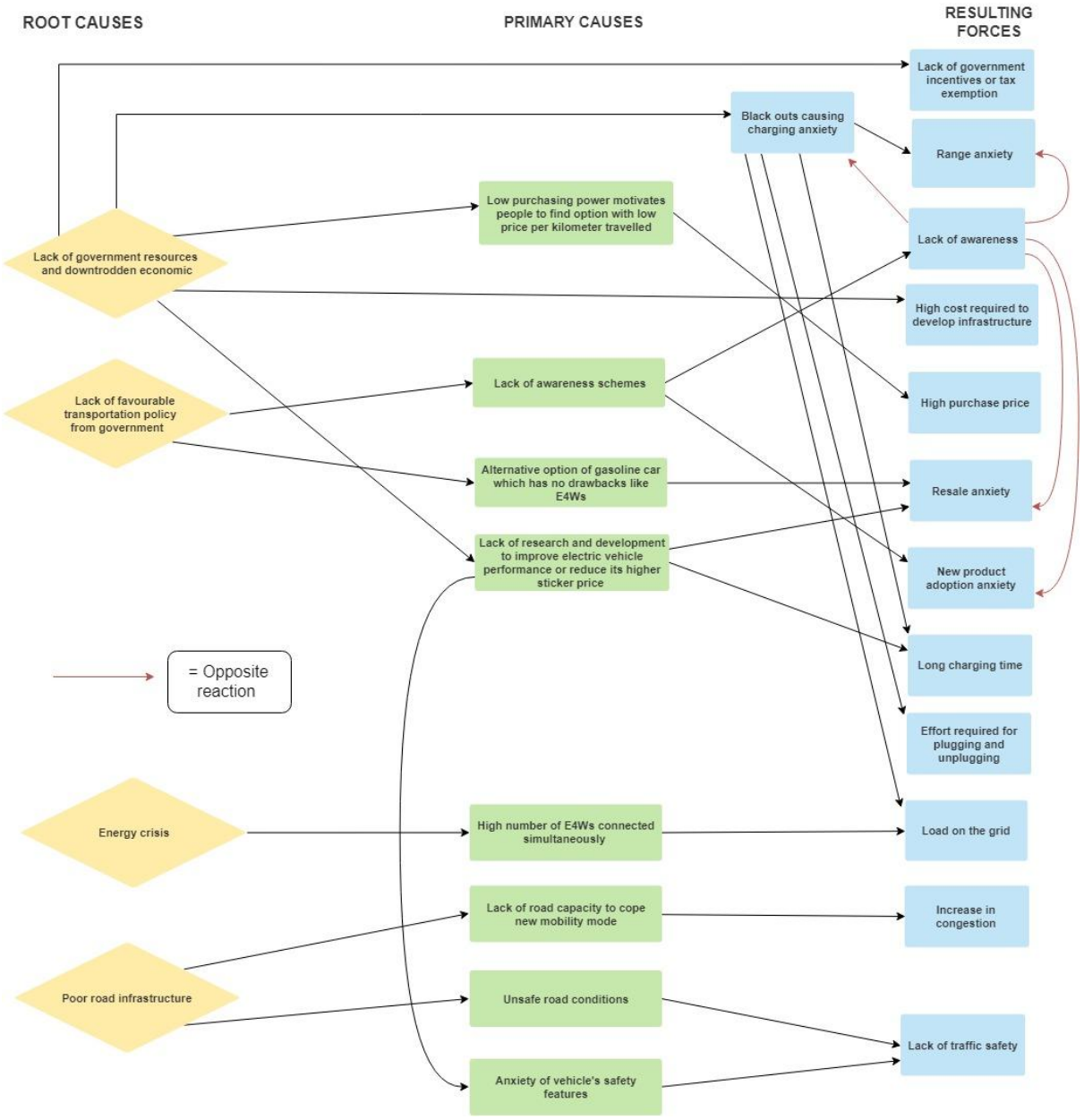


Figure 8 Resisting forces for E4Ws

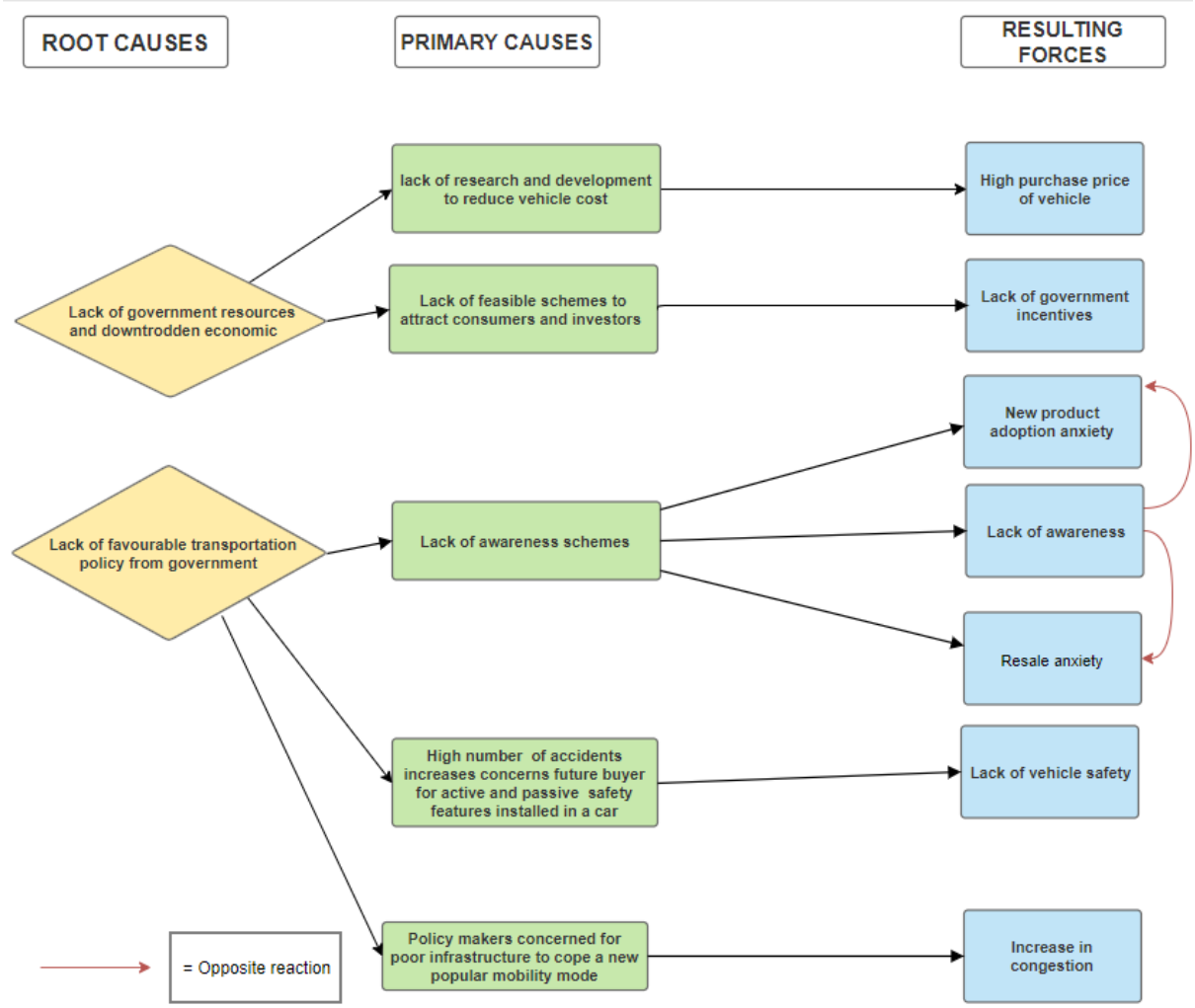


Figure 9 Interaction of resisting forces for HEVs

One can observe that driving forces out weigh the resisting for E4Ws and E2Ws. Whereas, HEVs seen to be acceptable because people are familiar with its market and attributes. In this evaluation, it is clear that mass awareness of EVs can create appeal and demand for a new market specially E2Ws. The awareness can also minimize the magnitude and likelihood of occurrence for resisting forces as charging anxiety, range anxiety, resale anxiety and effort required for the plugging and unplugging. There is lack of policies from the government in Pakistan such as awareness schemes, tax exemptions, and import friendly regulation to promote innovative technology such as EVs (Qureshi, Ullah, & Arentsen, 2017). Providing incentives to the rich class to buy HEVs or E4Ws does not seem reasonable in a developing country like Pakistan. So incentives may be introduced for middle and lower class people for the purchase of cheaper E2Ws. These incentives could be a waiver of registration tax, excise tax, toll tax and other related taxes. For the rich class, there can be smaller incentives as registration waiver or toll exemption for HEVs and E4Ws. Investors can also be encouraged by policies to ease taxes and regulation for the import of E2Ws. Recently, Pakistan has slashed its import duties on cars from 50% to 25%, this means that a Tesla brought in for $80000 would pay $20000 as a customs duty resulting into $100000 as the final cost ("Pakistan Budget 2018," 2018). Still, there are many trade groups who advocate that such import duties should be reduced to a range of 0-5% to induce the affluent class to buy electric cars (Ahsan Mirza, 2017). Thereby, investors and buyers can be lured by the government to create a market for EVs in Pakistan. Besides, the government can also motivate investors to produce E2Ws locally. The government can

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inspire from the model of China and ban on new gasoline motorcycle in one or two major cities (Weinert et al., 2008) to cut the emissions and save gasoline based savings.

Conclusion

In this study, literature review and face to face interviews are used as based to understand evaluate the present set of equilibrium with the driving and resisting forces for the propagation of EVs in Pakistan. These results indicate that in the contemporary scenario of Pakistan only HEVs have a favorable situation in which driving forces outweigh the resisting forces. The small success of HEVs in Pakistan could be related to its non-dependency on external charging infrastructure and gasoline savings. Considering E2Ws, resisting forces outweigh the driving forces. Nevertheless, the favourable situation could be created for E2Ws after taking drastic policy measures as relaxing regulation for investors and introducing awareness schemes and tax benefits to the final consumer. In the view of E4Ws, resisting forces vehemently outweigh the driving forces which are not feasible in the current situation of Pakistan despite creating favourable policies.

Future Studies

Future studies could be directed towards the attitudes and willingness to pay for E2Ws in Pakistan. This would help the government and private firms to introduce E2Ws that could reflect the purchasing power and perceptions towards the E2Ws.

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Does Mandatory IFRS Adoption Enhance Quality of Accounting Information: Evidence from Pakistan

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Abstract

This objective of this study is to investigate the impact of compulsory IFRS adoption on quality of accounting information in Pakistan, and its market attributes. The study employed the data from the year 1996 to 2016 gathered from the Pakistan stock exchange. Our study finds that IFRS adoption enhanced the quality of accounting information in medium and large size banks than in small. Although the assessment by constructing a single index indicates that IFRS enhanced quality of accounting information (QAI) of all banks. Comparatively by bank-wise assessment of QAI indices, we observe that mandatory adoption has no impact on Public and Specialized banks. Conjointly, our study overcomes the traditional perception of IFRS inconsistency and provide empirical justifications of the value addition of IFRS in quality information disclosure. Results from this study have technical and policy implications for regulatory institutions, policy makers and investors in emerging economies.

Keywords: IFRS; Accounting information quality; Value relevance; Earnings timeliness; Accounting conservatism.

JEL classification*:* M4; M40; M41; M48

Introduction

This study is motivated by the adoption of mandatory international financial reporting standards (IFRS) and changes in the financial reporting mechanism. IFRS shows differences in institutional settings and different culture due to the adoption of the same IFRS in 130 countries of the world. (Ball & Shivakumar, 2005, p.83) argued that differences in the institutional environment would yield the differences in financial reporting quality, even the same accounting standard has been applied. As (Rashid et al., 2012,p.p.1-13) argued that in place of IFRS adoption, there are various difficulties in its execution, i.e., inconsistency with prevalent standards, divergence in the techniques of re-entering accounting values.

The main objective of this study is to measure whether the mandatory adoption of IFRS enhanced the quality of accounting information of banks in the financial sector of Pakistan. As a result four research questions are investigated as under (i) Do the compulsory adoption of IFRS enhance value relevancy of accounting information of firms (ii) Do the compulsory adoption of IFRS enhance earnings timeliness of accounting information in banking industry (iii) Do the compulsory adoption of IFRS enhance accounting conservatism practices of firms (iv) Does the mandatory adoption of IFRS is successful in enhancing overall and bank wise quality of accounting information in the financial sector.

Since its inception, IFRS is considered as the most practiced and extensively used standards around the globe, whether adoption of IFRS is favourable for developing economies is still a question. The scenario of Pakistan is undoubtedly an enigma. It has differentiated sets of reporting requisites, i.e., financial and tax reporting, limited control of shareholders on corporate governance, and no governmental intervention in settlement of reporting standards. Contrarily, in depth, the governance prospects of Pakistan exhibit more attributes of a code law

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economy as (Baig 1997, p.2) Pakistan has shaky equity market, the monopoly of family-owned business entities, using debt as a mean of funding and weaker quality of reporting disclosure, (Ball & Shivakumar, 2005, p.83; Burgstahler et al., 2006,p.983; Daske et al., 2008, p.1085) the monetary worth of IFRS rely on companies incentive to quality information disclosure. Likewise (Zehri and Chouaibi 2013,p.56)corporate reporting methods affected by national level regulations, (Draz 2014, p.p.70-89) accounting reforms have a significant relationship with financial crises, (Cameran et al.,2014,p.278) IFRS adoption decreases the reporting quality of privately owned companies,(Hossain et al., 2015, p.2319) IFRS carry in equivalence of the financial statements of firms,(Gao and Sidhu 2016, p.1) the spillover impacts of IFRS are different at the firm and country level.

The existing studies such as (Baig 1997, p.1), (Ashraf and Ghani 2005, p.p.1-6) , (Zehri and Chouaibi 2013, p.56) and (Draz 2014, p.p.70-89) only focused on the theoretical importance of IFRS adoption and its implementation issues. Some studies measured the effects of IFRS on accounting information by employing specific financial ratios. They ignored the quantitative significance of IFRS and its monetary effects on the quality of accounting information (QAI) and the market attributes of firms. Moreover, they considered specific accounting ratios and IFRS standards to measure the effects by using general approaches which are not enough to portray the secondary changes in the QAI. Most of the studies have variable biased results. In order to bridge up the problems mentioned above, this study concentrates on the empirical aspects by using two popular but different methods on the data. Distinctively, our research study investigates the overall change in the quality of accounting information, by focusing all quantitative factors innovatively, and makes a new addition in the preliminary literature. The remaining paper designed in 4 parts. Part 2 explains the conceptual framework, part 3 represents the sampling and empirical models. Furthermore, part 4 exhibits the empirical analysis and discussion. Finally, part 5 represents the conclusion and policy implications of the research.

Conceptual Framework and Hypothesis Development

Accounting theories imply that an agreement by a financial entity to enhance the level of information disclosure should reduce the asymmetrical flow of information with investors and contrary choice in the stock market, arising in expanded market liquidity, contracted cost of assets, and increased value of the firm. Based on the assumption that adopting IFRS increasing financial disclosure, accounting information quality, and comparability of accounting standards. IFRS adopters are expected to enjoy the preceding benefits. Indeed many studies in developed economies have examined the effects of IFRS on accounting information quality, earning management, and investor's protection, finding positive influence likewise rise in liquidity (Daske et al., 2008, p.p.1085-1142). Considering, these transformations in the financial reporting system we assume our main hypothesis H_1 as follows;

H1: Whether the mandatory adoption of IFRS enhances the quality of accounting information in the financial sector.

We then investigate how the firms market attributes, such as value relevance, earning timelines, and accounting conservatism practices, are influenced by the mandatory adoption of IFRS. As (Capkun et al ., 2016, p.352) early adopters of IAS/IFRS have higher earnings management as compared to the economies awaited until compulsory implementation of IFRS, (Abad et al., 2017, p.1) a decrease in information asymmetry, (Dalci et al., 2017, p.525) no significant impact of IFRS on the basic accounting ratios. The above literature leads us to the main and sub-hypothesis of our study. Hence, we hypothesize that;

H1a: The adoption of mandatory IFRS enhances the value relevance of firms.

This controversy is coherent with (Ames 2013, p.p.154-165) the acceptance of IFRS has no significant influence on earnings quality (EQ) and value relevancy of companies. Whereas, the post-adoption of international financial reporting standards has increased some balance sheet values. (Ugrin, Mason, and Emley 2017, p.p.140-151)earning management of companies enhanced consequently after implementation of IFRS at the firm's level. Then, we hypothesize that;

H1b: The adoption of mandatory IFRS enhances earnings timeliness of firms.

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As (Black and Nakao 2017, p.113) the specific group of firms presenting relative conservatism, value relevancy of net profit, and reduction in earnings smoothing after acceptance of IFRS.IFRS adoption increases accounting comparability. Hence we hypothesize our third sub-hypothesis as;

H1c: The adoption of mandatory IFRS enhances accounting conservatism of firms.

IFRS enhances the quality and worth of accounting information (Shawn 2017, p.339), IFRS adoption reduced the existing inconsistencies between local and international standards (Edeigba & Amenkhienan, 2017,p.3).IFRS adoption is controversial for small and medium firms (Rodríguez García et al. 2017, p.p.155-168), IFRS can be less efficient if the domestic reporting standards are well-formed (Katselas and Rosov 2017, p.1).

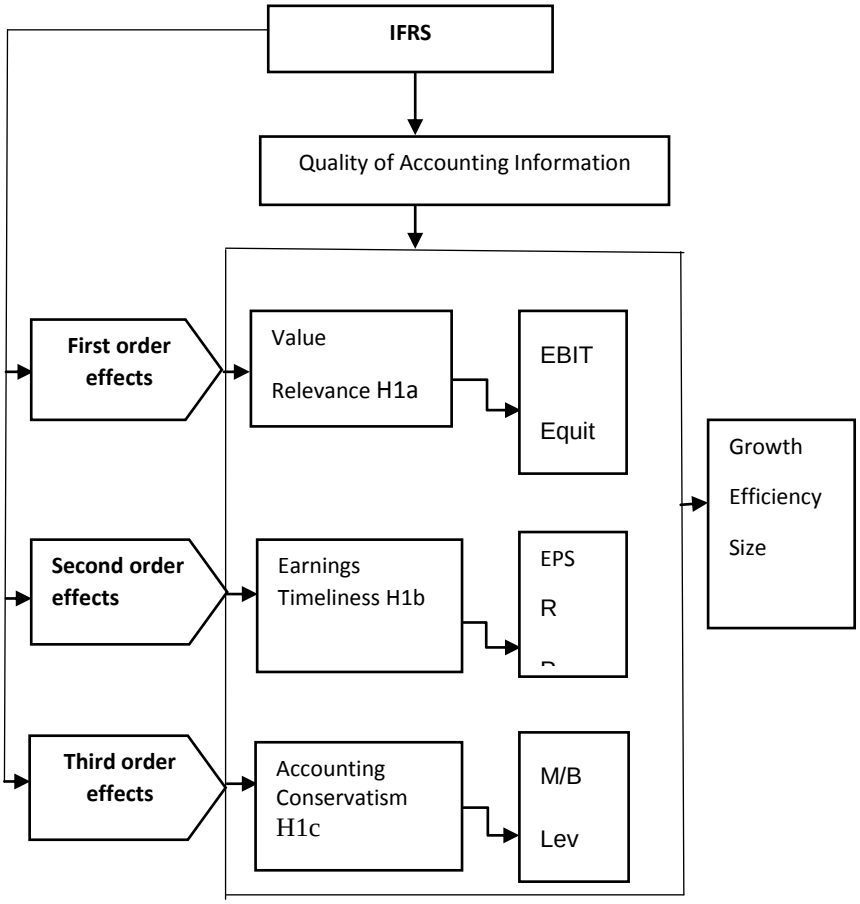


Figure 1: The conceptual framework of the study (**Source:** Self extracted)

Figure 1 illustrates the association between study variables. The transformation of accounting rules through stabilizing one reliable set of standards has an explicit impact on the characteristics of companies' financial statement information, i.e., the value relevance of financial statement. The increase in the relevancy of value generates first order effect and acquire a firm's value. If the accounting information is value relevant, the investors and corporate management decisions will be more accurate and relevant to the information disclosed by firms. The first order effect may, in turn, accelerate the second order earnings timeliness effect (i.e., stocks rating, changes in accounts earning/ earning per share and performance of prices) are the most pertinent impacts of corresponding reporting standards. Moreover, the second order effect generates the third order accounting conservatism effect. Theoretically, accounting conservatism practices depend upon information disclosure of financial statements, when the quality of accounting information will be accurate, the firms can avoid losses.

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Sample selection and methodology

Sample and data collection

To carry out this quantitative study, the financial industry of Pakistan has selected. The sample distribution comprised of 100 firms for 21 years as long as the pre-adoption/ transition period included in the study. It includes both non-listed and listed companies on Karachi stock exchange (KSE) by market capitalization. Quarterly panel data is employed from 1996-2016. Therefore, the measurement of the effect of IFRS adoption, focusing on one economy as a sample aspire divergences and discrepancies in the organizational conditions before and after the adoption of IFRS. The companies selected by using universal sampling technique and data availability constraints. Moreover, a database of the State bank of Pakistan (SBP), Pakistan stock exchange and annual reports of banks are used as a primary source of data collection.

Models formulation

Firstly, IFRS is intended as a dichotomous variable in the overall sample size to investigate the positive and consequential impact of international financial reporting standards on value relevancy of basic accounting determinants as exhibited in equation (1).

$$cap_{it} = \beta_0 + \beta_1 EBIT_{it} + \beta_2 Equity_{it} + \beta_3 Efficiency_{it} + \beta_4 Size_{it} + \beta_5 Risk_{it} + \beta_6 Growth_{it} + \beta_7 IFRS_{it} + e_{it} \quad (1)$$

Where Cap_{it} = market capitalization of the entity *i* in time t. $EBIT_{it}$ = earnings before interest and taxes of the entity *i* in time t. $Equity_{it}$ = equity of the entity *i* in time t. $Efficiency_{it}$ =aggregate sales divided by aggregate assets of the entity *i* in timet. $Size_{it}$ = Ln of the aggregate assets of entity *i* in time t. $Growth_{it}$ = annual change rate of the aggregate sales of the entity *i* in time t. $IFRS_{it}$ = dummy variable that takes a value of 1 if the financial statement of the respective entity is prepared in time t with the adopted IFRS standards and takes a value 0 if the entity financial statement not prepared under IFRS.Furthermore, the efficiency is measured by the annualized change in assets as indicated by(Lang et al., 2010, p.1).

Moreover, the Size of the company measured by the natural log of aggregate assets is considered as a control variable, congruent with (Khan & Watts, 2009, p.132), (Rodríguez García et al. 2017, p.p.155-168). To control the expected impacts of the future outcomes in the long term progression of the companies by growth variable represented as the logarithm of aggregate sales of the companies. To estimate the irregular timeliness of earnings, we followed the same research model used by (Rodríguez García et al. 2017, p.155) and (Basu 1997,p. 3), Junior et al. (2017, p.44). The Fundamental model to measure the impact of anticipated yield on profit is

$$X_{it} / P_{it-1} = \alpha + \beta R_{it} + e_{it} \quad (2)$$

Where X_{it} represents the earnings per share (EPS) for the *i*th company in financial year t, P_{it-1} is the price per share (PPS) at the start of the financial year, R_{it} is the stock market return for the *i*th company concentrated in its financial year t. Equation (ii) elaborates the stock returns influence on the responsiveness of profit. Moreover, to measure the existence of earnings timeliness in the adoption of international financial reporting standards, we assumed that whether bad news is very reactive comparatively good news, ultimately the slope of formulated equation (ii) changed as under;

$$\beta = \beta_1 + \beta_2 D_{it} + \beta_3 IFRS_{it} D_{it} \quad (3)$$

Where D_{it} is a categorical variable that represents the value of 1 if $_{R_{it}}$>0. Moreover, by interchanging equation (2) and (3) for the measurement of the responsiveness of profit to bad news and the unification of international financial reporting (IFRS) we formulated equation (iv) as;

$$X_{it} / P_{it-1} = \alpha + \beta_1 R_{it} + \beta_2 D_{it} R_{it} + \beta_3 IFRS_{it} D_{it} R_{it} + e_t \quad (4)$$

To estimate accounting conservatism, we extended the existing research model by the addition of new variables and changing the dependent variable as M/B_{it}. The extended form of the model is

$$X_{it} / P_{it-1} = \alpha + \beta_1 R_{it} + \beta_2 D_{it} R_{it} + \beta_3 IFRS_{it} D_{it} R_{it} + \beta_4 M/B_{it} + \beta_5 L + \beta_6 DR + e_{it} \quad (5)$$

To analyze the individual impact of IFRS on accounting conservatism the stylized form of model 4 to is;

$$M/B_{it} = \beta_0 + \beta_1 IFRS_{it} + \beta_2 L_{it} + \beta_3 DR_{it} + e_{it} \quad (6)$$

As (Watts 2003) the degree of conservatism changes along with changes in the firm's market-to-book ratio, size, and financial leverage.

