IJCF

e-ISSN 2149-9608

International Journal of Commerce & Finance

Volume 2 I Issue 1 I 2016

IJCF

International Journal of Commerce & Finance

ISTANBUL COMMERCE UNIVERSITY

International Journal of Commerce and Finance
ISTABUL COMMERCE UNIVERSITY JOURNAL

| *Published bi-annually* |
e-ISSN 2149-9608

International Journal of Commerce and Finance (e-ISSN 2149-9608) is a refereed, bi-annual, periodical journal containing original papers in English. Published since 2015, all research articles in the Journal are being reviewed by at least two referees after an initial editorial screening. The views expressed in the papers are under the responsibility of authors. The editors do not necessarily agree with the views expressed in the papers.

International Journal of Commerce and Finance is published under the auspices of Istanbul Commerce University.

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Vol 2, No 1 (2016), May

Table of Contents

International Journal of Commerce and Finance, Vol. 2, Issue 1, 2016, 1-13

FUNDS USED BY THE EUROPEAN UNION IN THE CONVERGENCE APPROACH and TURKEY

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Abstract

The article is to show the twinning mechanism as a convergence tool in a states accession process. Since it's beginning in 1998 more than 1300 projects have been carried out in the scope of candidate states' convergence process. Due to these projects the states' administrative and judicial systems have been restructured. Thus, the capacity of Union legislation's applicability enhanced and the programs have been used to strengthen the institutional structures in all the sectors in the scope of instrument for Pre-Accession Assistance. Starting from the December 17, 2001 various funds were launched for use in Turkey in order to ensure compliance with the EU acquis communautaire within the accession process of the state and to facilitate the fulfillment of the obligations which are specified in the Accession Partnership Document and National Programme of Turkey. The EU funds and their use within the scope of the approach and the contributions provided to institutions implementing the projects to the Legislative System of Turkey are to be discussed in the research.

Keywords: *European Union, Convergence, EU Funds, IPA, Twinning Project*

1. Introduction

The convergence tool of EU is the twinning projects mechanism during the new states' accession process. Thanks to these projects, the candidate countries' corporate structures are strengthened and restructured in line with the objectives. Thus, the capacity of Union legislation's applicability is enhanced. Those programs are used within the scope of Pre-Accession Assistance (IPA) in order to strength the corporate structures in all sectors.

The twinning projects are provided directly to some of the countries that are within the scope of Partnership and Cooperation agreements between EU and New Independent States from 2003. For example, the support programs were initiated to implement the partnership agreements between EU and those countries in order to enhance the joint work based on the objectives of Euro-Mediterranean Partnership (MEDA) Agreements.

The Twinning projects, which are the tool for implementation of Partnership Agreements in the corporate structuring area, are the powerful corporate structuring tool in the context of European Neighborhood and Partnership System (ENPI).

The Twinning programs are a good preparation stage in the EU enlargement process as stated in the IPA and ENPI regulations, and are created in order to structure all public capacities of candidate states in cooperation with EU.

2. Enlargement Strategy of European Union and its Convergence Approach toward the Candidate Countries

The idea on United Europe of Dante Alighieri, the Italian poet, is available in the book, De Monarchia (About Monarchy) written in 1310. It had been the objective which was dream of European lawyers, historians, politicians and scientists for years. The endeavors toward United Europe were gradually enhanced upon establishment of USA, and even though there were many ideas on establishing the union after the First World War, it took time to adopt those ideas. After the Second World War, the works on united and strong Europe were accelerated and the idea on unification was begun to be declaimed.

The first step toward United Europe, which was mentioned by Jean Monnet (Secretary of United Nations) during 1930s, was taken upon establishment of European Council in Strasbourg, 1949. Robert Schuman (French Minister of Foreign Affairs) published the Schuman Plan on 9 May 1950 showing the fact that the cornerstone of United

Europe was the French-German friendship. He prescribed that France and Germany should have produced the coal and steel together, and all European countries should have participated in the organization to be established.
Germany, France, Italy, Netherlands, Belgium and Luxembourg established the European Coal and Steel Community (ECSC) in Paris, 1951. ECSC became a supra-nationalist organization which the states granted some of their sovereignty powers to it. It provided a sustainable peace environment strengthened the unification in Europe and thus, the foundations of EU were laid down.
Upon being aware of that the Unified Europe could be established on the economic foundations, six countries, the member of ECSC, had, first, signed the Convention establishing the European Economic Community (EEC) in Roma on 25 March 1957. The European Atomic Energy Community (EURATOM) was established through Roma Convention on 1 January 1958, and the single Council, Commission and Parliament were established for ECSC, EEC and EURATOM, and the Merger Treaty (Fusion Treaty) was signed in 1965, the budgets were merged and for the first time, it was begun to use the term "European Communities".
Copenhagen Criteria are the essential conditions which must be met by all candidate countries that their application for EU membership is accepted on June 1993. The criteria that are brought into the force are generally as follows;
Political criteria include the conditions on stable corporate structure, superiority of law, human rights and respect to the minority rights; Economic criteria envisage a well-functioning market economy and providing the capacity to resist against the market forces within EU and competition pressure; acceptance of EU acquits communautaire entails that EU should adhere to the various political, economic and financial objectives. Unless adopting the EU acquits communautaire, there will be no unification. The accession process cannot be started with the country that doesn't meet those criteria.