Panel data and Quantile Regression

To measure the assumed hypotheses, we employed the quantile regression method. Comparatively, the panel data quantile regression is different from frequent time series and cross-section regression due to the twofold indication of its variables, that is,

$$y_t = \alpha + \grave{X}_{it} + u_{it} \quad (7)$$

Where *i* symbolizes companies and t time period.

Quantile regression method first suggested by (Koenker and Bassett 1978, p.p.33-50) is extensively practiced in place of linear regression models as a substitute for the modern mean regression models. The quantile regression method takes into account the entire distributional characteristics sufficiently and makesautoregressive variance forecast accurately(Kruger,2017,p.p.42-56). The quantile regression model exemplified; suppose if the linear identification for the dependent quantiles of y is;

$$Y_t = x_t \beta + e_t \quad (8)$$

So, y_t is the predicted variable, x_t is the predictor, β is the constant factor and e_t is the error term. Additionally, the quantile regression method measures a constant factor for various assumed quantile functions. Suppose that the assumed mean of Y is $(X) = X'\beta$ consequently the OLS method measures the mean as $\min_{\mu \in R} \Sigma_{t=1}^{n} (Y_t - \mu)^2$ that minimized,

$$\min_{\beta \in R} \Sigma_{t=1}^{n} (Y_t - X'\beta)^2 \quad (9)$$

Determining the linear identification of equation (vii) will exhibit the computation of the median, such as 50th percentile function. So, we will use the notation (T) to represent the other quantile variables. As a result, we represented the conditional quantile association,

$$Q_E(\tau / X) X'\beta(\tau) \quad (10)$$

Furthermore, to find out the approximation of the assumed quantile functional relation, we formulated the following equation;

$$\min_{\beta \in R} \Sigma_{t=1}^{n} \rho_\tau (Y_t - X'\beta)^2 \quad (11)$$

Through the minimization algorithm method, the equation (ix) is minimized as

$$\min_{\beta} [\tau \Sigma_{E_T} X'\beta \mid Y_t - X'\hat{\beta} \mid + (1-\tau) \Sigma_{Y_t \leq X'\beta} \mid Y_t - X'\hat{\beta} \mid] \quad (12)$$

Where $X'\hat{\beta}$ is an estimate of the τ-th assumed quantile of y. Through selecting τ most closely to 0(1), $X'\hat{\beta}$ represent the conduct of y at the left (right) tail of the assumed distribution. Moreover, this equation approximation and minimization problem can resolve through linear programming technique suggested by(Koenker & Dorey, 1987, p.383). The outcomes of the quantile regression method are comparable, but not enough. Hence, we employed PCA method. The main reason for using two different techniques is to simplify and reduce a large and probably complicated data to some consequential estimates. In addition, to analyzing the main characteristics and explore all exotic patterns in the data set. Moreover, in this way, we tried to achieve hypotheses of concern instead of testing.

Principal component analysis

The main aim of using PCA is to derive the uncorrelated index, where every individual component is a linear weighted combination of the first variable. The eigenvectors of the correlation matrix assign the weights for each principal component. As (Zhang et al., 2008, p.p.27-54) indicated that PCA curtails the dimensionality of the data comprising various reciprocal variables by restraining the change in the data. Thus, the number of predictors are $x1, x2, ..., xp$.

$$Z1t = Pc11x1t + Pc12x2t + Pc13x3t + Pc14x4t + ... + \Phi p1x pt \quad (13)$$

$$Z2t = Pc21x1t + Pc22x2t + Pc23x3t + ... + \Phi p2x pt \quad (14)$$

$$Z3t = Pc31x1t + Pc32x2t + Pc33x3t + ... + \Phi p3x pt \quad (15)$$

Where, $z1t, z2t, z3t$ are the principal components Φ_{p_1} Φ_{p_2} and Φ_{p_3} are storing vectors comprising loads ($\Phi 1, \Phi 2, \Phi 3, ...\Phi p$) of all principal components. Firstly, we constructed a single cumulative index by using

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all proxy variables for the assessment of aggregate change in QAI. Secondly, we constructed six weighted QAI indices for each sample bank, i.e.QAII, QAIC, QAIP, QAIMFB, QAIS, and QAI Invest to assess the bank-wise change in QAI. Model (16-17) is different from previously formulated models. It shows a new experiment while taking IFRS as the dependent variable. Hence, we used a cumulative index (QAI) to assess the overall change in the following equation;

$$IFRS_{it} = \beta_o + \beta_1 QAI_{it} + \varepsilon_{it} \quad (16)$$

To assess whether IFRS effects/ enhance the bank-wise quality of accounting information, we incorporated bank wise QAI indices in the following multivariate regression equation

$$IFRS_{it} = \beta_o + \beta_1 QAIi_{it} + \beta_2 QAIc_{it} + \beta_3 QAIinvt_{it} + \beta_4 QAIMFI_{it} + \beta_5 QAIP_{it} + \beta_6 QAIS_{it} + \varepsilon \quad (17)$$

The outcomes of Eq. (16) &Eq. (17) are shown in Table 10.

Empirical results and discussion

Sample descriptive statistics

Table 1 exhibits descriptive statistics of the selected variables for the measurement of the quality of accounting information. The skewness and kurtosis of panel data having higher values implied the state of infrequent observations and lack of symmetry. The results indicate that variables have no normality. So, there is no multicollinearity the data set.

Table 1. Descriptive statistics

Note:Cap:market capitalization of the firms, EBIT: earnings before interest and taxes,Efficiency (Eff):aggregate

Stat	Cap	EBIT	Eff	Equity	Growth	Risk	Size	R	EPS	M/B	L
Mean	70.6	61.61	2.35	9.89	37.04	7.59	5.66	0.78	4.64	0.47	78.5
Std.	188.6	220.5	6.24	18.4	107.3	12.7	7.93	0.07	1.86	0.11	134.9
Skew	3.75	4.02	4.08	2.23	3.72	2.35	1.53	1.09	1.12	1.17	1.48
Kurto.	16.2	17.81	18.21	6.67	15.79	7.46	3.79	3.11	3.31	3.72	5.33

Note:Cap:market capitalization of the firms, EBIT: earnings before interest and taxes,Efficiency (Eff):aggregate assets divided by aggregate sales, Equity: total equity of the firms, Growth: yearly change rate of the aggregate sales, Risk: yearly change rate of the aggregate liabilities, Size: Ln of the yearly aggregate assets, R: Stock return & EPS earning per share, M/B: market to book value ratio, L:financial leverage of firms.

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Table 2. Pearson correlation matrix for independent variables.

Variables	EBIT	Efficiency	Equity	Growth	IFRS	Risk	Size	DR	L	M/B	R
EBIT	-0.073										
Efficiency	-0.105	-0.034									
Equity	-0.017	0.023	-0.095								
Growth	0.077	-0.069	-0.052	0.765*							
IFRS	0.323*	0.235***	-0.092	0.379*	0.259**						
Risk	0.179	-0.126	-0.146	0.087	-0.018	0.478*					
Size	0.073*	-0.089	0.476*	0.182*	-0.079	0.341**	0.736*				
DR	0.074	-0.076	-0.082	0.109	-0.074	0.234***	0.631*	0.519*			
L	0.034	-0.017	0.079	-0.112	-0.129	0.312*	0.647*	0.572*	0.408*		
M/B	-0.161*	-0.109	0.405*	0.209*****	0.497*	-0.087	-0.148	0.047	-0.053	-0.064	
R	0.404	0.031	-0.029	-0.088	-0.321*	0.454*	0.776*	-0.669*	0.498*	0.141*	-0.263**
Xitn	-0.108	-0.157	-0.134	-0.035	-0.244***	-0.583*	-0.298*	-0.203	-0.131	-0.201 - 0.208*****	0.120

Note: * P-value=0.01, ** P-value=0.02, *** P-value=0.03, **** P-value=0.04, *****P-value=0.05, relatively, on the basis of two tailed test.

Table 2 represents the Pearson correlation matrix that depicts that the correlation coefficients are less than 0.5, except for two coalitions. Distinctively, the correlation between growth and Size are higher, and the VIF among the above variables is<10. The low correlation level among variables explains minimum chances of multicollinearity in the variables.

Quantile regression analysis

Table 3 represents the results of Model 1 formulated to measure the value relevance of basic accounting ratios. By percentiles and quantiles (25^{th}, 50^{th}, and 75th) of panel data quantile regression, the Model 1 is divided into three categories. The first category (q25th) depicts the outcomes of small corporate entities. The second category (q50th) shows the results of the medium, and the third portray large entities. Table 3 also interpret the underlying variables of model 1 for small firms, i.e., EBIT, efficiency, and size, are positive and significant. EBIT is more relevant for market capitalization as compared to size and efficiency. These outcomes are coherent with (Christensen et al. 2015, p.31) and (Junior et al., 2017,p.44) **indicated the significant and positive influence of IFRS adoption on value relevancy.** Ultimately the investor's implement long-term decisions and focus more on equity than earning profit and the firm's efficiency.

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Table 3. Traditional approach and quantile regression computation Model 1.

Variables Cap	q25th Coef.	Std. Err.	t	q50th Coef.	Std. Err.	t	q75th Coef.	Std. Err.	t
EBIT	0.008	0.002	(4.48)***	0.006	0.004	(1.28)*	0.003	0.008	(0.30)*
Efficiency	-5.534	2.236	(2.47)**	-3.825	1.306	(2.93)**	1.294	1.681	(0.77)*
Equity	0.221	0.246	(0.89)**	0.642	0.348	(1.84)*	1.486	0.437	(3.40)**
Growth	0.009	0.034	(0.29)*	-0.055	0.049	(1.13)*	-0.175	0.066	(2.64)***
Risk	-0.895	0.871	(1.03)*	0.435	0.818	(0.53)**	2.045	1.159	(1.76)**
IFRS	2.018	9.041	(0.220)***	9.668	3.212	(3.01)*	6.71	4.09	(5.19)*
Size	7.379	2.996	(2.46)*	5.084	1.748	(2.91)*	1.662	2.274	(0.73)*
Cons	-1.403	0.915	(1.53)**	-0.922	0.259	(-3.55)*	0.626	0.901	(0.70)*
Pseudo R^2	0.139			0.232			0.235		

Note:* P-value=0.01, ** P-value=0.02, *** P-value=0.03, **** P-value=0.05, q25th, q25th, q50th, q75th represent quantiles.

Whereas, in medium firms, the result shows that accounting variables equity and efficiency has value relevance with market capitalization. Furthermore, the 75^{th} quantile regression results for large firms show that the basic accounting variables efficiency, equity, and size are relevant to the market value of large firms. The results shown in Table 3 represent different values of "Efficiency, EBIT, Size, Growth, and Equity variables" in every quantile that small and medium companies have a moderate influence on market capitalization after the adoption of IFRS. Whereas, in large companies, the Equity and size variables are more value relevant and; investors prefer more earnings than total equity. By Model 1 outcomes, the formulated hypothesis "H1a" is accepted, which indicates that IFRS adoption is enhancing the value relevance of firms in the corporate sector of Pakistan. As (Rodríguez García et al. 2017,p.155) companies having higher earnings have a strong influence on market capitalization. The equity is increasing among the estimated quantiles, which indicates that the influence of equity to market capitalization is lesser than that of EBIT. These outcomes are coherent with (Clarkson et al. 2011,p.1), (Junior et al., 2017, p.44) and (Rodríguez García et al. 2017, p.155). The control variables of model 1 except Growth and Risk variables such as efficiency and size have a significant impact on market capitalization in 75^{th} and 25^{th}quantile. Whereas, the 50^{th} quantile indicates that companies with the highest market capitalization have a lower risk of size and higher efficiency as compared to small and medium firms. Comparatively, the Growth and Risk variables have no robust effects in the25^{th} and 75^{th} quantiles for the overall firm's size. These outcomes are consonant with (Rodríguez García et al. 2017, p.p.155-168).

Table 4 exhibit the outcomes of model 2 formulated to estimate the direct effects of IFRS adoption on the value relevance of accounting variables. Consequently, the adoption of IFRS has a substantial impact on the value relevance of large firms than small and medium firms which are beginners to adopt mandatory IFRS. The results of Model 2 are different and robust than Model 1.Comparatively, the adoption of IFRS enhances the value relevance of accounting ratios, which are closely related to the performance and financial position of corporate entities.

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Table 4. Simultaneous quantile regression computation Model 2.

Variables IFRS	q25th Coef.	Std. Err.	t	q50th Coef.	Std. Err.	t	q75th Coef.	Std. Err.	t
Cap	0.001	0.027	(5.40)*	0.001	0.001	(4.74)*	6.151	0.014	(0.23)*
EBIT	0.001	0.042	(6.14)*	0.001	0.007	(6.72)*	0.034	0.001	(1.18)*
Efficiency	0.088	0.057	(1.55)*	0.139	0.047	(2.96)*	0.029	0.148	(0.20)*
Equity	0.029	0.015	(1.93)****	0.040	0.010	(3.90)*	0.014	0.039	(1.35)*
Growth	-0.002	0.002	(1.10)*	0.004	0.002	(2.63)*	-0.002	0.005	(0.34)*
Risk	0.070	0.037	(1.92)****	0.099	0.030	(3.33)*	0.030	0.094	(2.32)*
Size	0.108	0.076	(1.42)*	-0.168	0.061	(2.74)*	-0.057	0.180	(0.32)*
cons	0.017	0.008	(-2.18)***	0.024	0.023	(1.02)*	0.888	0.379	(2.34)**
Pseudo R^2	0.556				0.508			0.810	

Note:*P-value=0.01, ** P-value=0.02, *** P-value=0.03, **** P-value=0.04, ***** P-value=0.05.

By focusing on the Pseudo R^2value, it can be concluded that the model (1 and 2) are significantly applicable and correspond corporate entities with a higher market capitalization (75^{th} quantile) more robust than it has firms with lower (25^{th} and 50^{th} quantile) market capitalization. The accounting and financial information are most pertinent for domestic investors in the firms having a higher market value (cap).

Table 5. Simultaneous quantile regression computation Model 3.

Variables X_{itn}	q25th Coef.	Std. Err.	t	q50th Coef.	Std. Err.	t	q75th Coef.	Std. Err.	t
R	0.517	0.146	(3.54)***	0.530	0.335	(1.58)*	0.213	0.543	(0.39
R(D)	-0.935	0.324	(9.21)*	0.611	0.051	(4.34)**	0.721	0.314	(1.66
(R)(D)(IFRS)	0.215	0.029	(7.34)*	0.273	0.086	(3.18)*	0.551	0.083	(6.62
cons	0.191	0.114	(1.68)*	0.291	0.250	(1.17)*	0.900	0.407	(2.21
Pseudo R^2	0.222			0.162			0.301		

Note: *P-value=0.01, ** P-value=0.02, *** P-value=0.03, **** P-value=0.04, *****P-value=0.05, R: the Stock return of the companies in time t, D:reciprocal term, which represents the value 1 if the R of bank *i* at time period t is negative during reporting time and 0 conversely.

Table 5 exhibit the outcomes of model 3 determined to estimate the earnings timeliness that β_2 is significant in medium (50^{th}) and large (75^{th}) entities not in small (25^{th}) firms, which indicates that the earnings timeliness per share is asymmetrical in the small firms. The medium and large firms are timely recognizing the losses, to ensure the timely earnings of accounting profit. The small firm's needs to hold down earnings for the sake of reducing losses to the lowest possible level. Moreover, the accounting earnings are very responsive to bad news as compared to good news in the 25^{th} quantile. The compulsory adoption of international reporting standards maximized the earnings timeliness in medium and large firms. These results are consistent with (Clarkson et al. 2011, p.1), (Junior et al.,2017, p.44). Therefore, $\beta_3$is positive and significant, which indicates the existence of earnings timeliness at the time of IFRS adoption. The stability determines that $\beta_1+\beta_2=0$, $\beta_2+\beta_3=0$ consequently, the formulated hypotheses "H1b" is rejected by results that earnings timeliness methods applied during the adoption of IFRS in all firms. The outcomes of model 3 are corresponding to (Christensen et al., 2015).

Table 6. Simultaneous quantile regression computation Model 4.

Variables	q25th			q50th			q75th		
M/B_{it}	Coef.	S.E	t	Coef.	S.E	t	Coef.	S. E	t
L	7.87	2.75	(0.90)*	3.73	1.19	(0.31)*	1.79	7.42	(2.41)*
IFRS	0.39	1.02	(1.30)*	-3.58	0.36	(2.20)*	-3.58	2.84	(4.30)*
DR	1.23	6.55	(18.71)*	2.61	1.17	(22.22)*	2.59	1.54	(16.84)*
cons	4.77	9.82	(-0.49)*	1.00	5.78	(1.70)*	1.00	1.47	(6.80)***
$PseudoR^2$	0.240			0.260			0.310		

Note: * P-value=0.01, *** P-value=0.03, IFRS: a categorical variable that represents value 1 if the sample corporate entities financial reports are prepared under the mandatory international financial reporting standards in the period t and 0 if not, DR: The Stock return of the companies in time t.

Table 6 exhibit the outcomes of model 4 determined to estimate the accounting conservatism practices. The results show that β_1 β_2 and β_3 are significant in small (25^{th}) medium (50^{th}) and large (75^{th}) entities; hence, the adoption of IFRS has enhanced accounting conservatism practices in all firms. Therefore, β_3 it is positive and significant, which indicates that accounting conservatism norms were existing at the time of IFRS adoption. The stability of the model 4 determines that $\beta_1+\beta_2=0$, $\beta_2+\beta_3=0$ consequently, the formulated hypotheses "H1c" is accepted by the results that accounting conservatism norms/ methods are existing before the adoption of IFRS in all firms. The outcomes of model 4 are corresponding with the research outcomes of (Christensen et al., 2015, p.31).

Next, to measure, the bank-wise impact of IFRS adoption on value relevance, the same model 1 is used to analyze each bank. Table 7 depicts the results of model 1, in which the effects of IFRS adoption across banks are estimated. The outcomes suggest that there is value relevance in the basic accounting variables although EBIT has a more positive impact on capitalization than does Equity, which is consistent to the outcomes presented in (Christensen et al., 2015, p.31) and (Rodríguez García et al. 2017, p.155). Therefore, EBIT and Equity enhanced their sensitivity to market capitalization when moving from 25^{th} to 75^{th} percentiles, such as when we consider all banks indicates that companies with greater capitalization have more value relevance than do companies with less capitalization. For these basic variables, we observe that value relevance is higher in Islamic, Public, Specialized, and Microfinance banks than in Commercial and Investment banks. Furthermore, while estimating the bank-wise effect of IFRS adoption on earnings timeliness, the same Model 4 is used to analyze each bank. Table 8 presents the outcomes of Model 4and indicates the existence of earnings timeliness in all banks that β_2 coefficients are positive and statistically cogent in 25^{th}, $50^{th,}$ and 75^{th} percentiles. Comparatively, by results and pseudo R^2values, the timeliness of earnings was disclosed more in large banks than small and medium. These results are consistent with (Clarkson et al., 2017p.1), (Christensen et al., 2015, p.31), (Junior at al., 2017, p.44), (Rodríguez García et al. 2017, p.155). These outcomes are persistent with the study hypothesis (H1c) and directed us to infer that **t**he mandatory IFRS adoption is positively enhancing earnings timeliness of firms in the financial sector of Pakistan.

Table 9 presents the bank-wise analysis of Model 4. The results exhibit the presence of accounting conservatism practices in medium (50^{th}) and large (75^{th}) than in small banks. The β_2 coefficients are positive and statistically consequent. So, the accounting conservatism practices are existing after the adoption of IFRS. These results are consistent with (Christensen et al., 2015, p.p.31-61).

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Table 10 shows the single and multivariate regression results of (Model.5&6) by using overall (QAI Index) and bank wise (QAI Index). The outcomes show that IFRS has significant effects on the quality of accounting information of all banks in Model.1. Moreover, the bank-wise effects of IFRS dramatically changed in (Model.2), that IFRS adoption has no consequent impact on the quality of accounting information of Public and Specialized banks. Moreover, the estimation of Model. 5 & Model .6 gives us comparable outcomes and enable us to easily predict the effects of mandatory adoption of IFRS on the quality of accounting information. Contrasting our research outcomes, we find that they are not inclined to the findings of previous literature and researchers, they indicated a decline in the accounting quality of IFRS adopting firm's contingent to non-adopters. Although they estimated a short time change after the implementation of IFRS, it is not clear whether the analyzed impacts are of temporary or permanent nature. Our results exhibit a permanent increase in the quality of accounting information over nine years after the adoption of IFRS in Pakistan. On the other side, the existing studies primarily driven by strong enforcement developed economies. It seems to be contradicting to what we find as we observe a stronger increase in developing country.

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Table 7. Simultaneous quantile regression for value relevance by the bank (Model.1)

Variables	Islamic		Commercial		Public		Specialized		Investment		MFB	
Cap	Coef.	t	Coef.	t	Coef.	t	Coef.	t	Coef.	t	Coef.	t
q25th Percentile												
EBIT	0.381	(2.31)***	-0.006	(0.18)*	0.001	(0.10)**	9.349	(2.49)**	0.022	(2.05)****	1.514	(5.27)*
Efficiency	0.049	(2.28)***	0.001	(0.14)*	0.08	(0.41)*	-0.003	(2.10)****	0.126	(-0.01)*	0.007	(2.57)**
Equity	0.001	(2.03)*****	0.026	(0.11)*	0.235	(0.61)****	-0.019	(0.03)*	0.088	(1.99) *****	0.567	(1.27)*
Growth	-0.075	(1.97)*****	-0.106	(0.26)*	0.117	(0.64)*****	0.008	(3.07)*	0.014	(0.12)*	-0.052	(11.85)*
IFRS	0.006	(2.04)*****	0.224	(0.77)**	1.562	(0.23)*	0	(0.02)*	0.01	(0.21)*	0.288	(3.55)*
Risk	-0.006	(1.93)*****	-0.118	(0.74)*	2.764	(2.37)**	0.006	(0.22)*	0.108	(0.33)*	7.653	(0.93)*
Size	0.006	(2.01)*****	0.151	(0.92)*	-0.303	(0.51)**	0.078	(4.90)*	0.051	(0.13)*	-5.876	(0.68)*
Cons	0.177	(2.99)*	0.57	(2.61)*	1.884	(1.21)***	-0.05	(0.08)*	-0.057	(1.98)*****	0.229	(2.62)*
Pseudo R^2	0.131		0.055		0.123		0.296		0.121		0.499	
q50th Percentile												
EBIT	0.445	(2.47)**	0.032	(1.43)*	0.008	(0.42)***	13.246	(6.85)*	0.13	(2.10)****	1.514	(5.27)**
Efficiency	0.053	(2.44)**	0.008	(0.73)**	0.014	(0.98)**	-0.004	(3.91)*	-0.172	(0.01)*	1.18	(2.57)**
Equity	0.656	(3.79)*	-0.055	(0.42)*	0.724	(1.14)*****	-0.579	(1.66)*	0.082	(1.74)*	0.567	(1.27)*
Growth	0.047	(1.24)	-0.54	(1.45)	-0.23	(0.65)*	0.001	(0.96)	0.036	(0.14)	-0.052	(11.85)*
IFRS	0.385	(1.03)*	0.279	(1.15)*	2.478	(0.65)*****	0.012	(1.96)****	0.008	(0.17)*	0.288	(3.55)**
Risk	-0.006	(0.98)*	0.191	(0.95)	4.207	(0.981)**	-0.026	(2.05)****	0.104	(0.42)**	7.653	(0.93)
Size	0.003	(0.91)*	0.734	(2.46)**	-0.466	(0.95)*	0.053	(1.78)	0.123	(0.36)*	-5.876	(0.68)*
Cons	0.204	(1.84)*****	1.229	(4.51)*	1.027	(0.17)*	1.153	(10.55)*	-0.013	(0.03)*	0.229	(2.62)*
Pseudo R^2	0.184		0.095		0.192		0.419		0.267		0.687	
q75th Percentile												
EBIT	0.647	(4.10)*	0.038	(0.90)**	0.006	(-0.01)*	11.152	(2.36)**	7.06	(0.41)*	-0.329	(1.05)*
Efficiency	0.093	(4.81)*	0.002	(0.20)	3.462	(1.53)*	-0.005	(8.09)*	0.146	(0.33)*	0.002	(2.07)**
Equity	0.001	(1.94)*****	0.494	(2.82)*	1.472	(2.07)****	0.005	(-0.02)*	5.17	(0.24)*	1.087	(4.28)**
Growth	0.169	(5.3)*	1.311	(0.68)	0.178	(0.45)**	0.001	(1.64)*	0.014	(0.31)	-0.053	(9.82)**
IFRS	2.18	(3.91)*	5.554	(2.56)**	0.482	(0.01)*	0.012	(4.8)*	0.037	(0.50)**	0.315	(25.27)*
Risk	-0.032	(3.43)*	0.875	(0.96)*	20.477	(1.54)*	-0.006	(0.67)*	0.21	(1.26)*	10.76	(3.62)**
Size	0.011	(2.92)*****	1.065	(1.13)*	32.194	(1.42)***	0.008	(0.38)*	0.123	(2.60)**	10.51	(3.18)**
Cons	0.736	(1.67)*	2.358	(3.77)*	19.15	(0.61)***	1.01	(8.82)**	1.11	(19.2)*	0.317	(33.55)*
Pseudo R^2	0.346		0.472		0.349		0.352		0.289		0.767	

Note: * P-value=0.01, ** P-value=0.02, *** P-value=0.03, **** P-value=0.04, *****P-value=0.05

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Table 8 Simultaneous quantile regression for earnings timeliness by bank (Model.3).

		Islamic		Commercial		Public		Investment		MFB		Specialized	
X_{itn}	Variables	co.ef	t	co.ef	t	co.ef	t	co.ef	t	co.ef	t	co.ef	t
25th	R	30.09	(1.95)*****	5.628	(0.38)*	11.87	(1.28)**	117.4	(3.35)*	3.861	(6.35)*	5.747	(0.08)*
	R*D*IFRS	-0.584	(0.64)*	3.713	(0.79)*	14.17	(4.35)*	19.11	(3.28)*	0.081	(0.09)**	2.972	(5.14)**
	cons	20.86	(1.86)*****	7.014	(0.65)*	-29.91	(3.27)*	53.26	(2.89)*	4.352	(11.26)*	5.935	(0.17)*
	Pseudo R^2	0.111		0.016		0.099		0.308		0.173		0.217	
50th	R	0.117	(1.23)*	4.289	(1.99)*****	0.034	(0.98)*	77.85	(3.55)*	0.991	(0.62)**	0.001	(0.22)*
	R*D*IFRS	1.000	(59.82)*	1.000	(3.59)*	7.000	(2.99)*	14.41	(2.81)*	0.170	(0.25)*	1.079	(2.55)**
	cons	1.000	(2.43)**	4.412	(2.51)**	9.00	(1.95)*****	35.82	(3.50)*	1.094	(1.01)*	1.079	(0.29)*
	Pseudo R^2	0.291		0.122		0.056		0.247		0.013		0.168	
75th	R	7.620	(1.21)*	2.820	(1.31)*	2.660	(1.04)*	-64.60	(2.08)****	0.123	(0.32)*	0.836	(0.15)*
	R*D*IFRS	1.129	(2.47)**	1.000	(3.59)*	1.942	(1.17)*	12.44	(1.90)*****	0.131	(0.21)*	0.993	(10.77)**
	cons	1.000	(0.14)*	1.000	(2.64)*	4.45	(1.79)*	30.48	(2.08)****	0.125	(0.29)*	1.407	(0.52)*
	Pseudo R^2	0.129		0.110		0.420		0.832		0.132		0.191	

Note: * P-value=0.01, ** P-value=0.02, *** P-value=0.03, **** P-value=0.04, *****P-value=0.05, R: Stock return ,R*D*IFRS: reciprocal variable, which takes a value of R if the stock return of firm *i* over year t is negative in the time period of IFRS and 0 if not, that is the returns snare only bad news at the time of IFRS adoption, Cons: constant of the quantile regression model, where the explanatory variable is X_{itn}.

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Table 9 Simultaneous quantile regression for accounting conservatism by bank (Model.4).

		Islamic		Commercial		Public		Invest.		MFB		Specialized	
M/B_{it}	Variables	co.ef	t	co.ef	t	co.ef	t	co.ef	t	co.ef	t	co.ef	t
25th	L	2.178	(20.07)*	0.082	(0.96)*	0.011	(0.91)*	0.032	(1.19)**	0.043	(0.59)	1.394	(2.26)*
	IFRS	0.018	(0.53)*	0.095	(2.37)**	0.064	(1.14)*	2.130	(3.21)*	0.063	(0.64)*	0.032	(0.28)*
	DR	0.086	(3.67)*	0.015	(2.16)****	0.041	(3.78)*	0.035	(1.12)	0.098	(1.43)*	0.012	(1.83)***
	cons	0.926	(43.48)*	0.074	(1.44)*	0.048	(4.01)*	0.052	(0.63)*	5.420	(1.45)**	0.705	(2.51)**
	Pseudo R^2	0.369		0.274		0.129		0.002		0.003		0.151	
50th	L	1.777	(14.95)*	0.030	(0.92)*	0.040	(0.06)*	0.059	(0.16)*	0.013	(3.14)*	0.711	(1.21)*
	IFRS	0.033	(1.940)*****	9.700	(2.91)*	0.041	(0.49)*	0.004	(2.08)****	0.059	(1.29)**	0.083	(1.94)*****
	DR	0.066	(4.730)*	2.940	(3.01)	0.012	(0.38)*	0.118	(3.84)*	0.023	(4.21)*	0.072	(1.99)*****
	cons	1.048	(13.90)*	-0.011	(0.04)*	0.866	(2.14)****	0.942	(2.53)**	0.987	(5.06)*	1.000	(70.41)*
	Pseudo R^2	0.362		0.307		0.117		0.178		0.083		0.412	
75th	L	0.012	(0.15)*	0.012	(0.06)*	0.000	(0.45)*	1.930	(0.51)*	0.012	(0.41)*	-0.641	(1.28)*
	IFRS	0.017	(0.23)*	0.032	(0.11)*	0.000	(1.32)*	2.250	(0.31)*	0.059	(0.50)*	-0.084	(1.19)*
	DR	0.001	(0.32)*	0.019	(0.23)*	0.000	(0.93)*	-0.037	(7.44)*	0.023	(2.18)***	-0.073	(1.18)*
	cons	1.000	(5.95)*	1.201	(33.04)*	1.000	(3.44)*	1.220	(28.04)*	1.000	(1.50)*	1.010	(18.27)*
	Pseudo R^2	0.170		0.061		0.167		0.057		0.074		0.265	

Note: * P-value=0.01 ; ** P-value=0.02; *** P-value=0.03; **** P-value=0.04; *****P-value=0.05; DR: debt ratio; L: Financial leverage; M/B: market to book value.

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Table 10 Simple linear regression results

Mode.5Simple OLS regression results				Model.6Multivariate Regression results Bank-Wise			
IFRS	Coef.	S.E.	t	IFRS	Coef.	S.E.	t
β_O	0.592	0.045	(13.14)*	β_O	0.592	0.031	(19.34)*
QAI	0.158	0.032	(4.931)*	QAII	0.143	0.038	(3.72)*
				QAIC	0.246	0.038	(6.45)*
				QAI Invest.	0.152	0.038	(3.97)*
				QAIMFB	-0.081	0.032	(-2.54) **
				QAIP	0.026	0.033	$(-0.79)^{n.s.}$
				QAIS	0.021	0.037	$(-0.56)^{n.s.}$
R^2	0.23				0.67		
Adj. R^2	0.22				0.64		
F	(24.31)*				(25.52)*		
DW	0.039				0.187		
Wald-Test	0.751				1.098		

Note:n.s.=not significant; *P-value=0.01; **P-value=0.02; QAI=quality of accounting information index; QAII=quality of accounting information index Islamic bank; quality of accounting information index Commercial banks; quality of accounting information index Investment banks; quality of accounting information index Microfinance Banks; quality of accounting information index Public banks; quality of accounting information index Specialized banks; DW= Durbin-Watson statistics

Similarly, recent studies estimated only two components of accounting information by reporting decrease and focused on all developed markets. So, our results assessed an increase in quality of accounting information in all firms (small (25^{th}), medium (50^{th}), and large (75^{th}) by focusing on all components of QAI, the difference exists here due to size and accounting conservatism practices. Thus, the differences may exist between financial reporting disclosure of all economies due to cultural, regulatory, economic, and company incentives. Whereas, our research comprised a sample of voluntary, non-voluntary, and mandatory adopters. Thus, the differences in sample selection, time period, and target economy might drive the differences in the findings. Some researchers reported the effects of IFRS adoption by regulatory quality index (RQI) suggested by Kaufmann and Kraay, (2009, p.p.2-103) to measure governance and policy effectiveness of any country**.** The RQI represents the recognition of government to articulate stable policies and laws that enable the private segments of the economy to develop. If we focus on the RQI, by reflecting gaps, in the financial and regulatory sphere of IFRS adoption in Pakistan. The index value ranges between -2.5(weak) to 2.5(strong), as shown in (Table 12in Appendix. A) which is less than other developed countries but at an increasing rate. The weak regulatory quality index (RQI) is improving at a slow pace in the implementation of financial reporting policies on one side and on the other side it also highlights the chances of improvement in internal governance and quality reporting disclosure of accounting information of Public and Specialized corporate firms. Hence, there is a need to develop separate reporting policies for Specialized and Public banks according to their modes of business.

Conclusion and policy implications

Our empirical results, especially "H1a," indicate that the implementation of "IFRS enhanced the value relevancy of QAI in the financial sector, have a positive relationship with the equity market worth. "H1b" shows that the medium and large firms are timely recognizing the losses, to ensure the timely earnings of accounting profit than small firms. "H1c" shows that the small, medium and large firms are following accounting conservatism practices to avoid losses. Also, the overall assessment of the effect of IFRS on QAI indicates that IFRS has

enhanced the quality of accounting information disclosure in all firms significantly. Finally, the bank-wise assessment of change in QAI indicates that mandatory IFRS adoption has enhanced the quality of accounting information in all banks except "Public and specialized banks." So there is an instant need to change the reporting policies and managerial incentives of Public and Specialized banks as per their accounting methods and mode of business. IFRS has significant effects on the quality of accounting information of all banks; the RQI shows the recognition of the government to articulate stable policies and laws that enable the private segments of the economy to develop. The accounting conservatism practices are existing after the adoption of IFRS. Additionally, the effects of IFRS adoption across banks are estimated, and the small companies are inefficient to determine losses before dispersion over every reporting year while the medium and large firms are timely recognizing the losses, to ensure the timely earnings of accounting profit.

Our study helps to understand the monetary worth of mandatory IFRS adoption for the quality of accounting information and reveal the differences among market attributes of QAI of firms. Also, the study assessed the effects of two different approaches individually and collectively, such as traditional and mathematical index approach. We extended the new model for assessment of accounting conservatism of firms. Moreover, the study reduces the ambiguities concerning inefficiency of IFRS by presenting predictable outcomes that adoption of IFRS is delivering valuable changes in the QAI of firms and beneficial for investors decision making. The policy we put forward as the international accounting standard board (IASB), security and exchange commission of Pakistan (SECP), the central bank (SBP) and policymakers can be more beneficial to focus on the domestic reporting inconsistencies and financial position of Public and Specialized banks to smoothly ensure the full implementation of IFRS. Therefore, for non-IFRS adopter firms, the policy stance to enhance governance and accounting disclosure capacity of these firms will appropriately strengthen. This study enables the policymakers to ensure the effectiveness and efficiency of business laws and incentives. The study will also help to develop the information asymmetry and to know the firm's behaviour. The study has three limitations firstly focused on the banking sector. Secondly, the study is not limited to listed firms; the non-listed corporate entities are also part of sampling. Thirdly, the study mainly assessed firms reporting under IFRS. The study can be extended to explore in detail whether the phenomena of information disclosure is incentive biased in both developed and developing economies.

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Appendix. A

Table 12. Regulatory quality index of Pakistan (2016)

Pakistan	The rule of law	Regulatory quality	G.E	V&A
1996	-0.63	-0.51	-0.63	-0.59
2016	-0.83	-0.64	-0.64	-0.68

Source: World Bank WGI 2016 (http://databank.worldbank.org)

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Does IFRS Adoption Enhance Earnings Timeliness of Accounting Information: Evidence from Pakistan

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Abstract

This study examine the impact of mandatory IFRS adoption on earnings timeliness of accounting information in Pakistan, and its major reporting innovations. We build a unique approach by combining theoretical and quantitative aspects. Our findings portray a permanent IFRS change in disclosure of earnings timeliness information in the corporate sector. We also find cumulative effects by incorporating a single weighted index that IFRS escalated timely profit and loss realization of banks and enhanced disclosure of good/bad news. Similarly, under bank-wise assessment of indices, we observe that IFRS has no consistency with earnings timeliness of commercial and specialized banks. Relatively, by analysing response of IFRS policy shocks we find that earnings timeliness and stock returns are responding positively to reporting innovations. Altogether, our outcomes contribute to figure out the value addition of IFRS in the information content of earnings timeliness and justify consistency of IFRS for information exposure based on empirical evidence.

Keywords: IFRS; Accounting disclosure; Earnings timeliness information, Banking sector, SVAR

JEL Classification*:* M4; M40; M41; M48

Introduction

This research study is motivated by the implementation of international financial reporting standards (IFRS) and transformation in the earnings timeliness of accounting disclosure. IFRS helps to disclose divergences in timeliness of managerial and reporting exposure of firms, due to enforcement of similar standards around the world. Before initiation, IFRS contemplated as the extensively exercised and substantially applicable standards across the world, in case acceptance of IFRS is suitable for the under-developed countries is still an issue. As (Kieruj, 2013, p.p.1-39) argued that in place of IFRS adoption there are several issues influencing the transparency of financial reporting and earnings timeliness such as managerial incentives, executive's biasedness, window dressing techniques (adopted by firms to display accounting numbers), lack of timely recognition of profit and anticipated losses, absence of earnings transparency (delay in disclosure of good and bad news) and also delay of financial reports. So the first time and mandatory adopters still have some issues related to IFRS inconsistency with the local reporting standards. Similarly (Ugrin at al., 2017, p.140) the increase in earnings timeliness under IFRS at the firm level is also associated with other factors in different economies, i.e. economic freedom, resistance to uncertainty, legal power and self-reliance.

Specifically, IFRS has several effects on firms profit, and loss realization capacity as (Pope and Walker, 1999, p.53) the timeliness is not anticipated to be similar beyond companies; it changes due to investment and financial growth opportunities. Earnings timeliness is noticed to fluctuate among legal, organizational and financial reporting system. As (Ding and Stolowy 2006, p.92) bad news is influenced more relative to good news and have deferred effect on earnings timeliness, (Ball et al. 2000,p.p.1-51)earnings timeliness pertain the range that current earnings mediate value relevancy of information, (Cameranm et al. 2014,p.278) IFRS enforcement deduce the reporting conditions of private firms, (Hossain et al. 2015,p.2319) adoption of IFRS enhanced

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comparability and consistency of companies, (Gao and Sidhu 2016,p.1) quantitative effects of IFRS are ddifferent at the entity and economy level.

Like other South Asian countries Pakistan also has IFRS adoption challenges such as the financial setup of Pakistan is entirely a puzzle. The motivation for selecting the economy of Pakistan from south Asia is the lack of quantitative research on IFRS adoption and its monetary worth. There are differentiated reporting requirements. Likewise, limited interference of government in reporting laws, corporate and tax reporting, independent corporate governance, confined participation of stakeholders in the decision making of governing body. Inconsistently, the governance system of Pakistan portray more characteristics of a code law country as (Baig 1997,p.p.1-13) Pakistan has week equity market, the single ownership of family-owned firms, firms on corporate debt dependency and worse quality of accounting information exposure. Similarly (Ball & Shivakumar,2005,p. 83; Burgstahler et al. 2006, p.983; Daske et al. 2008, p.1085; Li, 2010,p.607) the financial value of IFRS depends on the firms stimulus to quality accounting exposure. Coherently (Zehri and Chouaibi 2013, p.56) financial reporting mechanism actively controlled by national laws, (Draz 2014, p. 70) IFRS have a closer association with financial distress in the corporate industry of Pakistan.

This study has an analytical rationalization to show how compulsory adoption of IFRS influence firms with the differentiated accounting system. The primary objective of the study is to investigate whether mandatory adoption of IFRS improved the quality of earnings timeliness of accounting disclosure of firms in the banking industry of Pakistan. Our study examine followig research questions (i) Do adoption of IFRS improve timeliness of good/bad news disclosure (ii) How earnings timeliness is responding to IFRS transformation shocks in both short and long-run? (iii) How firms disclose financial information to stakeholders after acceptance of IFRS? (iv)Why the firms delay disclosure of bad news? (v) How the exposure of anticipated profit and losses affect firms after IFRS?

Prior literature addressed the impact of IFRS adoption on some specific earnings ratios for a particular group of firms in developed economies by using conventional approaches. And also studies concentrated more on the reporting timeliness instead of earnings timeliness of accounting disclosure. They ignored the primary component of quality of accounting information, market attributes of firms, sectoral impacts and important accounting ratios which can be used as a proxy to measure changes in the earnings timeliness of firms which can better represent earnings timeliness information after IFRS. To investigate the problems above, this study focuses on the quantitative conditions by applying mixed approaches to the data set. Primarily, we assessed fundamental accounting variables by quantile regression method to estimate the value addition in earnings timeliness of accounting disclosure after the adoption of IFRS for each variable, and then we employed a mathematical method by composing single weighted indices to assess the overall change in earnings timeliness of accounting disclosure (ET). We also constructed a weighted ET index to estimate bank wise earnings timeliness change.

Additionally, we used the SVAR method to measure impulse responses of earnings timeliness in response to the adoption of IFRS. The impulse response function measures the feedback of any dynamic system in return for external changes (here IFRS is considered as external variable). Notably, our research study examines the aggregate change in the earnings timeliness of accounting disclosure, by combining all quantitative components creatively, and makes an innovative contribution to the existing literature. Our research outcomes get over the ambiguity of preliminary literature regarding poor implementation and ineffective enforcement of IFRS along with a reduction in earnings timeliness of accounting disclosure of firms in South Asian economies. Our contribution also includes a comprehensive policy framework.

The remaining paper divided into 4 sections. Section 2 explains the conceptual framework; section 3 represents the sampling and empirical models. Furthermore, section 4 exhibits the empirical analysis and discussion. Finally, section5constitutes the conclusion and policy implications of the research.

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Conceptual Framework and Hypothesis Development

The existing accounting theories state that there is a relationship between the timeliness of financial reporting and the worth of accounting information disclosed. Furthermore, timeliness is the quantitative component of financial reporting transparency. Financial Accounting Standards Board (FASB, 1980) highlighted the importance of financial reporting and expressed that 'annual reports must disclose financial information on time to respective investors and all other stakeholders who utilize financial information to make timely investment decisions'. As (Houqe and Monem 2016, p.363) the companies in higher privacy used to report the lowest quality of earnings and IFRS limits the influence of secrecy on quality of income earnings.

Few recent studies explored the monetary consistency of reporting standards as (Hyunmi Ji 2017,p.90) the adoption of IFRS effectively boost the book value and earnings of the companies,(Shawn 2017,p.339) IFRS enhances the quality and worth of accounting information.Considering all these transformations of IFRS, we hypothesise our main hypothesis as:
HI: Does IFRS enhances the likelihood of earnings timeliness of accounting disclosure of corporate firms.

Not all firms are expected to be timely in the realization of profit and losses. The adoption of IFRS is favourable for firms having strong shareholders coordination, large size, and higher market capitalisation. Some researchers like (Rodríguez García et al. 2017, p.155) reveals that IFRS improved the level of earnings timeliness in large companies, (Black and Nakao 2017,p.113) the specific group of firms presenting relative conservatism and reduction in earnings smoothing. Few research studies argue that IFRS decreases earnings timeliness as (Coelho et al. 2017, p.65) reported no consequent difference between the asymmetric timeliness of loss/ gains recognition of government-owned and private companies. So some literature justifications support IFRS value addition in earnings timeliness as(Wang, 2011,p.55)companies with higher timeliness inclined to have lower information asymmetry between management and investors,(Musa, 2015,p.275)find positive association between low-earnings control and timeliness of financial statements,(Dobre et al. 2015,p.732) IFRS adoption enhanced the timeliness of loss recognition for listed firms,(Oshodin and Ikhatua 2018,p.p.92-106) the timeliness of annual reports enhanced partly after adoption of IFRS.

The preliminary literature shows different interpretations about the association of earnings timeliness of financial reporting and the direction of the disclosed information. Few researchers argued that good news is disclosed earlier than bad news although some researchers indicated that bad news is announced preceding good news. Therefore, the literature is evident to propose that the disclosure of bad news takes time relatively good news Chai & Tung, (2002,p.21); Giner & Rees (2001,p.1285) argued that firms in developed economies inclined to announce bad news faster than good news, apparently due to conservatism,(Basu 1997,p.3) and (Lang et al. 2006,p.255)elaborated alternative relationship of earnings recognition on a proxy variable for bad news, (Lang et al. 2003,p.363)timely recognition of losses bring in maximum coefficient values on bad news earnings in a dependence of earnings timeliness on profit, Gigler & Hemmer (2001,p.471) companies with higher accounting conservatism mechanism are timely disclosing accounting information relatively firms with low conservatism practices.Thus we hypothesise the second hypothesis:
H2: IFRS increases the timeliness likelihood of bad news disclosure rather than good news.

The timeliness of loss recognition influence rationality of economic decisions and generate economic worth (Srivastava et al. 2015,p.147). Similarly (Santos & Cavalcante, 2014,p.228)indicated that IFRS enhanced the value relevancy and accounting earnings of public listed firms. As Tanko (2012,p.133) found that after IFRS adoption firms are identifying losses regularly and showing increase in the earnings per share and other performance ratios,(Gormley, Kim, and Martin 2010, p.159) the rise in timeliness of earnings has crucial importance among companies relying on external debt,(Adut et al. 2013,p.126) the delay of earnings recognition is decreasing with the pace of time,This discussion leads us to our third hypothesis;
H3a: Whether IFRS shocks are responding positively to earnings timeliness information in short-run.
H3b: Whether IFRS shocks are responding positively to earnings timeliness information in long-run.
(Brown, 2011, p.403) the change in IFRS has significant influence on equity valuation and equity markets, (Vergauwe & Gaeremynck 2018,p.p.1-27) argue that fair value exposure decreases information irregularities.

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Likewise (De Meyere et al. 2018,p.759) earnings quality have significant relationship with the possibility of acquiring long-run debt.

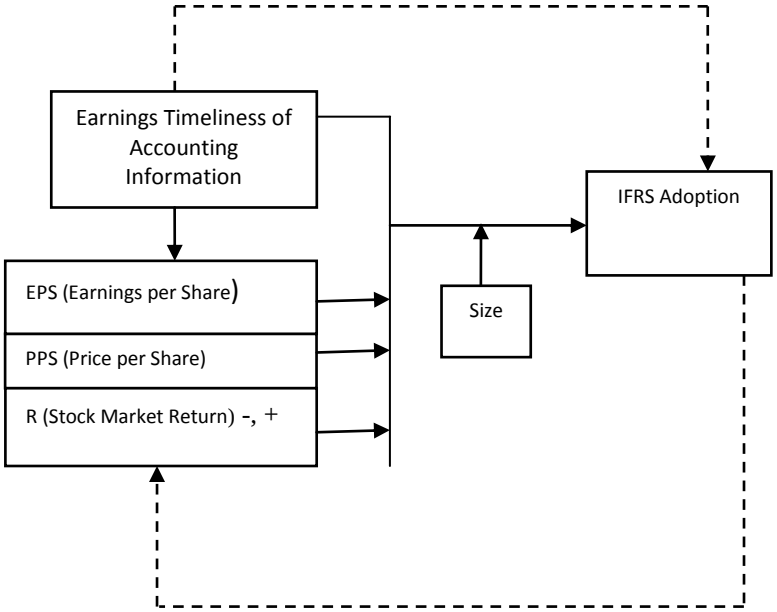


Figure 1 shows the roadmap of study and the relationship between variables. The shift of financial reporting laws by introducing uniform standards has a distinct effect on the attributes of the firm's financial reporting disclosure. The adoption of IFRS influence exposure of accounting information to enhance the information efficiency of the investor's decision making. The information efficiency associated with the timely announcement of accounting information and timeliness of earnings (recognition of profit along with anticipated losses). Hypothetically when the firms timely realise gains and losses, consequently the investors will be more confident to make investment decisions by utilising value relevant financial information. Therefore, figure 1 also interpret the assumption that how earnings timeliness responds to the reporting policy shocks after the adoption of mandatory IFRS.

Sample selection and research methodology

Sampling and data collection

To accomplish the study objectives we selected financial industry of Pakistan. Our sample size consists of 48 banks for 23 years since the transition period included in the study. We classified both non-registered and registered firms on Pakistan Stock Exchange (PSE) differentiated by market capitalisation. Quarterly panel data is used from 1996-2018. The companies picked out by using universal sampling method and data accessibility restrictions. All corporate entities are currently functioning in the banking sector comprising private banks, Islamic, microfinance, specialised, investment and insurance banks. Furthermore, a financial database of the State bank of Pakistan (SBP) and Karachi Stock Exchange (KSE) and financial statements of firm's are employed as a primary mean of data aggregation.

Research Design

To measure the asymmetric earnings timeliness concerning good and bad news, we adopted the similar research model employed by (Basu 1997,p.p.3-37), Srivastava et al. (2015,p.44) and (Rodríguez García et al. 2017,p.p.155-168)**.** The formulated model to estimate the effect of predicted gains is following;

$$EPS_{it} / PPS_{it-1} = \alpha + \beta R_{it} + e_{it} \quad (1)$$

Where EPS_{it} represents the earnings per share (EPS) for the *i*th company in financial year t, PPS_{it-1} is the price per share (PPS) at the beginning of the year, R_{it} is the stock market return for the *i*th company concentrated in its financial year t.

Equation (2) interpret the impact of stock returns on the reactiveness of profit. Furthermore, to calculate the presence of timely realization of gains in the acceptance of IFRS, we presumed that either bad news is more sensitive relatively good news. Consequently, the inclination of the derived equation (2) is altered as;

$$\beta=\beta_1+\beta_2 \text{Dummy}_{it}+\beta_3 \text{IFRS}_{it} \text{Dummy}_{it} \quad (2)$$

Where D_{it} is a categorical variable that represents the value of 1 if $R_{it>0}$. Therefore, by reciprocation of equation (2) and (3) for the estimation of the reactiveness of profit to bad news and the conjugation of IFRS we derived equation (4) as follows;

$$EPS_{it} / PPS_{it-1} = \alpha + \beta_1 R_{it} + \beta_2 Dummy_{it} R_{it} + \beta_3 IFRS_{it} Dummy_{it} R_{it} + e_t \quad (3)$$

The derivation of the quantile regression (QRM) method is in Appendix A. The results of the QRM are proportionate but not sufficient. Thus, we used PCA approach. The primary consideration of applying three different techniques is to come up with integrated and unbiased data interpretations.

Weighted index construction

As (Jankov 2018,p.p.1-41) the principal component analysis (PCA) is extensively employed a method for decreasing dimensionality in higher-quality data. The main purpose of applying PCA is to construct unrelated indices, in which every single factor is a linear weighted combination of the initial variable. The eigenvectors of the correlation matrix allocate the weights for each PC. Hence, the number of the forecaster is

$$x1, x2, ..., xp.$$

$$Z1t = Pc11x1t + Pc12x2t + Pc13x3t + ... + \Phi p1x pt \quad (4)$$

Where, $z1t, z2t, z3t$ are the principal components Φp_1 and Φp_2 are storing vectors comprising loads ($\Phi 1, \Phi 2, \Phi 3, ... \Phi p$) of all PCs. Initially, we calculated an individual aggregate index by a combination of all indicator variables for the measurement of cumulative change in earnings timeliness (ET). Secondly, we measured the similar six weighted ET index for all banks; i .e.ETI, ETC, ETP, ETMFB, ETS, and ETInvest to assess the bank-wise value addition of IFRS in earnings timeliness. Therefore, we employed aggregate earnings timeliness indices (ET) to estimate the changes expressed as under;

$$IFRS_{it} = \beta_o + \beta_1 ET_{it} + \varepsilon_{it} \quad (5)$$

To evaluate the bank-wise worth of international financial reporting standards, we expressed Eq. (6) as under;

$$IFRS_{it} = \beta_o + \beta_1 ETI_{it} + \beta_2 ETc_{it} + \beta_3 ETinvt_{it} + \beta_4 ETMFI_{it} + \beta_5 ETP_{it} + \beta_6 ETS_{it} + \varepsilon_{it} \quad (6)$$

The mathematical derivation of the quantile regression method is shown in Appendix A.

SVAR and Impulse Response Analysis

To assess how earnings timeliness positively / negatively responds to the shift in the accounting standards in the long and short-run, we employed SVAR (structural vector autoregressive) model. Firstly, we met the stationarity conditions of SVAR model by applying Johansen cointegration test and unit root test; we treated serial correlation from the data set by adding a sufficient number of lags to meet the errors I(0) condition of stationarity as indicated by (Blanchard and Quah, 1989, p.p.655-669). All variables have 1(0) differences. We started with a simple VAR(vector autoregression model), then assessed the response of variables to IFRS shocks through imposing anticipated long run and short run restrictions such as (A*e=B*u, e=S*u, Psi*e=F*u). We derived the following equation as;

$$A y_t = A_1^* y_{t-1} + ... + A_p^* y_{t-p} + C^* x_t + Bu_t \quad (7)$$

$$y_t = A^{-1} A_1^* y_{t-1} + ... + A_p^* y_{t-p} + A^{-1} C^* x_t + Bu_t \quad (8)$$

$$= A_1 y_{t-1} + ... + A_p y_{t-p} + C x_t + \in_t$$

So the reduced form lag matrices $A_i = A^{-1} A_i^*$ and $C = A^{-1} C^*$, and the reduced form error structure is given by

$$\in_t = A^{-1} Bu_t = Su_t$$

$$E(\in_t \in_t') = \sum_{\in} = A^{-1} BB' A^{-1'} = SS' \quad (9)$$

Where $S = A^{-1} B$

Therefore, the SVAR measurement employ estimates $\hat{\sum}_{\varepsilon}$ attained from standard vector autoregressive short-term association and constraints in Eq. (9) and the long-term restrictions on the aggregate impulse responses mentioned in Eq.(10 & 11).To evaluate the short-run response of earnings timeliness of accounting information to the mandatory adoption of IFRS, we formulated the following equation by employing short-run restrictions. Moreover, the assumed restrictions on component (a) and (b) indicate the assumed structure of the simultaneous response of variables in SVAR and also inference about the interrelationship of errors structure.

$$\in_t = A^{-1} Bu_t$$

$$A\in_t = Bu_t \quad (10)$$

$$\sum_{\in} = A^{-1} BB' A^{-1'}$$

To assess the long-run reaction of earnings timeliness to IFRS adoption shocks, we have employed an alternative identification technique introduced by Blanchard and Quah (1989, p.p.655-669) by applying limitations $A\in_t = Bu_t$ and $\in_t = Su_t$ on the long-term characteristics of the accumulative response feedback. The enforced restrictions are shown in Eq.11 below;

$$(1 - A_1 - A_2 - ..... - A_p)^{-1} \in_t = \Psi \in_t = Fu_t$$

$$\Sigma_{\in} = \psi^{-1} FF' \Psi^{-1'} \quad (11)$$

Hence $(1 - A_1 - A_2 - ..... - A_p)^{-1}$ is the long-term multiplier, we will measure it by employing reduced vector autoregressive estimators. The outcomes of SVAR analysis are shown in Table. 6.

Empirical results and discussion

Sample descriptive statistics

Table 1 shows the descriptive statistics such as skewness and kurtosis of the selected panel data for the estimation of earnings timeliness of information.

Table 1. Descriptive statistics

Variables	Obs	Mean	Std.	Min	Max	Skewness	Kurtosis
EPS	85	4.64	1.86	2.2	9.44	1.12	3.30
PPS	85	0.2	0.01	0.19	0.22	1.02	2.58
R	85	0.78	0.07	0.68	0.94	1.09	3.10
SIZE	85	5.66	7.93	0.17	26.8	1.54	3.79

Note:(i) EPS: earning per share, PPS: price per share, R: Stock return

The skewness and Kurtosis of panel data having higher values indicated the state of infrequent observations and lack of symmetry. The results indicate that variables have no normality. So, there is no multicollinearity in the data set.

Table 2. Pearson correlation matrix for independent variables.

Variables	IFRS	EPS	PPS	R	SIZE
IFRS	1	(-0.619)**	(-0.661)**	(0.454)**	(0.341)**
EPS	(-0.619)**	1	(0.387)**	(-0.136)	(-0.227)*
PPS	(-0.661)**	(-0.388)**	1	(-0.362)**	(-0.363)**
R	(-0.454)**	(-0.136)	(-0.361)**	1	(-0.669)**
SIZE	(-0.341)**	(-0.227)*	(-0.363)**	(-0.669)**	1

Notes: **. Correlation is significant at the 0.01 level (2-tailed), *. Correlation is significant at the 0.05 level (2-tailed).

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Table 2 exhibits the Pearson correlation matrix that the correlation coefficients are less than 0.5. Specifically, the correlation between earnings per share and Size of the firms are higher as compared to IFRS and other variables, and the "Variance Inflation Factor" among tabulated variables is less than (<10). The lower correlation level among variables elaborates the lowest possibility of multicollinearity in the variables.

Quantile regression analysis

Table 3. Simultaneous quantile regression computation Model 1.

Variables	25th		50th		75th	
Xitn	co.ef	t	co.ef	t	co.ef	t
IFRS	0.22	(5.60)*	-0.27	(-2.49)**	-0.55	(-5.93)*
Size	-0.01	(-0.58)*	-0.02	(-2.03)****	-0.08	(-0.66)*
R	0.52	(4.22)*	0.53	(2.05)****	0.21	(0.32)*
cons	0.19	(1.88)*	0.29	(`1.74)*	0.90	(1.81)*
Pseudo R^2	0.22		0.16		0.31	

Note: *P-value=0.01, ** P-value=0.02, *** P-value=0.03, **** P-value=0.04, *****P-value=0.05.

Table 3 represents the results of model 1formulated to measure the influence of IFRS on earnings timeliness thatβ_3 is significant in small (25^{th}), medium (50^{th}) and large (75^{th}) firms, which implied that the realisation of profit per share is less timely in the medium firms. The medium scale entities are not regular enough to realise losses before spread over every reporting year. The small and large firms are timely in recognising the losses, to ensure the rapid earnings of accounting profit. The medium companies need to cut earnings for the sake of compensating losses to a minimum level. Moreover, the accounting earnings are very responsive to bad news as compared to good news in the 50^{th} quantile. The mandatory adoption of IFRS enhanced the earnings timeliness in small and large firms. These outcomes are coherent with (Rodríguez García et al. 2017, p.155), (Junior et al. 2017,p.44). Moreover, β_3 is positive and significant which indicates the existence of earnings timeliness at the time of IFRS adoption. The stability determines that $\beta_1+\beta_2=0, \beta_2+\beta_3=0$ as a result, the assumed hypotheses "H1b" is rejected by results that earnings timeliness methods applied during the adoption of IFRS in all firms, i.e. Small, medium and large. The intervening variable "Size" coefficients are negative in all quantiles, which indicate that size does not influence earnings timeliness information of Pakistani firms. Furthermore, while estimating the bank-wise impact of IFRS adoption on earnings timeliness, the same Model 1 is used to evaluate the change in each bank.

Table 4 shows the estimation of Model 1 and reveals the presence of earnings timeliness information in all banks that β_2 coefficients are statistically significant in 25^{th}, $50^{th,}$ and 75^{th}percentiles. Relatively, by outcomes and pseudo R^2 values, the timeliness of earnings was disclosed more in large commercial, investment and specialized banks and other counterparts. Furthermore, the accounting earnings of firms are very reactive to the bad news

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relatively good news in the 50th and 75th quantile. So the medium and large firms hold back the negative information when the time is right. The managers have a higher level of discretion to unveil negative accounting information. Exposure to lousy news drag down stock prices and also affect managers own stocks and bonuses. The model outcomes are coherent with (Rodríguez García et al. 2017, p.p.155-168). These outcomes are persistent with the study hypothesis (H1c) and directed us to infer that **t**he mandatory IFRS adoption is positively enhancing earnings timeliness of firms in the financial sector of Pakistan.

Table 5 Simple linear regression results

Mode.1 OLS regression results				Model.2 Bank-Wise Regression results			
IFRS	Coef.	S.E.	t	IFRS	Coef.	S.E.	t
β0	0.61	4.45	(1.37)*	β0	1.24	0.07	(17.59)*
ET	0.24	4.47	(5.29)*	ETI	3.67	6.38	(5.76)*
				ETC	-0.03	0.03	(-1.23)n.s.
				ETInv.	-0.36	0.05	(-6.68)*
				ETMFI	-3.71	6.30	(-5.76) *
				ETP	0.06	0.02	(2.66)*
				ETS	0.03	0.02	(1.27)n.s.
R2	1.00				0.62		
Adj. R2	0.99				0.59		
F	(2.812)*				(18.35)*		
DW	2.00				0.504		
Wald-Test	0.846				0.573		

Note:n.s.=not significant; *P-value=0.01; **P-value=0.02; ET= earnings timeliness index; ETI=earnings timeliness index Islamic bank; ETC= earnings timeliness index Commercial banks; ETinv index Investment banks; ETMFI index Microfinance institutions; ETP earnings timeliness index Public banks; ETS index Specialized banks; DW= Durbin-Watson statistics, WT=Wald test.

Table 5 shows the single and multivariate regression results of (Model.5&6) by using overall (ETIndex) and bank wise (ET indices, i.e. ETI, ETC, ETinv, ETMFI, ETP, ETS). The results indicate that IFRS has significant impacts on earnings timeliness information of all financial entities in Model.5. Furthermore, the bank-wise effects of international financial reporting standards cogently different after estimation of Model.6, in which IFRS adoption has no consequent impact on the earnings timeliness information of Specialized and Commercial banks. The "specialised and commercial" banks still have company incentives and managerial discretion which is leading to shareholders inequality and lack of timeliness of information disclosure to investors. Moreover, the estimation of Model. 5 & Model .6 gives us relatively divergent results and set up new conditions that compulsory adoption of IFRS has enhanced earnings timeliness of banks but still unable to be consistent with the traditional reporting standards of commercial and specialised banks.

Estimation of IFRS policy shocks response to earnings timeliness of information

To accomplish our hypothesis ($H3_a$ and $H3_b$) that whether IFRS policy shocks are responding positively to earnings timeliness of information in the long and short-run", we applied restriction on b12 and b21 to assess the response of dependent variable shocks towards explanatory variables (domestic accounting variables).

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Estimation of structural impulse responses short-run and long-run identifying restrictions (Recursive factorisation)

We assessed the unit triangular and b diagonal by using model Ae = Bu, where E[uu']=I , the estimated matrix are as under;

$$A = \begin{bmatrix} 1 & 0 & 0 \\ b1 & 1 & 0 \\ b2 & b3 & 1 \end{bmatrix}, \; B = \begin{bmatrix} b4 & 0 & 0 \\ 0 & b5 & 0 \\ 0 & 0 & b6 \end{bmatrix}$$

$$A = \begin{bmatrix} 1 & 0 & 0 \\ 0.34 & 1 & 0 \\ 0.03 & -0.07 & 1 \end{bmatrix}, \; B = \begin{bmatrix} 0.02 & 0 & 0 \\ 0 & 0.09 & 0 \\ 0 & 0 & 0.01 \end{bmatrix}, \; S = \begin{bmatrix} 0.01 & 0 & 0 \\ -0.01 & 0.09 & 0 \\ -0.01 & 0.01 & 0.01 \end{bmatrix}, F = \begin{bmatrix} 2.85 & -0.95 & 1.61 \\ -0.84 & 0.62 & -0.35 \\ 0.21 & -0.06 & 0.60 \end{bmatrix}$$

The estimated matrix indicates that the impulse responses of each accounting variable are responding positively to international financial reporting change. The principal diagonal of the matrix is positive which indicates a favourable increase in the earnings ratios. The positive IFRS shocks on earnings timeliness of accounting information produced anticipated outcomes, as the earnings timeliness (timely realisation of gains and anticipated losses) has enhanced rather than decreased. Therefore, the response of earnings timeliness is favourable, decreasing for a short time and then showing a constantly increasing trend. The stock returns are also responding effectively to transformation in the reporting standards. The impulse responses are shown in Figure.1(see Appendix A).

Recursive short-run impulse responses(S-triangular) estimation

We assessed the short-run responses of IFRS change to earnings timeliness by using model e = Su where E[uu']=I, the estimated matrix are as under;

$$S = \begin{bmatrix} b1 & 0 & 0 \\ b2 & b4 & 0 \\ b3 & b5 & b6 \end{bmatrix}$$

The estimated matrix values for all coefficients are following;

$$S = \begin{bmatrix} 0.02 & 0 & 0 \\ -0.01 & 0.09 & 0 \\ -0.01 & 0.01 & 0.01 \end{bmatrix}, \; F = \begin{bmatrix} 2.85 & -0.95 & 1.61 \\ -0.84 & 0.62 & -0.35 \\ 0.21 & -0.06 & 0.60 \end{bmatrix}$$

The calculated matrix exhibits the contemporaneous relationship between variables. The diagonal elements of the matrix are positive, indicates that the short run identification restrictions tend to identical impulse responses. The negative diagonals express the decrease in the accounting variables at the initiation of IFRS change. Therefore, the impulse responses of the recursive model are reflecting the reporting policy change (IFRS adoption) more adequately. Thus, each accounting variable is positive to IFRS shift. So in Figure.2 (see Appendix A) we can see the strength of IFRS short-run impact. The stock returns of firms in response to earnings timeliness information are increasing. The assessment of IFRS effect on earnings timeliness of accounting information in the short run gives us the consistency of IFRS with the accounting information disclosure of corporate firms. Hence the results support our hypothesis (H3a) that IFRS shocks are responding positively to earnings timeliness information.

Recursive long-run impulse response (F-triangular)

We assessed the long-run responses of IFRS change to earnings timeliness by using model e = Phi*Fu where E[uu']=I, the estimated matrix are as under;

$$F = \begin{bmatrix} b1 & 0 & 0 \\ b2 & b4 & 0 \\ b3 & b5 & b6 \end{bmatrix}$$

$$S = \begin{bmatrix} 0.02 & 0.01 & -0.01 \\ -0.03 & 0.08 & -0.02 \\ 0.01 & 0.01 & 0.01 \end{bmatrix}, \; F = \begin{bmatrix} 3.41 & 0 & 0 \\ -1.04 & 0.36 & 0 \\ 0.47 & 0.19 & 0.38 \end{bmatrix}$$

Similarly, the diagonal elements of the long run recursive matrix are positive, which shows that the long-run identification restrictions incline to similar impulse responses. The timeliness of accounting disclosure (realisation of gain and losses) is reacting favourably to shift in the international financial reporting standards. In the long run, IFRS has the potential to overcome inconsistency of information disclosure and firms can fully adopt the new reporting standards, to meet the financial statement comparability of international firms. Thus, the outcomes support our hypothesis (H3b) that IFRS shocks are responding positively to enhance earnings timeliness of accounting information in the long-run. The impulse responses are shown in Figure.3 (see Appendix A).

Comparing our study results, we find inconsistency with the existing literature and the outcomes by different researchers as they indicated a decrease in the earnings management after the adoption of IFRS. Our study outcomes portray a steady rise in the earnings timeliness of accounting information after the adoption of IFRS. Secondly, various studies focus only on developed economies which already have extraordinary reporting mechanism. Unusually, we estimated expansion in the earnings timeliness of accounting information in all corporate entities, the impact within and between firms differs by the scale of business and size. Accordingly, the diversification in earnings timeliness information under IFRS also exists among companies as result of financial culture, openness, the capacity of firms accounting disclosure, nature of the investment, and company's hidden priorities for the sake of stabilising the financial position.

Moreover, the differences in the economic environment, time frame, sampling and selection of prominent accounting variables always give us different outcomes. Hence, our research study seems unique in this way; we combined all components of change in the timeliness of profit and loss realisation such as the inclusion of pre and post-adoption period, registered and non-registered companies, assessment of short and long run reaction of IFRS policy shocks towards earnings timeliness of firms. We are also assessing the improvement of IFRS adoption on one single measure of accounting information in an underdeveloped economy.

Ultimately the findings can be different and divergent. Various researchers investigated the influence of international financial reporting standards adoption through regulatory quality indices proposed by (Kaufmann and Kraay, 2009, p.p.2-103) for the assessment of governance mechanism and efficient enforcement of laws in economies. The use of regulatory indices can only elaborate on the theoretical aspects of IFRS and not sufficient to measure the quantitative as well as monetary value addition of IFRS on accounting disclosure. The regulatory index only gives us ambiguous outcomes regarding the value addition of IFRS. This study overcomes the inconclusiveness of existing literature by taking into consideration all monetary components, i.e. (core accounting ratios, stock returns, and size of companies) in a less developed economy that is representing changes in the accounting information disclosure and its measures. Therefore, mostly studies considered accrual-based accounting measures for analysis in developed countries. So, if the indicators selection will differ the results will automatically change, and the firms in developed economies portray maximum accounting disclosure under established reporting policies relative to under-developed country firms. Here we may not compare the outcomes of our study with the developed economies. The earnings timeliness of accounting information in the under-developed countries is improving after IFRS adoption and firms efficiently realise gains and anticipated losses, to overcome future losses. The minor gaps exist due to dissymmetry between managers, investors, inverse impacts of stock market and other market forces, capital costs and liquidity of companies.

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Conclusion and policy implications

We constructed a quantitative framework of mandatory IFRS adoption to check the earnings timeliness of accounting disclosure of firm. Further, our study evaluated the impacts of IFRS on earnings realisation of firms individually and cumulatively by employing a weighted index approach under principal component analysis. Besides this we assessed the short run and long-run impact of IFRS policy shocks and the response of financial accounting variables to IFRS adoption by applying SR (short-run) and LR (long-run) restrictions, i.e.(b12=0, b21=0) on the variables coefficients. Our study extended the existing models by employing mixed approaches to portray the conclusive and anticipated outcomes. Our analytical outcomes particularly (H1) determines that the adoption of international financial reporting standards increased the earnings timeliness (ET) of all banks. Whereas, the testing of H1 for bank-wise change in earnings timeliness, an increase in the earnings timeliness information of Islamic (ETI), investment (ETinv), microfinance institutions (ETMFI), and public (ETP) noticed, and shows no impact on the earnings timeliness of specialised (ETS) and commercial (ETC) banks.

Testing of (H2) indicates that the earnings timeliness of banks is very reactive to disclosure of bad news relative to good news. The medium and large banks defer the negative information in good times. Finally, (H3a, H3b) shows that under both short-run and long-run restrictions the identification of variables impulse responses towards IFRS policy shocks is positive. Hence, IFRS has a contemporaneous relationship with the accounting variables. The reporting policy change is acceptable in the short-run and long-run. This research study enables to figure out the value addition of IFRS enforcement towards the enhancement of earnings timeliness of accounting information and distinguish between the disclosure characteristics, i.e. bad news and good news of firms under IFRS. The study also reveals the inconsistency of IFRS with the earnings timeliness of specialised and commercial banks. Furthermore, the policy recommendations we anticipate are contending the policymakers and regulatory institutions to concentrate on the firm level reporting divergences, managerial and company incentives in commercial and specialized banks. All these factors are playing a role in the determination of earnings timeliness and information exposure of accounting values to investors. The private, specialized and unlisted banks need to improve their reporting practices to meet the reporting comparability of listed counterparts. The outcomes of our research support the investors in decision making and regulatory institutions in overcoming the policy endorsement problems, and firms will enable to control managerial incentives. Furthermore, this study will create awareness among firms and stakeholders that how to cope with the exposure of bad news to avoid future losses and trust of investors while reporting under IFRS. The study also spotlights the worse role of company hidden incentives in investor's value creation. This study is limited to the banking sector, and the analysis only concentrates on one component of accounting information that is earnings timeliness of accounting information.

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Analysis of Measure taken for Terrorism Financing Activities: The Case of Turkey

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Abstract

The effect of terrorism on social, economic, political and psychological factors has reached high levels both in national and international arena. Today, due to the various terrorist organizations and their activities influencing a large part of the World, the fight against terrorism has brought the necessity and mechanism of various measures not only in Turkey but also in many countries. In this context, main puprpose of this study explores the financing of terrorism within the scope of the measures taken by Turkey, a member of United Nations, in recent years. For this purpose; the meausres such as the decision taken by the Council of Ministers to freze the assets, quality and quantity of ordinary requests & denunciation made to Financial Crimes Investigation Board (MASAK) and the number of files on terrorism financing are examined. This study evaluates the nature of the measures taken within the scope of Turkey's fight against terrorist financing.

Keywords: Terrorism, Financing of Terrorism, Anti Money Laundering (AML), Combating the Financing of Terrorism (CFT), International Struggle.

Introduction

Terrorism has been defined as violent and fearful and intimidating acts of violence against the public authority or the structure of society. (Glossary of Encyclopedic Political Terms and Organizations). Terrorism is conceptually used as a means of threatening social and national security due to the use of vehicles such as weapons of mass destruction, suicide attacks and bombings. (Ruby, 2002).

Şimşek (2016) defines *national terror* as the violance(s) taken within the country that are not carried out in cooperation with any external terrorist organization and which are not targeted by another state or individual; *state terror* as the violence of the state organs to citizens, violation of human rights law; *political terror* as the political aims and the fear of actions in society; *international terror* as terrorist actions with international consequences and *cyber terrror* as using the technology to attack the national defense systems on one hand, and public resources on the one hand being harmful to society.

Understanding the main channels and motivations of terrorism financing is crucial to be able to set the correct actions or remedies to control or block these illegal activities. This study will explain some important implications on terrorism financing activities in Turkey.

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Literature Review

According to Taşdemir (2005), terrorism is the name given to criminal acts directed against society or the state creating an atmosphere of terror in the eyes of the individual or society. On the other hand, since there is no common definition of terrorism on international level, Lawless (2008:146-148) states that terrorism focuses on the ones who accomplish any event, their aims and the methods they use.

Karatay and Kapusızoğlu (2011) referring to the definition on financing of terrorism as *"any person commits an offence within the meaning of this Convention if that person by any means, directly or indirectly, unlawfully and wilfully, provides or collects funds with the intention that they should be used or in the knowledge that they are to be used, in full or in part, in order to carry out"* (Article 2/1) outlined in International Convention for the Suppression of the Financing of Terrorism adopted by the General Assembly of the United Nations, claim that terrorism has legal and illegal sources such as dues, fees and donations; the income obtained from the sale of the publications of the association foundations and the related entities; funds provided from external sources, legal activities such as commercial activities and other social activities. In addition, drug trafficking; ransom, tribute collection; forgery; it was also stated that through illegal activities such as human trafficking, terror activities could also be provided.

According to Passas (2007: 24-24), since financing sources of terrorism depend on global developments, it also affects the funding structures independent of the decision making mechanisms of terrorist organizations.

Qurbanoy (2011), stated that the necessity of money laundering emerged for the terrorist organizations while performing their global activities. Likewise, Gümüşkaya (1998: 64-65) argues that the financial gains generated by the financial accumulation resulting from the work constituting a criminal offense either by itself or by converting itself to another financial value are in the concept of Money laundering.

In a report on the subject, revenues obtained through illegal activities such as smuggling, tribute collection, looting and theft, fraud, drug smuggling etc. and different sources of finance are used as revenues obtained through legally-looking activities such as donations, dues collection, commercial activities through shadow organizations etc. (UTSAM, 2009, 3).

Aykin and Sözmen (2009) argued that there may be a change in the methods of funding the terrorist organizations due to differences in the ideological objectives and geographical regions where activities are carried out within the scope of the Financial Crimes Research. In addition, most of the methods used by terrorist organizations to fund terrorist organizations are similar such as extortion, robbery, dues or donations, tributes, publications, commercial activities, human, weapons and substance smuggling, fraud .

According to Raphaeli (2010) terrorism has a global reach in its activities and funding sources. He asserted that it was possible to take advantage of the sources operating in various ways, either legally or illegally, and that the use of so-called charitable organizations could serve as a channel for money by mobilizing funds.

(Johnston 2006) pointed out the need for effective policy and regulatory responses to protect financial systems against terrorist attacks, and that should liquid and robust financial markets supported by well-organized crisis management interventions would be more successful in absorbing terrorist attack shocks.

Alam (2013:119), pointing at the subject from another angle, based on the example of Pakistan, points out the existence of a development-blocking relationship between countries' stock markets and terrorism activities. As a matter of fact, according to Shiller (2003), terrorism potentially affects the attitudes of investors and thus has a negative impact on stock prices by reflecting on their purchasing behavior.

Freeman (2011) points out that even though the cost of specific operations is relatively small, terrorist organizations will need larger budgets to operate, indicating the existence of a number of criteria such as

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quantity, legitimacy, safety, reliability, control and simplicity that terrorist financing sources can evaluate in terms of the advantages and disadvantages of terror groups. .

In this context, the Revolutionary Armed Forces of Colombia (FARC) can be given as an example. This organization was able to initiate a full-fledged uprising from the traditional guerrilla group because of its ability to effectively transform revenues from illegal drug trafficking into operational funds. (Cook, 2011).

As a matter of fact, even if the funding required for the final stage of the action in terrorist acts is low, a significant amount of money is needed for terrorist organizations such as propaganda and voluntary procurement. It is stated that the necessity of destroying the environment which is appropriate for the organizations in the stage of funding and transfer of the organizations, and the difficulties that will be created for the terrorist organizations to provide and transfer the financing of the terrorist organizations, although they fail in the terrorist acts of the administrations, can decrease the terrorist acts against the public in time. (FATF 2008a, 27-28). However, according to (Napoleoni 2008), it was found that the reduction of financial sanctions and barriers in the 1990s gave terrorism the opportunity to go beyond local activities, and thus terrorist organizations had the opportunity to enter illegal economic cooperation.

Tekinarslan (2011) Ali stated that the terrorist organizations were able to carry out the smuggling activities directly, but also from the people who made smuggling in the form of commissions or tributes under the name of tax. The smuggling incidents that occurred due to Ağrı's border province indicate that the terrorist organization in the region is an important source of finance.

In this context, Emhan (2011) states that terrorist organizations have become more complex nowadays and that they have started to host the image of the enterprise or company in addition to being a force with the arms of the terrorist organizations. In this study, the nature of the measures taken within the scope of Turkey's fight against terrorist financing and quantity will be evaluated.

Methodology

In this research, document review method was utilized. Certain criteria were emplemented in the design of the study. Within the scope of these criteria, decisions of United Nations Security Council and the asset freeze decision taken on real and legal persons / number of organizations by Turkish Council of Ministers in line with the demands of foreign states between the years of 2011 and 2017 were investigated.

Information on the judicial requests and notices made to MASAK for those who have been decided to freeze the assets and persons and organizations thought to be related to the financing of terrorism / terrorism were obtained from the annual (activity)reports published by MASAK (Financial Crimes Investigation Board).

MASAK's annual (activity) reports were analyzed to assess the nature, number of measures taken, the proportion of companies whose measures were abolished, and the status of the files under investigation in relation to the financing of terrorism.

Data & Results

Table 1: Decisions of the Council of Ministers Taken Under Article 5 of Law No. 6415 (2013-2017)

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Year	Decisions to Freeze Asset(s)		Decisions to Remove Freeze Asset(s)		Information Updated	
	Real Person	**Legal Person/Org.**	**Real Person**	**Legal Person/Org.**	**Real Person**	**Legal Person/Org.**
2013	353	67	1	-	-	-
2014	27	10	16	1	46	2
2015	34	5	24	-	21	1
2016	20	1	7	-	22	-
2017	12	4	13	-	9	1

Source: www.masak.gov.tr **(MASAK 2017 Annual Report)**

In Table 1, the United Nations Security Council to take decisions in accordance with that, a member of the United Nations for the prevention of terrorist financing in Turkey, actions for the freezing of assets of individuals and organizations concerned are presented. When the data are analyzed, it is seen that the number of both real and legal persons who have taken a decision to freeze assets has decreased gradually from 2013 to 2017. The number of real persons who were thought to have contributed to the financing of terrorism, but later freed the decision to freeze the assets were 1 in 2013; 16 in 2014; 24 in 2015; 7 in 2016 and 13 in 2017.

Table 2 illustrates a Cabinet decision issued in Turkey upon the request of a foreign state. Accordingly, within the scope of the financing of terrorism, the demands of foreign states for freezing the assets of these individuals and organizations were evaluated by the Ministry. The number of real persons who were decided to freeze assets were 1 in 2014; 7 in 2015 and 5 in 2016. In 2017, there is no Council of Ministers decision taken for both real persons and legal entities or organizations.

Table 2: Data Regarding Decisions of the Council of Ministers Received Based on Foreign Government Demands

Year	Asset Freeze Decision Taken		
	Number of Foreign State Demand	**Real Person**	**Legal Person / Org.**
2014	1	1	-
2015	2	7	7
2016	3	5	2
2017	-	-	-

Source: www.masak.gov.tr **(MASAK 2017 Annual Report)**

Table 3 below shows the nature and number of judicial requests and notifications sent to the Financial Crimes Investigation Board. According to the 2017 activity report published by MASAK (see p. 26), 26,647 of the 26,800 notifications related to the financing of terrorism or terrorism are notified to FETÖ.

Table 3: Distribution of Judicial Claims and Notices to MASAK

Judicial Claims and Notices	2017
Financing Terrorism or Terrorism	26.800
Money Laundering	88
Illegal Betting / Gambling	71
Fraud	45
Malpractice	43
Usury	35
Doubtful Money Movements	23
Boundary Money and Similar Values	15
Drug Trafficking	13
Tax Evasion	11

Source: www.masak.gov.tr **(MASAK 2017 Annual Report)**

In 2017, the majority of the judicial requests and denunciations are denunciations for the financing of terrorism or terrorism. The most noticeable offense after the financing of terrorism is aimed at laundering proceeds of crime. These are followed by gambling, fraud, fraud, corruption, usury, suspicious money transactions, money and possessions seized at the border, demand and denunciations for drug trafficking and abduction crimes.

Table 4: Analysis and Evaluation Files Concerning the Financing of Terrorism According to the Years

Years	Number of Files Investigated	Number of Files Concluded
2011	77	36
2012	69	17
2013	57	14
2014	54	24
2015	55	24

Source: www.masak.gov.tr **(MASAK 2015 Annual Report)**

Table 4 presents data on the files referred to MASAK and subject to evaluation under the scope of the financing of terrorism. When the data are analyzed, it is observed that 36 of the 77 files, which were examined in 2011 for the crime of terrorism financing, were concluded. In 2012, the number of files evaluated in terms of the financing of terrorism was 69, 57 in 2013, 54 in 2014 and 55 in 2015.

Conclusion & Discussion

Terrorism and terrorism-related crimes cause instability in both the global economy and the social structure, resulting in security concerns. Terrorist organizations use the proceeds they receive in criminal activities such as weapons, bombs and propaganda activities. (Qurbanov, 2011). Due to the negative effects of terrorist activities, countries have developed various legal arrangements for money laundering and terrorist financing. For example, the obligations imposed on financial institutions within the framework of the Methodology for the Anti-Money Laundering/Combating the Financing of Terrorism (AML/CFT) can be listed as recognition of the customer, notification of suspicious transactions, storage and presentation, attention to political influence, correspondent banking obligations, trust in third parties, special attention to sensitive situations, special attention to risky countries, taking preventive internal measures, paying attention to fund transfers and finally, the implementation of obligations abroad. (Üstün, 2006:55).

Reflection of both the psychological and political and economic effects of terrorist activities in all societies has reached a very important level. For this reason, it is clear that the fight against transaction and money transfers that generate income for terror activities and the necessary legal arrangements are necessary. It is understood that the important steps taken in Turkey in Law No. 6415 and the activities of terrorist organizations associated with the freezing of assets of natural and legal persons or organizations with a method to prevent financing of terrorism matters. In this context, as it is seen in Table 1, in accordance with the decisions of the United Nations

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Security Council, in accordance with the decision of the Council of Ministers, the number of real persons decided to freze were 353 in 2013 and this figure decreased to 12 in 2017.

The biggest percentage of the judicial requests and denunciations made to MASAK are the notifications regarding the financing of terrorism. Especially after the July 15 coup attempt, it is observed that the notifications made within the scope of the financing of terrorism reached high levels. Particularly, the United Nations, including the European Union, Council of Europe, the World Bank, the International Monetary Fund, the arrangements made by various international organizations such as the Financial Action Task Force consistent with (Yıldırım, 2013) entered into force in Turkey in 6415 pursuant to Law No. UN Security A prevention and prevention mechanism has been established in the form of freezing of the assets of people and organizations related to terrorism with the demand of foreign states, especially the Council. These steps taken in the domestic law on the financing of terrorism are considered to be useful in preventing the financial support of people and institutions that help the terrorist organizations.

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Causality Relation between Real Exchange Rate and International Trade in Agricultural Production – The Case of Turkey

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Abstract

In this paper, the long-term causality relationship between the reel effective exchange rate and agricultural foreign trade was examined by considering 1996-2018. Augmented Dickey Fuller (ADF) unit root test, Johansen Cointegration test and Granger Causality test were used to determine the causality relationship between the variables. The ADF unit root test showed that the series were not stationary in level values and were stationary at the first difference. The result of Johansen Cointegration test indicated the existence of at least one cointegration vector. As a result of the Granger Causality test there was one-way granger causality relationship from agricultural import to agricultural export.

Keywords: Reel effective exchange rate, agricultural import and export, cointegration, granger

JEL Classification: Q17, F14

Introduction

After renouncing the fixed exchange rate system, the fluctuations in exchange rates become higher in the world. Exchange rate fluctuations directly affect the international trade levels of countries. However, the effect of these fluctuations may vary on each sector depending on the openness level of the sectors to international markets. The agricultural sector in Turkey has a strategic importance for many reasons. First of all, it employs more than 18% of the labor force, which is much higher than developed countries. It also provides raw materials to the Turkish industrial sector. Moreover, agricultural imports and exports have reached a considerable level in recent years. Exchange rates show large fluctuations in Turkey in recent years and these fluctuations affect both input and output prices. The impact of exchange rate fluctuations on agricultural sector is ambiguous and should be examined. For these reasons, this paper investigates the long run relationship between real effective exchange rate and agricultural foreign trades in the case of Turkey, using Johansen cointegration method ang Granger Causality test.

Literature Review

The results of studies on this subject show great differences. Some studies such as Poonyth and Zyl (2000) and Kafle (2011) have concluded that real exchange rates directly affect agricultural trade, while others have not. The literature is summarized below.

Zengin and Terzi (1995) examined the relationship between exchange rate and imports and exports of Turkey with annual data from 1950 to 1979 and from 1980 to 1994, by using the Granger cointegration and Granger causality tests. According to the results of the study, no causality relationship was found between the variables. Then, Terzi and Zengin (1999) analyzed the relationship between exchange rate and sectoral imports and exports of Turkey with monthly data from 1989:1 to 1996:12, by using VAR method. As a result of the study, no

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relationship was found between exchange rate and import or exchange rate and export, but two-way relationship was determined between import and export.

Poonyth and Zyl (2000) studied the impact of real exchange rate changes on South African agricultural exports by using an error correction model approach. Their studies indicated that there was one-way causality from exchange rate to agricultural exports.

Yılmaz ve Kaya (2007) examined the relationship between exchange rate and imports and exports of Turkey with monthly data from 1990:1 to 2004:6, by using VAR method. Results were analyzed by Granger causality and variance decomposition. The results of the study revealed that the change in the real exchange rate did not have a significant effect on the foreign trade balance. The one-way causality from imports to exports showed that import restrictions in Turkey affected exports negatively.

Kandilov (2008) showed that the negative effect of exchange rate fluctuations on the total international trade in G-10 countries was lower than the effect on the agricultural trade. In addition, the author examined the effects of fluctuations in exchange rates between developed, emerging and emerging market economies on trade. According to the results of the study, in developed countries, the effect of exchange rate fluctuations on agricultural trade was quite small.

Aktaş (2010) examined the relationship between exchange rate and sectoral imports and exports of Turkey with quarterly data from 1989:1 to 2008:4, by using VAR method. According to the findings, it was concluded that the changes in the real exchange rate did not have a significant effect on the foreign trade balance, so that the real exchange rate could not be used effectively in achieving the foreign trade balance and that import restrictions would negatively affect exports.

Kafle and Kennedy (2011) examined the effect of nominal and real exchange rates on foreign trade at the basis of agricultural and non-agricultural sectors in 28 countries, annual data from 1970 to 2010, by using panel data gravity model. Exchange rate fluctuations in agricultural and non-agricultural sectors had statistically significant and negative effects. In addition, exchange rate fluctuations were more effective on the agricultural sector, while real exchange rate fluctuations were more effective on non-agricultural sectors.

Sever (2012) examined the relationship between exchange rate variability and agricultural foreign trade of Turkey with quarterly data from 1989: 01 to 2011: 02, by using Johansen cointegration test and error correction model. According to the findings, the real exchange rate variability affected agricultural exports and imports in Turkey negatively.

Ergun and Taşar (2014) examined the causality relationships between exchange rate, productivity and exports with semiannual data from 1992 to 2009, by using Engle Granger Causality Test. They found that there was no causality relationship between export and exchange rate but there was a one-way relationship between productivity and exchange rate.

Şimşek (2017) examined the relationship between exchange rate and agricultural foreign trade of Turkey with annual data from 1980 to 2014, by using Johansen cointegration and Granger Causality test.

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Table 1 Literature Review in a table

Author(s)	Sample	Findings
Zengin ve Terzi (1995)	1950-1979 and 1980-1994, Annual, Turkey	There was no relationship between these variables.
Terzi and Zengin (1999)	1989:1-1996:12, Monthly, Turkey	Two-way relationship was determined between import and export
Poonyth and Zyl (2000)	1991:1-1999:2, Quarter, South Africa	There was one-way causal flow from exchange rate to agricultural exports.
Yılmaz ve Kaya (2007)	1990:1-2004:6, Monthly, Turkey	It was determined one-way relationship causality from import to export.
Kandilov (2008)	1975-1997, Monthly, 10 Countries	The effect of exchange rate volatility was greater for developing country exporters than developed exporters.
Aktaş (2010)	1989:1-2008:4, Quarter, Turkey	It was concluded that the changes in the real exchange rate did not have a significant effect on the foreign trade balance
Kafle and Kennedy (2011)	1970-2010, Annual, 28 Countries	Exchange rate fluctuations in agricultural and non-agricultural sectors had statistically significant and negative effects.
Sever (2012)	1989:1-2011:02, Quarterly, Turkey	According to the empirical result, the real exchange rate variability affected agricultural export and import in Turkey negatively.
Ergun and Taşar (2014)	1992-2009, Semiannual, Turkey	They found that there was no causality relationship between export and exchange rate but there was a one-way relationship between productivity and exchange rate.
Şimşek (2017)	1980-2015, Annual, Turkey	There was a one-way causality relationship between agricultural product export and import.

Data and Methodology

In this study, three different data were used: real effective exchange rate, agricultural export and agricultural import. The data of agricultural export and import were obtained from Turkish Statistic Institute and real effective exchange rates data were obtained from Central Bank of the Republic of Turkey. The real effective exchange rate variable was taken as index that 2003 = 100. Agricultural import and export data are expressed in US dollars and natural logarithms of the series were used in the study. REER abbreviation was used for real effective exchange rates, LnEX for agricultural exports and LnIm for agricultural imports.
In the empirical analysis of the study, the stationarity of the variables was determined by using the Augmented Dickey Fuller (ADF) test, developed by Dickey and Fuller (1981). After the unit root test, the optimum lag length for cointegration analysis was determined by Vector Auto Regressive (VAR) analysis, expressed by Hall (1991). The cointegration of the series was examined by the cointegration method, developed by Johansen (1998). All series must be stationary at the same level in order to apply cointegration analysis in Johansen Cointegration method. Finally, to determine the causality relationship between series, Granger Causality Analysis was performed (Granger, 1969).

Results

In econometric analysis, stationarity in time series is an important issue. This is because when the series are not stationary, false regression may occur even if there is not real causality relationship between the series. So, firstly, the stationarity of the series was tested. Stationary in series means that the mean, variance and autocovariance of series do not change over different time periods. In this study, Augmented Dickey-Fuller test (ADF) was used because it is the most preferred test in the literature. Critical values and hypotheses in the ADF test are the same as Dickey Fuller (DF) test (Tarı, 2008). DF test can be performed based on three equations. These equations;

$$\Delta Y_t = \gamma Y_{t-1} + u_t \quad (1)$$

$$\Delta Y_t = a_0 + \gamma Y_{t-1} + u_t \quad (2)$$

$$\Delta Y_t = a_0 + a_1 t + \gamma Y_{t-1} + u_t \quad (3)$$

The first equation states that there is no intercept and trend, the second equation states that there is only intercept, and the third equation states that there is both intercept and trend. The expression (t) in the equations indicates the time. By estimating these regressions, DF test statistics were compared with Mackinnon critical values (Mackinnon, 1996). If the absolute value of the ADF test statistic is smaller than the critical values, it is assumed that the series is not stationary and contains unit root. If the absolute value of test statistic is greater than the critical value, it is assumed that the series is stationary and does not contain unit root.
Table 2 shows the ADF unit root test results for real exchange rate, agricultural export and agricultural import variables. As a result of the unit test, it was determined that the series were not stationary in level values and they were stationary in the first difference.

Table 2 ADF unit root test results

Variables	Intercept	Trend and Intercept
REER	-1.388158	1.020914
lnIm	-0.632945	-2.558875
lnEx	-0.570550	-1.537626
First Difference		
REER	-6.743049***	-4.289835***
lnIm	-4.702271***	-4.582360***
lnEx	-3.733689***	-3.636990*

*** Statistically significant at 1% level.
* Statistically significant at 10%

The same level stationarity of variables allows for cointegration analysis. Determining the optimal lag length of the series is an important step to create a reliable model. Numerous criteria were used to determine the optimal delay length. These were: Akaike Information Criterion (AIC), Schwarz Information Criterion (SIC), Hannan-Quinn Information Criterion (HQ) and Final Prediction Error (FPE). VAR lag length is given in table 3. As seen in table 3; The LR, FPE, AIC, SC, and HQ information criteria show 1 lag length.

Table 3 VAR Lag Length

Lag	LogL	LR	FPE	AIC	SC	HQ
0	-89,6164	NA	1,359605	8,820609	8,969827	8,852993
1	-50,1223	63.94290*	0.075540*	5.916405*	6.513275*	6.045942*
2	-43,7438	8,504641	0,103507	6,166074	7,210596	6,392762

The cointegration test was performed by the method developed by Johansen (1998). This test explores the long-term movement of series that non-stationary in level values. When applying the cointegration test, it is important to determine whether the intercept and trend will be included in the model. Usually the model with the minimum Akaike value is selected as the appropriate model. In the study, the model with the smallest Akaike value was in

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the intercept and trend model (Table 4). Johansen's maximum likelihood approach uses two kinds of test statistics: trace and maximum eigenvalue. Cointegration test results are given in table 5.

Table 4 Determination of the appropriate model

Selected (0.05 level*) Number of Cointegrating Relations by Model					
Data Trend:	None	None	Linear	Linear	Quadratic
Test Type	No Intercept No Trend	Intercept No Trend	Intercept No Trend	Intercept Trend	Intercept Trend
Trace	1	1	3	2	2
Max-Eig	0	1	1	2	2

*Critical values based on MacKinnon-Haug-Michelis (1999)

Information Criteria by Rank and Model					
Data Trend:	None	None	Linear	Linear	Quadratic
Rank or No. of CEs	No Intercept No Trend	Intercept No Trend	Intercept No Trend	Intercept Trend	Intercept Trend
	Log Likelihood by Rank (rows) and Model (columns)				
0	-45.60879	-45.60879	-42.38033	-42.38033	-37.39848
1	-37.43894	-29.15925	-27.59096	-26.49204	-21.70291
2	-32.67516	-23.37576	-22.15342	-13.08281	-9.679231
3	-32.64723	-19.10612	-19.10612	-8.409035	-8.409035
	Akaike Information Criteria by Rank (rows) and Model (columns)				
0	6.360879	6.360879	6.338033	6.338033	6.139848
1	6.143894	5.415925	5.459096	5.449204	5.170291
2	6.267516	5.537576	5.515342	4.808281	4.567923*
3	6.864723	5.810612	5.810612	5.040903	5.040903
	Schwarz Criteria by Rank (rows) and Model (columns)				
0	7.257038	7.257038	7.383552	7.383552	7.334727
1	7.338773	6.660590	6.803335	6.843229	6.663889
2	7.761114	7.130747	7.158300	6.550812	6.360241*
3	8.657041	7.752290	7.752290	7.131941	7.131941

According to the trace statistics, the null hypothesis ($r = 0$) that there is no cointegration relationship between the variables is rejected against the alternative hypothesis that there is cointegration relationship between the variables. Because trace value was greater than 5% critical value. In this case, the presence of at least one cointegration relationship at a critical value of 5% should be accepted. As a result of the cointegration test, it can be stated that there was a long-term relationship between agricultural import, export and real effective exchange rate.According to the maximum eigenvalue statistic, the test statistic of null hypothesis was found to be 35.31198. Since this value was greater than the critical value of 5% significance level (29.79707), null hypothesis was rejected. On the other hand, $r < 1$ and $r > 1$ hypotheses cannot be rejected. The same results were obtained from both cointegration tests.

Table 5 Johansen Cointegration test results

H_0	H_1	Trace Statistic	0.05 Critical Value	Prob.
Trace Test				
r = 0	r>0	35.31198*	29.79707	0.0105
r < 1	r>1	10.94606	15.49471	0.2148
r < 2	r>2	2.959154	3.841466	0.0854

H_0	H_1	Max-Eigen Statistic	0.05 Critical Value	Prob.
Max. Eigenvalue				
r = 0	r>0	24.36591*	21.13162	0.0169
r < 1	r>1	7.986911	14.26460	0.3800
r < 2	r>2	2.959154	3.841466	0.0854

In the study, Granger causality test was performed to determine the causality of the relationship determined by cointegration. The causality test results are given in table 6.

Table 6 Granger Causality Test Results

Dependent variable: REER			
Excluded	Chi-sq	Df	Prob.
LnIm	1.419725	1	0.2334
LnEx	1.893008	1	0.1689
Dependent variable: LnIm			
Excluded	Chi-sq	Df	Prob.
REER	0.490821	1	0.4836
LnEx	0.193941	1	0.6597
Dependent variable: LnEx			
Excluded	Chi-sq	Df	Prob.
REER	0.420532	1	0.5167
LnIm	4.044491	1	0.0443

Table 7 was prepared by summarizing the Granger Causality Analysis Test results in table 6.

Table 7 Results of The Causality Test

Hypothesis	P value	Causality
Real Effective Exc. Rate → Import	0.2334	None
Real Effective Exc. Rate → Export	0.1689	None
Export → Real Effective Exc. Rate	0.4836	None
Export→Import	0.6597	None
Import→Real Effective Exc. Rate	0.5167	None
Import→Export	0.0443	Available (one-way causality)

According to these results, there was one-way Granger causality relationship between agricultural exports and imports. But there was no Granger causality relationship between real effective exchange rate and agricultural exports and imports.

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Conclusion

In this study, the relations between real effective exchange rate and agricultural exports and imports were examined by considering 1996-2018 period. Firstly, it was determined the stationarity of series by using ADF test. According to the result, real effective exchange rate, agricultural exports and imports variables were found to be stationary in the first differences. The Johansen cointegration test was used to determine whether there was a long-term relationship between the series. As a result of the analysis, it was concluded that there was a long term cointegration relationship. Then, the appropriate lag length for VAR analysis was determined as one. Granger causality analysis was performed according to this lag length. According to the causality test results, there was a one-way causality relationship from agricultural imports to agricultural exports. On the other hand, there was no causal relationship from real effective exchange rate to agricultural export and import or from agricultural export and import to real effective exchange rate. The results of the study are similar to Terzi and Zengin (1999), Yılmaz and Kaya (2007).

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Investigation of the Relationship between Islamic Work Ethics and Work Alienation: The Example of the Banking Sector in Kirikkale Province

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Abstract

The determining role and impact of religion, in particular, Islam in social, economic, cultural and political life is clear. The effects of Islam in working life have different reflections both in demographic and various sectors. On the other hand, Islamic working ethics is based on the "Qur'an and Sunnah ve and in this respect, it serves extremely important functions both for the market functioning which aims and directs the production of goods and services, and for the internal control of the individual. This study investigates the relationship between islamic work ethics and work alienation and aims to determine the differences between the demographic groups of these two variables. In this context, the main purpose of the study is to examine the relationship between Islamic work ethics and alienation to work on the basis of bank employees and to reveal the results with the findings of the research. The face to face interview method was utilized at the primary data collection phase. The research was conducted on the employees of the banking sector in Kırıkkale province and 91 questionnaire data were obtained. According to the results; it is found that the Islamic working ethics of single bank employees are higher than married bank employees and the level of alienation from state bank employees is higher than private bank employees. However, according to the correlation analysis findings, a negative, moderate and statistically significant relationship was found between Islamic work ethics and alienation from work.

Keywords: Banks, financial sector, alienation to work and islamic work ethic.

Introduction

Alienation is a process that arises as a result of the machine intervening in humanity and destroying human creativity, causing the person to lose sensitivity to himself, other people and his environment. On the other hand, alienation at work occurs because the employee cannot have control in the business process and as a result of this, the person performs his / her job not voluntarily, due to a neccessity. The human being alienated from his work is distanced from his own characteristics such as sovereignty, change and development of nature, being and knowing, which distinguishes man from all other living beings. Cangızbay (1989:133) define man as a human being losing his sovereignty over the loss, behavior and reasoning of something that is at the basis of his human and internal features.

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In a particular business environment, it is possible to develop moral principles that guide activities based on certain beliefs, such as Islam. For example, Islam, in terms of Islamic faith; principles such as productive work, fair distribution of income, trade space, freedom and fair practices, tolerance, service requirement, creative awareness (Tanri, 1997,47). On the other hand, commercial behavior and relationships are not independent of the values and principles of the society. Furthermore, the sustainability of economic interests (profit, sales, etc.) depends on compliance with ethical principles. (Korkmaz, 2012:37-69). After the separation of the church from the state in the West, although religion has become a special issue, it is not possible to talk about a society and economy that is independent of values. As global business activities expand, managers need to have knowledge about the cultures that they did not know before and the work ethics as a part of it. Rice (1999:345). Knowing the characteristics of different work ethics in different societies facilitates understanding of the relationship between morality and business activities. For example, in the Middle East, Saudi Arabia is more individualistic and independent at work than Kuwait and Oman. On the other hand, according to Robertson et al. (2011: 223-244) who argue that the three countries do not differ in terms of their perspective on leisure time, they state that men have higher averages than women in terms of work ethic.

Work ethics is an issue that determines the success of the work done at the individual or social level and the level of prosperity. It is stated that the work ethic is based on the work of the German sociologist Max Weber in 1904, the Protestant Moral and the Spirit of Capitalism. This approach is used to explain the rise of capitalism in the West. However, hard work cannot be attributed to Western culture alone, but in fact it has a different work ethic in terms of the necessity or characteristics of the work, although at different levels of influence in every society. On the other hand, while mostly non-economic, immaterial values are intense in the Middle Ages the Ottoman Empire's inability to adapt to the new world value understanding has prepared its end. At this point, Weber stated that he could not come out of Islam because of the sophistication, conquest and jihad understanding and the despotic state administration that restricted the property rights and accumulation of people, which left everything to fate despite a work ethic that was the basis of capitalism (Arslan, 2000: 13-19), according to the work ethic in areas other than the Christian faith and the related changes are needed in society, working in particular with a mixture of West and East, such as Turkey. In his study comparing the Protestant work values of British and Turkish executives, he concluded that Turkish executives generally have higher work ethics. Consequently, this result, seen as the opposite of Weber, shows that there are barriers to the development of the capitalist spirit in the Islamic world, not the fact that Islam cannot produce the capitalist spirit. Essentially the Islamic lifestyle supports work-oriented behaviors such as the view of hard work as worship, accepts waste of time and resources as a sin, prohibits empty and unnecessary activities.

The organizational results of Islamic Work Ethics have been examined in various studies. According to them, Islamic work ethic; (Naresh-Raduan, 2010: 79-93) organizational commitment and job satisfaction (Yousef, 2001: 152-169), loyalty of managers (Abbas et al., 2007: 93-104). misuse of business tools (computer games, etc.) (Norshidah et al., 2010: 13-23) is closely related to behavior and attitudes. In addition, various studies of Islamic Ethics is related to the individuality of managers or employees. (Mahmood-Ismael,2009:333-346), (Abbas J.,2008:507-519), (Abbas,1987:575-583). Moreover, work ethics and beliefs are closely related to behaviors such as slowing the job when there is no supervisor or manager, trying to sell the product at high prices, seeing every way as suitable for making money, producing poor quality goods and showing cheap despite increasing prices.

On the other hand, the concept of alienation, which can be defined as the separation of man from his own self, product and natural and social environment, has become a symbol of revolt against a rationalist and technocratic civilization form which mechanizes, commodifies and eventually enslaves man. Alienation has a sociological, psychological, political and philosophical meaning. (Tolan, 1981:3). Empirical analysis of the relationship between emotional labor and alienation, and found a positive and meaningful relationship between the two concepts, was related to the concept of alienation from work (Kaya and Serçeoğlu, 2013).

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Theoretical Framework

Work Ethics

Work ethics is based on the values or beliefs that people have about work (Islamic, Protestant, etc.). It is stated that people who have good work ethics should be selected for good positions and should be given more responsibility and reward (Ali-Al Owaihan, 2008: 5-19). Much of the work on the work ethic, which expresses the individual's attitudes towards his work, is mostly based on the ideas of the German sociologist Weber (1958) about Protestant work ethic in the West (Naresh-Raduan, 2010: 79-93).

Islamic and Protestant Work Ethics

The aims of Islam are not primarily materialistic, but are based on the fulfillment of spiritual needs, such as brotherhood, social and economic justice, such as the goodness of humanity and a good life. (Chapra, 1992). Ethics is important for social and economic development of undeveloped societies and overcoming administrative and economic problems that need to be eliminated. In this context, Ali (1988) developed the Islamic study ethics scale. From an Islamic point of view, work is a necessary activity, a necessity for balancing the individual and social life and meeting the human needs. At the same time, according to Abbas (1987: 575-583), the concept of work provides independence, self-esteem, satisfaction, success, happiness, pride and business development to the individual. This suggests that it leads to an increase in society and prosperity. Ali (2005) defines islamic work ethics as effort, competition, transparency and ethical responsibility. Accordingly, hard work, timeliness and continuity are important. Accordingly, hard work, attention to timings and continuity are important. In addition, Naresh-Raduan (2010: 79-93) stated that the study should be followed not only as a result but as a tool for personal development and social relations, the dedication to work and creativity as virtue, and the importance of justice and generosity.

Alienation to Work

Alienation is a process that arises as a result of the machine intervening in humanity and destroying human creativity, causing the person to lose sensitivity to himself, other people and his environment. On the other hand, alienation at work occurs because the employee cannot have control in the business process and as a result of this, the person performs his / her job not voluntarily, due to a neccessity. The human being alienated from his work is distanced from his own characteristics such as sovereignty, change and development of nature, being and knowing, which distinguishes man from all other living beings. In the meantime, while the nature, environment, work environment and social environment may be mentioned, one discontinues to change and develop them. By encouraging this situation, what increases the dimensions of human alienation; to meet the needs of being human, by means of narrowing the productive feature and increasing the consumption situation. (Şeriati,1992:247). On the other hand, Cangızbay (1989:133) define man as a human being losing his sovereignty over the loss, behavior and reasoning of something that is at the basis of his human and internal features. According to another evaluation, the adaptation of the individual to his / her socio-cultural and natural environment, losing control of his / her environment and becoming increasingly helpless and lonely, are expressed as alienation (Çetin et al. 2009).

Methodology

In the scope of the study, firstly literature review was conducted. Afterwards, primary data were collected by survey method about the effects of demographic characteristics on Islamic Work Ethics and Alienation. Through this study, attitudes and behaviors of banking sector employees working in Kirikkale province to Islamic Labor Ethics and alienation concepts were analyzed by demographic characteristics and their results were shared. The Islamic Study Ethics Scale was developed by utilizing 17 expressions (Ali, 1988; Naresh Kumar, Raduan Che Rose, 2010) in the literature. The Alienation Scale utilized in this study is a 6-item alienation scale developed by Kaya and Serçeoğlu (2013).

The main population of the research is the employees of the banking sector in Kırıkkale. A total of 91 bank employees were selected by simple random sampling from the population. The aim of this study is to determine

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the relationship between Islamic work ethics and alienation. In addition, the study will determine how Islamic work ethics and alienation differ in terms of demographic variables.

Results

Demographic Results

The demographic distribution of the bank sector employees participating in the research is shown below.

Table 1: Demographic Results

VARIABLE	CATEGORY	FREQUENCY	(%)
Gender	Female	28	30,8
	Male	63	69,2
Marital status	Married	70	76,9
	Single	18	19,8
	Widow(er)	3	3,3
Age	30 and below	28	30,8
	31-40	54	59,3
	41-50	9	9,9
Bank's Capital Structure	State Bank	22	24,2
	Private Bank	69	75,8
Position	Teller	19	20,9
	Service Officer	15	16,5
	Servis Manager	21	23,1
	Director's Assistant	23	25,3
	Director	4	4,4
	Manager	9	9,9
Experience	1-5 years	25	27,5
	6-10 years	31	34,1
	11-15 years	26	28,6
	16-20 years	7	7,7
	Above 21 years	2	2,2

When the demographic variables presented in Table 1 are examined, it is seen that male employees (63) are more than female employees (28) and married employees (70) are more than single (18) employees. When the age distribution is analyzed, the maximum age range of the bank employees is between 31-40 years (54), and then the minimum age group of 30 and under (28) comes from the 41-50 age range. Most of the data obtained consists of private bank employees (69). When experience groups are examined, it is seen that 1-5 years (25), 6-10 years (31) and 11-15 years (26) groups constitute 90% of the total number of employees.

Normality Test

In order to determine the type of analysis to be performed, it should be determined whether the data exhibits normal distribution. Field (2009) states that parametric methods should be used in data showing normal distribution and non-parametric methods should be used in data that do not exhibit normal distribution. Kolmogorov Smirnov test was used to determine whether the data were normally distributed or not.

Table 2: Normality Test Results

Kolmogorov-Smirnov			
Variable	**Statistics**	**df**	**p**
Islamic Work Ethic	0,210	91	0,000
Alienation to Work	0,418	91	0,000

Examining Table 2, it is seen that Islamic working ethics and alienation variables deviate significantly from the normal distribution ($p < 0.05$). Non-parametric methods will be used for the analysis of data that do not exhibit normal distribution.

Comparisons Between Demographic Groups

Nonparametric Mann Whitney and Kruskal Wallis methods were utilized to make comparisons between demographic groups. Mann-Whitney test was used for comparison of two groups and Kruskal-Wallis test was used for comparison of more than two groups.

Table 3: Mann Whitney U Test Results of Gender Groups

Variable	**Gender**	**N**	**Rank Average**	**Total Rank**	**U**	**p**
Islamic Work Ethic	Female	28	50,64	1418	752	,247
	Male	63	43,94	2768		
Alienation to Work	Female	28	40,50	1134	728	,140
	Male	63	48,44	3052		

Analyzing Table 3, it is seen that the variables of Islamic working ethics and alienation to work do not differ significantly according to gender groups ($p > 0.05$). When the average of the rankings is examined, the average rank of Islamic working ethics of female employees is higher than that of males and the average of the rankings is lower than that of males.

Table 4: Mann Whitney U Test Results of Marital Status Groups

Variable	**Gender**	**N**	**Rank Average**	**Total Rank**	**U**	**p**
Islamic Work Ethic	Married	70	43,01	2897	412	,019
	Single	18	58,75	1019		
Alienation to Work	Married	70	47,76	3240	505	,148
	Single	18	38,83	676		

Marital status groups showed a significant difference ($p < 0.05$) in terms of Islamic work ethic variable, but no significant difference in terms of alienation from work ($p > 0.05$). (Table 4). When the rank averages are examined, it is seen that Islamic working ethics is significantly higher in single bank employees than married bank employees.

Table 5: Kruskal Wallis Test Results of Age Groups

Variable	Age Groups	N	Rank Average	χ^2	sd	p
Islamic Work Ethic	30 and Below	28	50,30	1,877	2	,391
	31-40	54	45,20			
	41-50	9	37,39			
Alienation to Work	30 and Below	28	43,00	1,075	2	,584
	31-40	54	46,54			
	41-50	9	52,11			

When the average of Kruskal-Wallis test results of Table 5 age groups are examined, it is seen that Islamic working ethics is the highest and alienation is the lowest among bank employees under 30 years of age. Similarly, the average rank of the 41-50 age group is the lowest for Islamic work ethic and the highest for alienation to work. In other words, alienation is low in the group with high Islamic work ethic and high alienation in the group with low Islamic work ethic. However, the differences according to age groups were not statistically significant ($p > 0.05$).

Table 6: Mann Whitney U Test Results of Bank Capital Structure Groups

Variable	Capital Structure	N	Rank Average	Total Rank	U	p
Islamic Work Ethic	State	22	40,07	881,50	628,5	,210
	Private	69	47,89	3304,50		
Alienation to Work	State	22	56,41	1241	530	,018
	Private	69	42,68	2945		

When Table 6 is analyzed, it is determined that the bank capital structure groups do not show significant difference in terms of Islamic working ethic variable ($p > 0.05$), but it shows significant difference in terms of alienation from work ($p < 0.05$). When the average of the rankings is examined, it is seen that alienation to work is significantly higher in state bank employees than private bank employees.

Table 7: Kruskal Wallis Test Results of Title Groups

Variable	Position Groups	N	Rank Average	χ^2	sd	p
Islamic Work Ethic	Teller	19	46,05	4,007	5	,548
	Service Officer	15	52,27			
	Servis Manager	21	41,76			
	Director's Assistant	23	50,89			
	Director	4	35,75			
	Manager	9	37,39			
Alienation to Work	Teller	19	49,84	9,000	5	,109
	Service Officer	15	37,20			
	Servis Manager	21	51,00			
	Director's Assistant	23	38,35			
	Director	4	64,75			
	Manager	9	52,11			

When the rank average of the Kruskal-Wallis test of the Table 7 title groups is examined, it is seen that the highest level of alienation from the workforce among the director group bank employees with the highest Islamic work ethic. In the group of service workers with the highest Islamic work ethic, alienation was the lowest. However, the differences were not statistically significant (p> 0.05).

Table 8: Kruskal Wallis Test Results of Experience Groups

Variable	Experience Groups	N	Rank Average	χ^2	sd	p
Islamic Work Ethic	1-5 Years	25	48,80	4,182	4	,382
	6-10 Years	31	45,11			
	11-15 Years	26	49,54			
	16-20 Years	7	28,79			
	Above 21 Years	2	39,00			
Alienation to Work	1-5 Years	25	49,84	6,177	4	,186
	6-10 Years	31	37,20			
	11-15 Years	26	51,00			
	16-20 Years	7	38,35			
	Above 21 Years	2	64,75			

Examining the average of Kruskal-Wallis test results of Table 8 experience groups, it is seen that Islamic working ethics is highest in 11-15 years experience bank employees and lowest in 16-20 years experience group. On the other hand, alienation is highest in 11-15 years experience group and lowest in 6-10 years experience group. Unlike comparisons between other demographic variables, the highest rank average for both variables was in the same group (11-15 years of experience). However, the differences according to experience groups were not statistically significant (p> 0.05).

Analysis of Relations Between Variables

Non-parametric Sperman correlation test was used for correlation analysis showing the relationship between variables. A negative correlation between correlation analysis and Islamic work ethic and alienation is expected.

Table 9: Relationship Between Variables Sperman Correlation Test Results

Variable		IWE	AW
Islamic Work Ethic	**Correlation Coefficient**	1.000	-0.570**
	p		0,000
	N	91	91
Alienation to Work	**Correlation Coefficient**	-0.570**	1.000
	p	0,000	
	N	91	91

IWE: Islamic Work Ethics. **AW:** Alienation to Work.

When the relationship between variables and Sperman correlation test results were examined, it was found that there was a negative, medium level 99% significance relationship between Islamic work ethic and alienation.

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Conclusion

The role and impact of "Islam as a social phenomenon in social life is clear. As a "religion", the effects of "Islam in working life have different reflections both in demographic and sectors. As a matter of fact, Islamic work ethic is based on "Quran and Sunnah". "So, when you finish one job, you put yourself in the other" in (Insirah: 7) and "He is in a waste of two days equal" (Hadith-i Sharif), this importance is made clear. Again, with "Make the measurement exactly. Do not be one of the missing" (Shuara: 181) both in business and commercial issues to be sensitive and ethical to be advised.

In this study, the relationship between the variables of demographic groups and the phenomenon of Islamic work ethics and alienation from the Qur'an and Sunnah of the employees working in the banking sector of Kırıkkale province were investigated. Since there are no studies examining these two variables together in the literature, to the best of our knowlege, it is not possible to make a comparison with other studies. Therefore, the relationship between these two variables was revealed as a result of this study and statistical results.

According to demographic variables, male employees (63) are more than female employees (28) and married employees (70) are more than single employees (18). When the age distribution is analyzed, the maximum age range of the bank employees is between 31-40 years (54), and then the minimum age group of 30 and under (28) comes from the 41-50 age range. Most of the data obtained consists of private bank employees (69). When experience groups are examined, it is seen that 1-5 years (25), 6-10 years (31) and 11-15 years (26) groups constitute 90% of the total number of employees.

Among the Bank's employees, those who are 30 years of age or younger have the highest level of Islamic work ethic and lowest level of alienation from work. In the 41-50 age group, the level of Islamic work ethic is the lowest and the highest for the alienation from work. In other words, the level of alienation from work is low in the group with a high level of Islamic work ethic, and the level of alienation from work is high in the group with low Islamic work ethic. The differences between the groups were not statistically significant ($p > 0.05$).

According to the findings obtained from the analyzes, the difference between the demographic groups and the marital status group was found to be statistically significant. According to the findings, Islamic working ethics of the banking sector employees in Kırıkkale province were found to be higher in single employees than married employees. Another significant difference between demographic groups is that alienation from work is higher in state bank employees than private bank employees. The relationship between Islamic work ethic and alienation was tested by Sperman correlation method. Accordingly, it was found that there was a negative correlation between variables (-0.57).

The findings of this research are valid in the demographic frame-sample of the participants. By expanding the boundaries of the research; It is the main suggestion that dealing with variables such as job satisfaction, organizational trust, commitment, justice, citizenship, burnout, creating an atmosphere of trust and improvements in organizational communication will make valuable contributions to the literature.

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The Economy Policy Results of Possible BREXIT in the Paradox of Public and Government Europeanness Perception in the UK

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Abstract

The Second World War put its stamp as the most devastating in the world's recent history, by the death of forty million people. At the end of the First World War, the treats, which are againist to some national benefits, have signed rapidly; the problems were papered over the cracks. On a side, there are appetitive international markets; on the other side, the fascist governments that could not achieved what they demand… The economic anxieties of 1929 Great Depression… Many nation states that were pressed into the Continental Europe… Although the Allied States were the victors of the Second War, all the countries that entered the war, suffered heavy losses. The increasing fascism movement of thought has polarized the nation countries. This circumstance has teased the European intelligentsia, thoroughly.

Before Europe's speriority struggle between the industrial and trade giants of Germany and France reached a level of fearful again, projects for launched through a European integration or the United States of Europe. The UK, which closely follows the functioning of European integration, has established the European Free Trade Area (EFTA) with the Scandinavian countries. However, this competitive trade union did not satisfy Britain and applied for membership to the European Union in 1963. Although, the two vetoed application by French Prime Minister Charles De Gaulle, the UK gained the membership of EU by the third application. The philosophical approach and background underlying the UK's application to the integration was purely realistic and pragmatist anxieties. The government, which applied for membership to the EU, has taken the path of integration for economic concerns rather than to regard the UK, as more aristocratic and superior than other countries.

Besides the EU membership of UK was leant towards by charter members; indeed, due to the British public's considering itself as noble and aristocratic obsessions; the entrance could not be said indulged both sides. Then again; in the membership process up till now, the British politicians have always voiced the seperation from the EU to keep their domestic political status and achievements. At that point, there are two ideological emerge, which are Euroscepticism and Europeanness.

Keywords: EU membership of the UK, Europeanness perception, Euroscepticism, BREXIT.

Introductory Remarks

Up till now from 1973, the UK governments and people have been divided over the Europeanness identity. Considering the number of votes opposing EU membership has been always higher than integrationists. Governments and prime ministers have also been eager to end European Union membership. Political parties and leaders, who declared their willing to leave the EU, expressed this declaration with respect to a domestic political material for most of the people.

As for imagination the Brexit process, it is independent from political benefits, it will be available to state that the people in Britain are bipolarized regarding political ideas. One group argues that the EU membership should

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maintain. One of the reasons for this is that they percept the UK as a European country. Although Britain is a cluster of islands outside of Continental Europe, its historical infrastructure and background accumulations and values like European countries in terms of linguistics and culture. Additionally, because of domination in the European markets, the Channel Tunnel between Britain and France, almost half of the British people identify themselves within the framework of European belonging.

In addition, this location, along with highly developed manufacturing capacity, commercial products have been directed to European countries mostly. Even just from this perspective, the Europeanness perception satisfies the supporters of the EU in the view of realistic and pragmatic mentality.
Opponents to the European Union, who interpret historical consciousness differently, evaluate the tendency of philosophical thought through superiority or nobleness. In other words, they believe that they are an aristocratic and superior people, regarding British Kingdom different from Europe both geographically and politically. Therefore, there are significant people, who claim that Britain does not need EU membership; on the contrary, Europe should keep relations with Britain well. However, a huge paradox emerges in this approach. If Europe needs Britain, which political and economic cooperation will be met by this requirement? Doesn't this suspicious Europeanness thought of "Euroscepticism" get Britain introvert? Do this mass of people and politicians, who want to withdraw from Europe, rely on political, commercial, diplomatic and military relations with the US and the NATO? Will the fact that the US has always supported Britain's EU membership will be enough to drive this great royal location away from Europe?

This study examines the referendums, the prime ministers who developed discourses on domestic politics, and the chains of indecisiveness history on the issue of Britain's wish to permanently withdraw from EU membership, since the day they were accepted into the EU. The aim of the study is to project new balances in the post-Brexit region by codifying the implications of the effects and consequences of Britain's possible withdraw from EU membership.

The UK between Europeanization and Scepticism

The two terms which are situated in the EU literature as the two positions taken by the British people in the EU process, have been adopted by the public and the social scientists rather than the government. The British governments did not hesitate to use the idea of withdrawing from the Union as a political tool for public sphere. They adopted withdrawal opinions as an important policy for elections, privately during the Thatcher period, even though a diplomatic language prevails in EU negotiations, conferences and meetings has always postponed the idea of realizing Brexit.

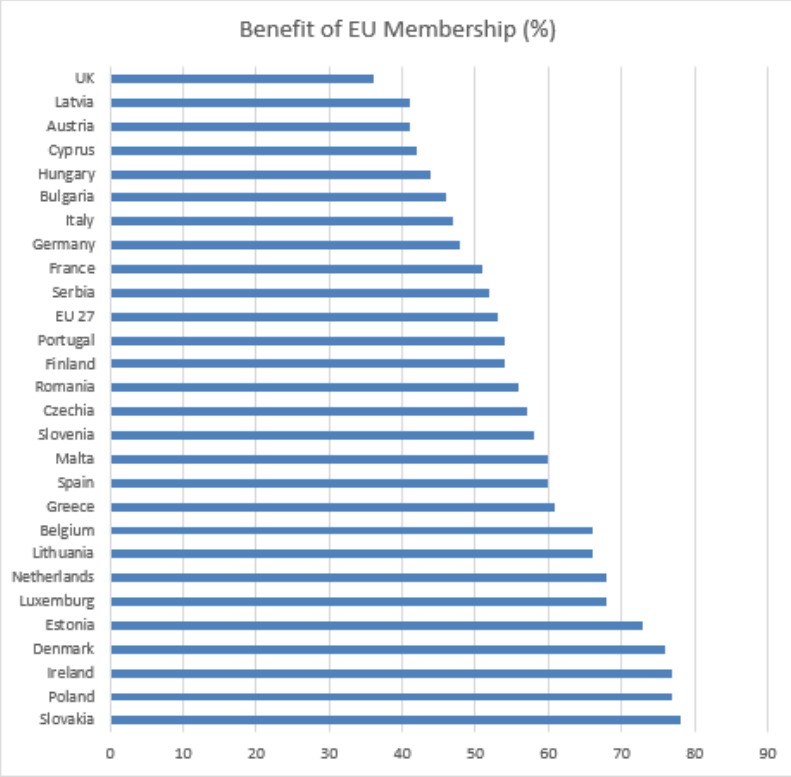


Figure 1: Perception of Benefits from European Union Membership

Source: (Standart Barometer, 2010)

The philosophical infrastructure of integration, which aims to establish an identity over Europeanism in Continental Europe, has not been accepted by the British public. Geographically, the UK, which is a community of islands separated from Continental Europe, runs in the same track the same as countries with a nation-state identity. According to Delanty (2015: 295), although the idea of Europe emerged as a higher identity, Europe is not an alternative to nationalism, but rather the consolidation of nation-state idea.

By 2010, the lowest perception of Europeanness has been belonged to British people by the rate of 36%. This rate is also quite below the EU average (53%).

The opinion of Euroscepticism objects the delegation of members to the EU. The hard-line fraction defends the subsidiarities opinion completely and intemperately. The soft-line fraction objects also the Union thought but, according to them, the delegation of the authority can be transferred to a limited extend, not entirely (McCormick, 2014: 182). Eurosceptics were gathered under the group of "Europe of Nations and Freedom (ENF)" founded by Sir James Michael Goldsmith in 1994, which have conspicuous structure and unstable behaviour. This political group, which concretely opposes the European Union and discretely opposes the European integration opinion, is felt the dominance of Britain. The British Independence Party (UKIP), which has always advocated Britain's withdrawal from the EU, argues that countries should be left with their own dynamics (McCormick, 2015: 308-309).

The former prime minister Tony Blair, who peaked in his claim to superiority, claimed that Europe needs Britain, by equalling Euroscepticism from the top. Blair often emphasized the United States, in his expressions on capitalist ideas. The fact that he resorted to notions such as global peace, security, NATO and the US ally

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indicated that he did not feel cold about EU membership. However, in his public statements and speeches, he defended Brexit, just as former prime ministers did (Blair, 1997).

Results of Possible Brexit

Most of authors who had studied this process, declared different ideas about a possible post-Brexit era. However, no separation has occurred so far. Under this topic are given brief discussions that about a possible Brexit in terms of Britain, European Union and Turkey.

Prime Minister Theresa May's resignation on 7 June 2019 (The Guardian, 2019), revealed how it is difficult and responsible to manage the Brexit process. After the British Parliament rejected the Brexit Agreements three times, PM May declared that this would have heavy consequences, and may not want to bear the burden of such a responsibility on her shoulders. And in fact, the anti-Brexit opposition of the other political groups remained solely about voting concerns.

Baimbridge and Whyman (2017: 200) pointed out that if Britain left the EU, it would compete closely with European countries in industrial and commercial terms, illustrating the miraculous development of Germany and Japan in terms of competition and trade.

After a possible Brexit, it is expected that the prices of goods and services will decrease due to the restriction of free movement. On the other hand, IMF (2016), which raised expectations to the level of anxiety, warns that many macro indicators will come to risky levels in post-Brexit era. IMF also explains in detail that Britain will have to develop tight monetary and fiscal policies.

Concluding Remarks

In the case of Brexit, it is seen that Britain will not have any trouble in taking part in new economic formations and will be able to create conjunctures that can maintain their one-to-one relations with developed countries in which they have commercial relations. However, US has always supported the UK for being in the EU. Since, the EU is a huge competitor for the US, in terms of world markets. So, in order to be in the EU, the US supports the EU membership of Britain, a very significant ally for itself.

A two-way comparison of the effects of Brexit would be an advantage for developed countries that are members of the EU. Since Britain, which devotes its whole energy to EU relations, will transfer this energy to commercial cooperation. However, it cannot be claimed that Britain benefited greatly from this circumstance.

The second direction is viewed, developing countries in commercial relations with the EU, such as Turkey, which can get into a disadvantageous position for the free movements will be affected in a negative way. In developing countries such as Turkey, in which cooperation is sure to experience losses in trade volume. In this case, developing countries will have to construct more commercial relations with Britain.

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A Study of India's Unemployment Conundrum

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Abstract

On May 23, 2019, the day of completion of this Paper, India completed the world's largest ever democratic election process to re-elect the incumbent National Democratic Alliance (NDA) government under the Prime Ministership of Narendra Modi, frequently referred to as 'NaMo' in popular media. Narendra Modi's victory is so resounding, that it is being touted as a 'TsuNaMo', washing away in its wake, even the grand old party of India, the Indian National Congress, and many other dynastic political parties. However, brutally criticised for failing to live up to its promise of creating millions of jobs during its first term, the NDA 2.0 government will have its task cut out, when it comes to tackling India's severe unemployment crisis. A story titled 'Blueprint 2.0: Here's what the new government's first big decisions are likely to be' in Economic Times, clearly identified the possibility of substantive work on job creation. The story also identified three large scale job-creating sectors, that are likely to see radical reforms. While it might be fine to bring reforms in such specific sectors in the short and medium terms to facilitate quick large-scale employment,

1. In the long term, would it be more advisable for the government to orient itself towards creating job creators rather than creating jobs themselves?
2. Would such a shift in orientation substantially reduce direct burden on the government and move the nation towards a more entrepreneurial, and hence, a self-reliant society?

To this end, the Paper aims to suggest steps that the government can take to give a greater boost to entrepreneurship. The data and information for the purpose of the study have been collected through secondary sources, primarily websites and media reports. The Paper concludes that the government has already created a strong support system comprising of policies, institutions and funding; it is just a matter of leveraging the same for greater impact.

***Keywords**:* Unemployment, Entrepreneurship development, Job creation, Job creators

Introduction & Background

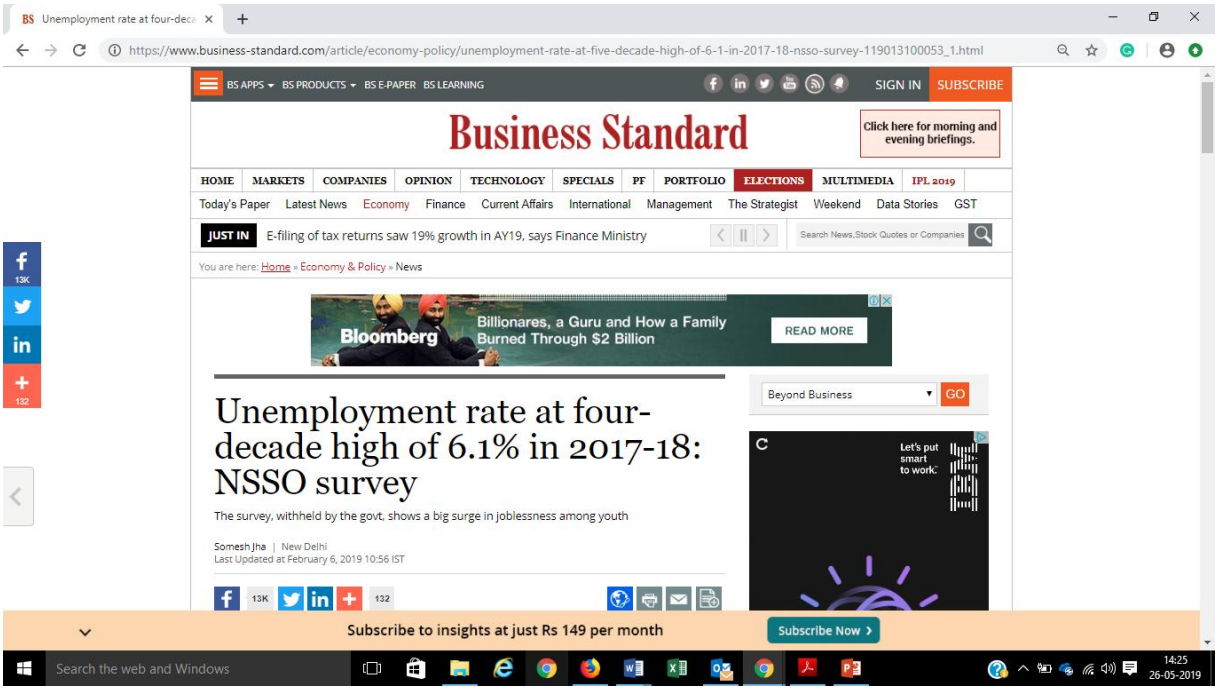
On February 1, 2019, Economic Times, a popular business newspaper in India, quoted the Niti Aayog CEO Amitabh Kant as saying, "The suggestion that the government is trying to hide something was incorrect. There is plenty of evidence that jobs are being created but the problem, however, is the lack of quality employment." (ET Bureau, 2019)

According to its website, "The National Institution for Transforming India, also called NITI Aayog, is the premier policy 'Think Tank' of the Government of India, providing both directional and policy inputs. While designing strategic and long-term policies and programmes for the Government of India, NITI Aayog also provides relevant technical advice to the Centre and States." (https://niti.gov.in, n.d.) It is obvious that it is a high-level, highly responsible entity and its utterances cannot just be brushed aside.

However, within less than a week from the Niti Aayog quote, a headline in the Business Standard **(Fig. 1)** claimed, "The country's unemployment rate stood at a 45-year-high of 6.1 per cent in 2017-18, according to the National Sample Survey Office's (NSSO's) periodic labour force survey (PLFS)." (Jha, 2019)

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Fig. 1. Business Standard Headline (February 6, 2019)



Source: https://www.business-standard.com

It is alleged that this was a leaked version and not an official report. The report has since been at the centre of a controversy after two members of National Statistical Commission (NSC), that includes the acting chairman, resigned. Moreover, they alleged that the government had not released the report despite approval of the NSC. Moreover, no such official report has been published since 2012.

It has further been claimed in popular media that "Data in the 'thwarted' NSSO report shows employed males at 28.6 crore in 2017-18, against 30.4 crore in 2011-12, pegging the unemployment rate for males at 7.1% and 5.1% in rural and urban areas, respectively," (Sharma P. , 2019) suggesting that fewer men were employed in 2017-18 compared with five years ago. According to a media report, the fall, at 6.4%, was steeper in rural areas.

"As per NSSO data, between 2011-12 (published & official) and 2017-18 (leaked and unofficial), there has been a loss of 4.3 crore jobs in rural areas, and 40 lakh jobs in urban areas. It can be said that the total loss in employment in the country during this period stood at 4.7 crore," claimed the report.

If one were to go by these reports, rural women suffered 68% jobs losses, while urban men suffered 96% job losses. "In all, since 2011-12, India's national workforce shrunk by 4.7 crore — more than the population of Saudi Arabia," claimed a report.

During and before the elections, the incumbent government was severely criticised for its reluctance to release the NSSO report on unemployment. On the other hand, government claimed that if the country's economy is growing at 7%, it cannot happen without a corresponding growth in jobs.

The above media reports make it abundantly clear that there is no authentic data available to draw conclusions from. As such, it is obvious that there would be speculation, especially from the opposition parties, and also in the media. It is on the backdrop of this conundrum that the present Paper is conceived.

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Research Questions

While studying the data and information regarding the status of unemployment, the Paper has the following specific research questions:

i. In the long term, would it be more advisable for the government to orient itself towards creating job creators rather than creating jobs themselves?

ii. Would such a shift in orientation substantially reduce direct burden on the government and move the nation towards a more entrepreneurial, and hence, a self-reliant society?

Objectives

On the backdrop of the unemployment crisis in India, the objectives of the Paper are:

i. To assess the existing entrepreneurship development initiatives of the government

ii. To suggest ways to leverage the existing infrastructure and support system for entrepreneurship development to create job-creators

Methodology of the Study

The data and information for the purpose of the study have been collected through secondary sources, primarily websites and media reports.

India's Unemployment Status

According to the Centre for Monitoring Indian Economy (CMIE), "Unemployed, willing to work and actively looking for a job" is the status for a person who is unemployed because of a lack of job and where such a person is actively looking for a job (https://cmie.com/). In an attempt to know the number of such people and to understand the status of unemployment rate in India as on date, the author explored and examined multiple sources, so as to arrive at authentic numbers. Author presents a few of these numbers, along with their sources to highlight the challenges in doing so. As can be observed from **Fig. 2**, which depicts the data as per CEIC which uses the World Bank data, the annual unemployment rate for India from the year 2007 till the year 2018. The data clearly shows a decline in the unemployment rate from the peak of 2013, sometimes sharp and sometimes slight. For example, from 2016 to 2017, the decline is fairly sharp, but from 2017 to 2018, there is only a slight decline. But most importantly, the unemployment rate is pegged at 2.55 for 2018. However, except for a very slight increase from 2014 to 2015, it is clearly a declining trend.

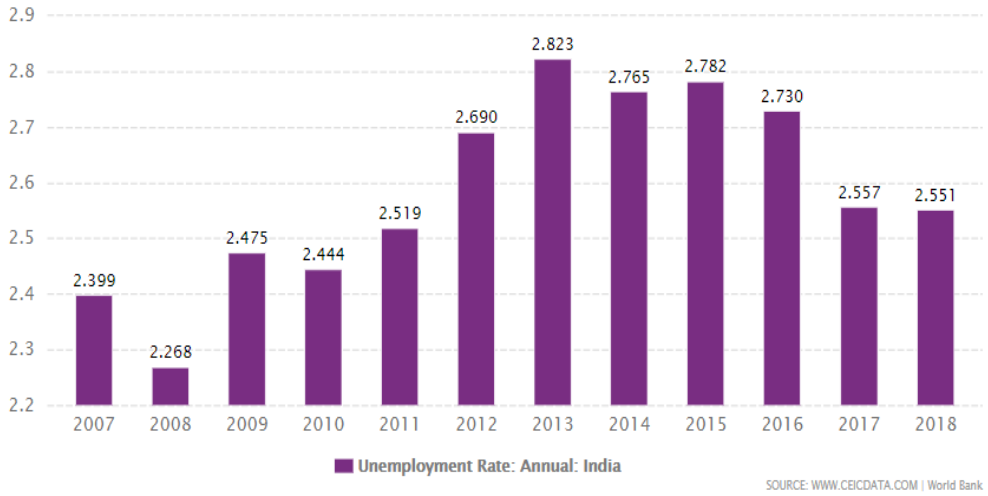
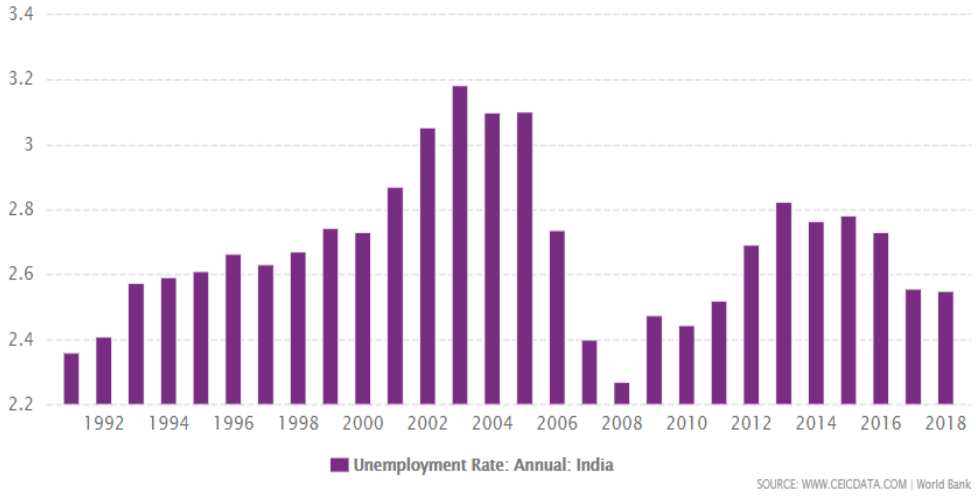


Fig.2: Unemployment Rate: Annual: India (2007-2018)
Source: www.ceicdata.com

In fact, Fig. 3 depicts the data from the same source for the years 1991 to 2018, putting the situation in an even better perspective. The data shows that India had reached the peak of unemployment in the year 2003. The data further shows that the unemployment rate in India had, in fact, been increasing fairly sharply after reaching its lowest point in the year 2008.

Fig. 3. Unemployment Rate: Annual: India (1991-2018)



Source: www.ceicdata.com

Table 1 presents the same 1991 to 2018 data, in a different way, giving more statistical details. As can be observed from the table, the data has been updated as recently 25th April 2019, and has been sourced from World Bank, making it fairly authentic. As per the data, the current rate of unemployment at 2.55, is still lower than the Mean of 2.68, across the period.

Table 1. India Unemployment Rate (1991-2018)

India Unemployment Rate

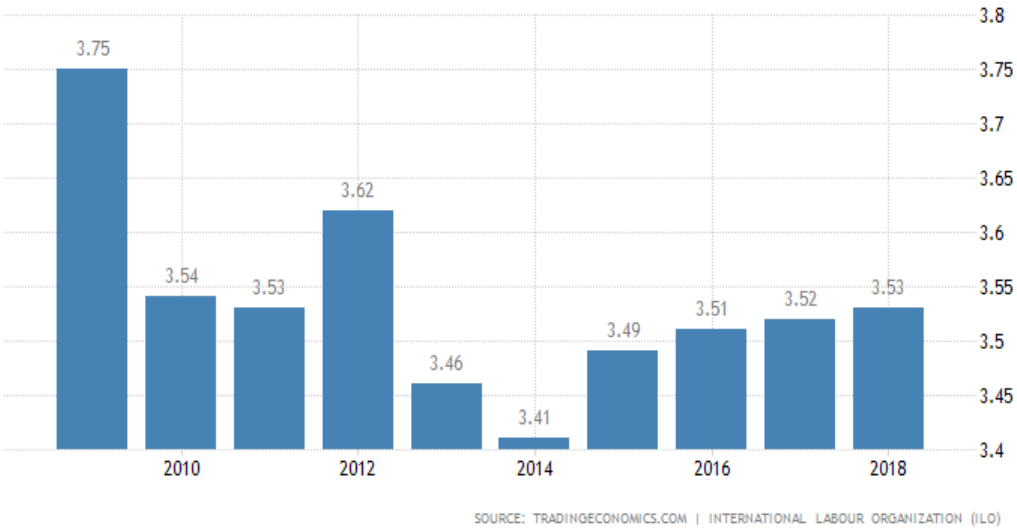
Series Details		
Series ID		355185137
Name		India Unemployment Rate
Country		India
Frequency		Yearly
Unit		%
Status		Active
Source		World Bank
First Date		1991
Last Date		2018
Last Updated		25 Apr 2019
Statistics		
Mean		2.68
Variance		0.05
Standard deviation		0.23
Skewness		0.53
Kurtosis		-0.02
Coefficient variation		0.09
Median		2.67
Max	2003	3.18
Min	2008	2.27
Previous observation	2017	▼2.56
Last observation	2018	▼2.55
Number of Observations		28

Source: www.ceicdata.com

The other source author explored was the Trading Economics data sourced from ILO. As can be observed from Fig. 3, the unemployment rate in India is 3.53, a difference over 1, from the 2.51 as per the CEIC number. This difference is very large, especially considering the fact that the Mean itself is 2.68 as per the CEIC data. However, a quick look at the entire dataset will show that the Trading Economics data sourced from ILO has consistently shown higher rates of unemployment, which might possibly be attributed to the way the rate is calculated. The difference, if any, in the calculations has not been verified as a part of this study. Another data point that stands out in the Trading Economics data is the one that says 2014 was the year with the lowest rate of unemployment at 3.41. However, since the data in Fig. 3 is available only from 2009, it could not be compared for 2008. It would certainly have been interesting to compare the 2008 number as the rate was lowest in that year as pert eh CEIC data sourced from World Bank.

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Fig. 3. India Unemployment Rate (2009-2018)

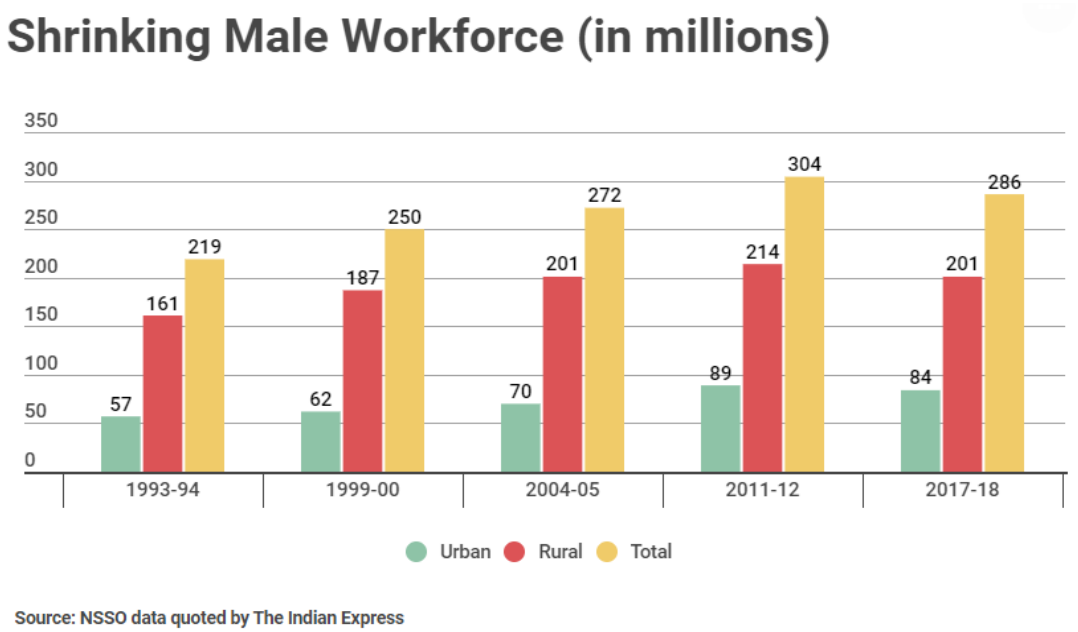


Source: https://tradingeconomics.com

A part of the last source explored by the author is presented in **Fig. 4**. The chart is taken from a media report that appeared in The India Express newspaper (Sharma P. , 2019), which claims to have sourced the data from NSSO. The author could not verify the claim since the said NSSO report has not been officially published; it is only alleged to have been leaked as mentioned in the Introduction.

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Fig. 4. Shrinking Male Workforce



Source: NSSO data quoted by The Indian Express

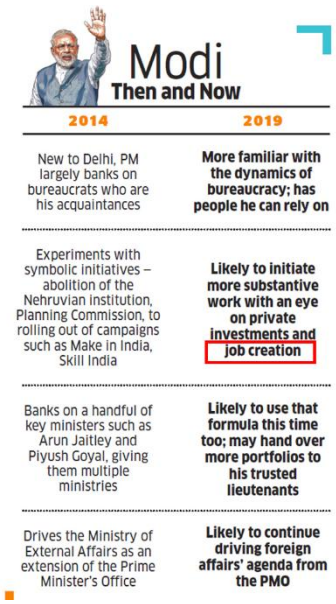
Irrespective of the differences in the data cited above, and the decreasing trend in the rate of unemployment, the fact still remains that in the light of increasing population, the actual number of unemployed persons is growing in India, and it does pose a huge socioeconomic, and hence, a political challenge to the reinstated government.

Solution to Unemployment

On May 23, 2019, India completed the world's largest ever democratic election process to re-elect the incumbent National Democratic Alliance (NDA) government under the Prime Ministership of Narendra Modi, frequently referred to as 'NaMo' in popular media. Narendra Modi's victory is so resounding, that it is being touted as a 'TsuNaMo', washing away in its wake, even the grand old party of India, the Indian National Congress, and many other dynastic political parties. However, brutally criticised for failing to live up to its promise of creating millions of jobs during its first five-year term, the NDA 2.0 government will have its task cut out, when it comes to tackling India's severe unemployment crisis. A story titled 'Blueprint 2.0: Here's what the new government's first big decisions are likely to be' in Economic Times (Sharma S. N., 2019), clearly identified the possibility of substantive work on job creation (**Fig. 5**).

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Fig. 5. Comparison of Modi Government's focus areas



Source: https://economictimes.indiatimes.com

Among other things, the same story also identified three large scale job-creating sectors, that are likely to see radical reforms (**Fig. 6**); they are construction, textiles and tourism

Fig. 6. New Government Roadmap



Source: https://economictimes.indiatimes.com

While it must be accepted that the media reports could be mere speculation based on the media house's own perception of what needs to be done and how it needs to be done, there is no denying the fact that the re-elected government, in its second term, must take visible measures and must derive visible outcomes from those measures in terms of job creation.

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Having established that there is a severe problem of unemployment, and that the government must do something tangible about it, the Paper advocates the obvious and well-accepted solution of Entrepreneurship. To that extent, this Paper does not claim to make any new contribution. As far as the other solutions for creating mass employment are concerned, governments are well-equipped to do that. The problem is, the measures may not be sufficient. There are several studies that have proposed the entrepreneurship solution; a very recent one being 'UNEMPLOYMENT, ENTREPRENEURSHIP AND EDUCATION' (Rajgarhia, 2019), where the author argues, "We are nearing the all-time highest level of unemployment in our country. Rise in population and unemployment is set to be fatal for the economy."Without going into the veracity of the claim regarding the 'all-time highest level' of unemployment, what needs to be looked into, in this March 2019 study is the argument that the energies of the unemployed youth could be channelized for accelerating India's development journey. The study goes on to say that, "Entrepreneurial ventures also generate employment for others hence entrepreneurship is the perfect solution for our economic woes pertaining to constructive utilization of our youth". It is hard to challenge that argument. The study focuses primarily on higher education in the context of entrepreneurship ecosystem and concludes that, "Higher education is also an essential component of this ecosystem and must play an instrumental role in supporting entrepreneurship in the country".

Existing Government Support to Entrepreneurship

The author then explored steps taken by the governments, both NDA and earlier, for developing as well as supporting entrepreneurship. Known to possess a keen sense of business the current Prime Minister had taken personal interest in entrepreneurship development through initiatives like Start-up India, Make in India, and others. There are a number of steps that the NDA government has taken in its first term, in addition to the ones that were already in existence. To be specific, **Table 1** lists some of those initiatives in alphabetical order.

Table 1. Government of India Support for Innovation and Entrepreneurship in India

Sr.	**Initiative**
1	Atal Innovation Mission (AIM)
2	Biotechnology Industry Research Assistance Council (BIRAC)
3	Department of Science and Technology (DST)
4	Digital India
5	Jan Dhan- Aadhaar- Mobile (JAM)
6	Make in India
7	National Skill Development Mission
8	Pradhan Mantri Kaushal Vikas Yojana (PMKVY)
9	Pradhan Mantri Mudra Yojana
10	Prime Minister's Employment Generation Programme (PMEGP)
11	Science for Equity Empowerment and Development (SEED)
12	Stand-Up India
13	Startup India
14	Support to Training and Employment Programme for Women (STEP)
15	Trade related Entrepreneurship Assistance and Development (TREAD)

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The details of most of these initiatives have been explained in a document sourced in entirety from the Global Entrepreneurship Summit (2017) website and reproduced as **Exhibit 1** at the end, except Pradhan Mantri Mudra Yojana, also called as the Mudra Loan Yojana, and the Prime Minister's Employment Generation Programme (PMEGP).

As per its website, Mudra Yojana has been described as, "Pradhan Mantri Mudra Yojana is the scheme to fund the unfunded." As such, it is a highly ambitious, and well-intended scheme that focuses on the section of the society that does not have the traditional creditworthiness in terms of credit history. Incidentally, 'Mudra' stands for Micro-Units Development & Refinance Agency Ltd. And as the website describes, "This Mudra is the new institution established by Indian Government to provide funds for non-farm sector, non-corporate and micro or small enterprises." **Table 2** presents types of loans available under this scheme.

Table 2. Pradhan Mantri Mudra Yojana (PMMY)

Sr.	**Type of loan**	**Amount of loan (INR)**
1	Shishu	Upto INR 50,000
2	Kishor	INR 50,000 to 5,00,000
3	Tarun	INR 5,00,000 to 10,00,000

Source: www.mudraloanyojana.com

Prime Minister's Employment Generation Programme (PMEGP) is in fact a combination of two earlier schemes, viz. Rural Employment Generation Programme (REGP) and Prime Minister's Rojgar Yojana (PMRY). It is clear from their names that both the schemes were launched for employment generation. PMEGP scheme works with the objective of "facilitating constant and sustainable employment to a large section of traditional & future artisans, urban & rural unemployed youth." **Table 3** presents types of loans available under this scheme.

Table 3. Prime Minister's Employment Generation Programme (Loan Amount)

Sr.	**Sector**	**Amount of loan (INR)**
1	Manufacturing	Upto INR 25,00,000
2	Service/Business	Upto 10,00,000

Source: www.mudraloanyojana.com

Table 4 presents some more details of PMEGP that underline the intent as well as funding pattern under the scheme.

Table 4. Prime Minister's Employment Generation Programme (Funding pattern)

Categories of beneficiaries	**Beneficiary's contribution**	**Rate of subsidy**		**Term Loan**
		Urban	**Rural**	The balance amount will be provided by banks as a Term Loan
General	10%	15%	25%	
Special (Schedules Castes/Scheduled Tribes etc)	05%	25%	35%	

Source: www.mudraloanyojana.com

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Leveraging Existing Infrustructure and Policies

It is clear from the previous section that there is no dearth of schemes and initiatives from the government side in promoting entrepreneurship. Having studied the existing policy infrastructure for entrepreneurship development, the Paper proposes to offer suggestions for leveraging/modifying/enhancing the same, instead of crowding the ecosystem with even more schemes that just add to the clutter, without really adding to the intended outcomes.

To this end, the author has identified a select five initiatives listed in **Table 1** to offer specific suggestions for getting more out of them. The suggestions are not based on an expert opinion survey or beneficiary opinion survey. Instead, they are based purely on the author's personal views, developed during the course of his journey of over three decades as an entrepreneurship educator and a decade as an entrepreneur.

Startup India

While it is a very good initiative in terms of its integrative and comprehensive nature, especially since it incorporates entrepreneurship mentoring throughout the life cycle of a start-up, the four-week free online learning program, which is a critical component in the success of the initiative, could be converted to a blended-learning model and the responsibility for the offline training could be given to suitable academic institutions in the respective geography.The reason for this suggestion is obvious; the peer group would not just enhance the learning experience for the participants, but it would also not let them feel lonely. Otherwise, entrepreneurship is known to be a lonely journey, irrespective of the size of the team. An offline learning module is likely to create a support group of its own.
The flipside of such a change is that it would entail a cost. However, author strongly feels that the incremental cost could be offset with incremental positive outcomes.

Atal Innovation Mission (AIM)

AIM is easily one of Government of India's showcase initiatives in the field of innovation and entrepreneurship; a highly ambitious endeavour that is expected to serve as a platform for world-class innovation, preferably in tech-driven sectors.

A critical component of the AIM is the Atal Tinkering Labs (ATL) that are established in schools across the country. The primary objective of ATLs is to foster curiosity and imagination. Atal Incubation Centres (AIC) are the higher-level counterparts of ATLs at academic institutions and industry.

Author's own experience with ATLs is that the excitement around them is not getting translated to its logical end, primarily because the infrastructure created is not actually being put to use. The reasons for such sub-par utilisation is the lack of suitable manpower in schools. Author suggests that private entrepreneurs be encouraged to run and maintain the ATLs on the school premises. The incremental cost to generate surplus for these entrepreneurs could be made up by a small component to the student fees.

Digital India

Though the Digital India initiative has a very different objective, that of modernizing the Indian economy by making electronic availability of all government services, the same spirit can be used to encourage creation of micro enterprises at grassroot level, to help the last man with digitalisation.

For example, subsidies could be provided for digital payments for all possible purposes and in fact, make it mandatory for certain payments. Since a majority of the rural population may not be equipped to carry out digital transactions on its own, these micro enterprises can make the transactions on their behalf, and the citizens can pass on a part of the subsidy as professional charges to these micro enterprises. This would not only create jobs

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through these micro enterprises but would also push the nation towards a low cash economy, which would have its own benefits.

A small beginning could be made at fuel stations, where such micro enterprises can set up their shop and make digital payments for fuel. This would not immediately replace cash, but the entire fuel would be purchased digitally. Same could be done at ration shops, with a micro enterprise setting shop alongside every ration shop. There is no doubt that such micro enterprises may succeed only for a few years till the population learns to make digital payments on its own, but it would certainly take care of the unemployment problems in the medium term and would immensely help digitalisation in the long term.

Jan Dhan-Aadhar-Mobile (JAM)

JAM primarily enables direct transfer of subsidies to bank accounts of beneficiaries, eliminating all intermediaries and leakages. Millions of such accounts have been opened in the last five years and subsidies are indeed being transferred directly.
Author suggests that the beneficiaries should be prohibited from withdrawing such funds in the form of cash from these accounts. It should be made mandatory to use such funds only for making digital payments. It might need some amount of adjustment to segregate such amounts from other amounts in the account but would not be difficult/impossible.

It is obvious that such beneficiaries may not be equipped to make digital payments/transfers. The micro enterprises mentioned above could be provided with more business through this route, thus improving their sustainability. Such a solution is also bound to improve the overall economy, in terms of making it cleaner.

Make in India

Make in India initiative has helped in replacing obsolete & obstructive frameworks with user-friendly and transparent systems. One thing that the government can do under this scheme is to periodically, and proactively, announce a list of products they would like to be produced in India, in order to reduce the import bill and to create a possibility of higher exports. There are a number of startup aspirants who are struggling to find suitable idea. Such announcements from time to time would motivate budding entrepreneurs to take the plunge with greater probability of success.

Conclusion

Unemployment is definitely an enormous problem facing India, irrespective of the puzzling numbers thrown up by different reports. However, based on the suggestions made in the previous section, it is clear that instead of creating completely new schemes and/or initiatives and making things unwieldy for effective implementation, it might be a good idea to rework the existing frameworks by modifying them and enhancing their effectiveness in terms of outcomes, to overcome the problem of unemployment in India.

Limitations and Scope for Further Research

Though Section 8 contains suggestions only for five of the initiatives listed in **Table 1**, it is obvious that similar modifications/enhancements could be made in any of the other initiatives. Moreover, since these suggestions are not based on expert or beneficiary opinion surveys, it would be good idea to conduct such surveys with different segments of respondents and draw conclusions based on the same.

Studies could also be conducted using focus groups and other qualitative methods to come up with better solutions to tackle the problem of unemployment. In fact, efforts could be made to tackle multiple problems with same solution e.g. unemployment and digitalisation, unemployment and pollution, and any other combinations.

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Exhibit 1. GOVERNMENT OF INDIA SUPPORT FOR INNOVATION AND ENTREPRENEURSHIP IN INDIA

The Government of India has undertaken several initiatives and instituted policy measures to foster a culture of innovation and entrepreneurship in the country. Job creation is a foremost challenge facing India. With a significant and unique demographic advantage, India, however, has immense potential to innovate, raise entrepreneurs and create jobs for the benefit of the nation and the world.In the recent years, a wide spectrum of new programmes and opportunities to nurture innovation have been created by the Government of India across a number of sectors. From engaging with academia, industry, investors, small and big entrepreneurs, non-governmental organizations to the most underserved sections of society. Recognising the importance of women entrepreneurship and economic participation in enabling the country's growth and prosperity, Government of India has ensured that all policy initiatives are geared towards enabling equal opportunity for women. The government seeks to bring women to the forefront of India's entrepreneurial ecosystem by providing access to loans, networks, markets and trainings. A few of India's efforts at promoting entrepreneurship and innovation are:

Startup India

Through the Startup India initiative, Government of India promotes entrepreneurship by mentoring, nurturing and facilitating startups throughout their life cycle. Since its launch in January 2016, the initiative has successfully given a head start to numerous aspiring entrepreneurs. With a 360-degree approach to enable startups, the initiative provides a comprehensive four-week free online learning program, has set up research parks, incubators and startup centres across the country by creating a strong network of academia and industry bodies. More importantly, a 'Fund of Funds' has been created to help startups gain access to funding. At the core of the initiative is the effort to build an ecosystem in which startups can innovate and excel without any barriers, through such mechanisms as online recognition of startups, Startup India Learning Programme, Facilitated Patent filing, Easy Compliance Norms, Relaxed Procurement Norms, incubator support, innovation focused programmes for students, funding support, tax benefits and addressing of regulatory issues.

Make in India

Designed to transform India into a global design and manufacturing hub, the Make in India initiative was launched in September 2014. It came as a powerful call to India's citizens and business leaders, and an invitation to potential partners and investors around the world to overhaul out-dated processes and policies, and centralize information about opportunities in India's manufacturing sector. This has led to renewed confidence in India's capabilities among potential partners abroad, business community within the country and citizens at large. The plan behind Make in India was one of the largest undertaken in recent history. Among several other measures, the initiative has ensured the replacement of obsolete and obstructive frameworks with transparent and user-friendly systems. This has in turn helped procure investments, foster innovation, develop skills, protect intellectual property and build best-in-class manufacturing infrastructure.

Atal Innovation Mission (AIM)

AIM is the Government of India's endeavour to promote a culture of innovation and entrepreneurship, and it serves as a platform for promotion of world-class Innovation Hubs, Grand Challenges, start-up businesses and other self-employment activities, particularly in technology driven areas. In order to foster curiosity, creativity and imagination right at the school, AIM recently launched Atal Tinkering Labs (ATL) across India. ATLs are workspaces where students can work with tools and equipment to gain hands-on training in the concepts of STEM (Science, Technology, Engineering and Math). Atal Incubation Centres (AICs) are another programme of AIM created to build innovative start-up

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businesses as scalable and sustainable enterprises. AICs provide world class incubation facilities with appropriate physical infrastructure in terms of capital equipment and operating facilities. These incubation centres, with a presence across India, provide access to sectoral experts, business planning support, seed capital, industry partners and trainings to encourage innovative start-ups.

Support to Training and Employment Programme for Women (STEP)

STEP was launched by the Government of India's Ministry of Women and Child Development to train women with no access to formal skill training facilities, especially in rural India. The Ministry of Skill Development & Entrepreneurship and NITI Aayog recently redrafted the Guidelines of the 30-year-old initiative to adapt to present-day needs. The initiative reaches out to all Indian women above 16 years of age. The programme imparts skills in several sectors such as agriculture, horticulture, food processing, handlooms, traditional crafts like embroidery, travel and tourism, hospitality, computer and IT services.

Jan Dhan- Aadhaar- Mobile (JAM)

JAM, for the first time, is a technological intervention that enables direct transfer of subsidies to the intended beneficiaries and, therefore, eliminates all intermediaries and leakages in the system, which has a potential impact on the lives of millions of Indian citizens. Besides serving as a vital check on corruption, JAM provides for accounts to all underserved regions, in order to make banking services accessible down to the last mile.

Digital India

The Digital India initiative was launched to modernize the Indian economy to makes all government services available electronically. The initiative aims to transform India into a digitally-empowered society and knowledge economy with universal access to goods and services. Given historically poor internet penetration, this initiative aims to
make available high-speed internet down to the grassroots. This program aims to improve citizen participation in the digital and financial space, make India's cyberspace safer and more secure, and improve ease of doing business. Digital India hopes to achieve equity and efficiency in a country with immense diversity by making digital resources and services available in all Indian languages.

Biotechnology Industry Research Assistance Council (BIRAC)

BIRAC is a not-for-profit Public-Sector Enterprise, set up by Department of Biotechnology to strengthen and empower emerging biotechnology enterprises. It aims to embed strategic research and innovation in all biotech enterprises, and bridge the existing gaps between industry and academia. The ultimate goal is to develop high-quality, yet affordable, products with the use of cutting-edge technologies. BIRAC has initiated partnerships with several national and global partners for building capacities of the Indian biotech industry, particularly start-ups and SME's, and has facilitated several rapid developments in medical technology.

Department of Science and Technology (DST)

The DST comprises several arms that work across the spectrum on all major projects that require scientific and technological intervention. The Technology Interventions for Disabled and Elderly, for instance, provides technological solutions to address challenges and improve quality of life of the elderly in India through the application of science and technology. On the other hand, the *ASEAN-India Science, Technology and Innovation* Cooperation works to narrow the development gap and enhance connectivity between the ASEAN countries. It encourages cooperation in science, technology and innovation through joint research across sectors and provides fellowships to scientists and

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researchers from ASEAN member states with Indian R&D/ academic institutions to upgrade their research skills and expertise.

Stand-Up India

Launched in 2015, Stand-Up India seeks to leverage institutional credit for the benefit of India's underprivileged. It aims to enable economic participation of, and share the benefits of India's growth, among women entrepreneurs, Scheduled Castes and Scheduled Tribes. Towards this end, at least one women and one individual from the SC or ST communities are granted loans between Rs.1 million to Rs.10 million to set up greenfield enterprises in manufacturing, services or the trading sector. The Stand-Up India portal also acts as a digital platform for small entrepreneurs and provides information on financing and credit guarantee.

Trade Related Entrepreneurship Assistance and Development (TREAD)

To address the critical issues of access to credit among India's underprivileged women, the TREAD programme enables credit availability to interested women through non-governmental organizations (NGOs). As such, women can receive support of registered NGOs in both accessing loan facilities and receiving counselling and training opportunities to kick-start proposed enterprises, in order to provide pathways for women to take up non-farm activities.

Pradhan Mantri Kaushal Vikas Yojana (PMKVY)

A flagship initiative of the Ministry of Skill Development & Entrepreneurship (MSDE), this is a Skill Certification initiative that aims to train youth in industry-relevant skills to enhance opportunities for livelihood creation and employability. Individuals with prior learning experience or skills are also assessed and certified as a Recognition of Prior Learning. Training and Assessment fees are entirely borne by the Government under this program.

National Skill Development Mission

Launched in July 2015, the mission aims to build synergies across sectors and States in skilled industries and initiatives. With a vision to build a 'Skilled India' it is designed to expedite decision-making across sectors to provide skills at scale, without compromising on quality or speed. The seven sub-missions proposed in the initial phase to guide the mission's skilling efforts across India are: (i) Institutional Training (ii) Infrastructure (iii) Convergence (iv) Trainers (v) Overseas Employment (vi) Sustainable Livelihoods (vii) Leveraging Public Infrastructure.

Science for Equity Empowerment and Development (SEED)

SEED aims to provide opportunities to motivated scientists and field level workers to undertake action-oriented, location specific projects for socio-economic gain, particularly in rural areas. Efforts have been made to associate national labs and other specialist S&T institutions with innovations at the grassroots to enable access to inputs from experts, quality infrastructure. SEED emphasizes equity in development, so that the benefits of technological accrue to a vast section of the population, particularly the disadvantaged.

(Source: https://www.ges2017.org/govt-of-india-support-for-entrepreneurs)

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