2.1. EU Enlargement Process

The First Enlargement Process is the summit held in Hague, 1969; the first enlargement process resulted the accession of UK, Ireland and Denmark to the Community on 22 January 1972 upon starting the accession process, taking two years, of UK, Ireland, Denmark and Norway that would like to access to the Community, and the number of member increased from six to nine.
The Second and Third Enlargement Process; the Accession Treaty was signed between Greece and EU on May 1979; and after the Treaty was approved, the number of member increased to 10 upon accession of Greece to EU on 1 January 1981.
Spain and Portugal; the accession process for those countries started during 1978-1979 and resulted the accession of those countries to the Union in 1986, and thus, the number of member of the Union became twelve.
Fourth enlargement process; upon accession of Austria, Sweden, Finland to EU in 1995, EU enlarged toward the Center and Northern Europe, and the number of member became fifteen.
Copenhagen Summit was another important milestone during the enlargement process of European Union. During the Summit in 2002, the accession process was completed with Check Republic, Hungary, Poland, Slovakia, Estonia, Latvia, Lithuania, Slovenia, GCASC (Greek Cypriot Administration of Southern Cyprus) and Malta. 10 candidate countries signed the Accession Treaty in Athena on 16 April 2003 and became the EU Member countries on 1 May 2004 (Tezcan, 2015).
It was stated that Turkey met the political criteria sufficiently on 3 October 2005 and was decided to start the accession process (Tezcan, 2015).
Fifth Enlargement Process; European Commission offered the roadmap to Bulgaria and Romania on 13 November 2002 in order to make them full Members of Union in 2007, and they became the member on 1 January 2007 (Tezcan, 2015). Thus, the number of EU member became 27 and the official languages 23.
Sixth Enlargement Process; Croatia became the 28th member of EU on 1 July 2013 and thus, the number of official languages in EU became 24, and population reached to 508 million (Tezcan, 2015).

2.2. Today's EU Enlargement Policy

EU determined the problematic areas specific to structure of each candidate country waiting for accession to EU through the experiences gained during the enlargement processes, and laid down them as the customized criteria to such countries. After the enlargement wave during 2004 and 2007, the enlargement fatigue that was felt throughout EU and the debt crisis, which affected EU within the Euro Zone in 2010, brought the problems arising from

enlargement into the forefront. This made the enlargement receded into background for EU in the priority list, and made the conditions for accession to EU more difficult (Tezcan, 2015).
At this point, EU Council began to have a voice more efficiently in the enlargement policy, and the Commission, having attitude toward enlargement, began to make the special attempts on enlargement policy considering the special case of each country and the difficulties that it encountered. The Positive Agenda, which was started to accelerate the accession process with Turkey, was implemented based on this approach.
European Commission adopted the new approach which put the superiority of law into the center of EU membership process in the Enlargement Strategy Document in 2012. At the framework of new approach, it was envisaged that the negotiation chapters of "Jurisdiction and Fundamental Rights" and "Justice, Freedom and Security" would be negotiated with priority, be followed studiously during the accession process and would be the last negotiation chapters to be closed (Karluk, 2013).
European Commission declared in the 2013-2014 Enlargement Strategy that it would attach a special importance to the subjects on superiority of law, economic governance, strengthening of democratic institutions, fundamental rights and good relations with the neighbors during 2014 (Karluk, 2013).

2.3. The EU's Convergence Model of Candidate Countries

Now, EU is an economic and political community consisting of 28 countries. Other countries such as Turkey, continuing the accession process with EU, Macedonia, Serbia and Bosnia-Herzegovina also try to become the member of EU. The question whether any convergence occurred between the countries within the enlarged EU is one of the primary questions about the decision enforcement related to EU toward the future from commencement of Union to today.
The convergence fact, which is defined as becoming similar of various economic indicators between one group country or region during the course of time, is assessed in two processes which are separate from, but integrate each other within EU: Real and nominal convergence (Atalay, 2007).
The real convergence is considered as the economic criteria which are one of Copenhagen Criteria that are the criteria of accession to EU. It means convergence of economies to each other in the indicators related to living standard, notably the gross national product per capita, harmonization of business cycles and similarity of production and commercial structures (Atalay, 2007).
It is stated in the establishment objectives of union that the benefits, which EU countries gain from the membership, are determined as "Directing the community policies and activities so as minimizing the economic development differences between the regions and providing the economic development of underdeveloped regions".[1] Convergence analyses primarily give information about at which level the enlargement matches with the union's objectives.
Nominal convergence may be identified with the Maastricht Criteria that are the criteria on accession to Economic and Monetary Union. It means the convergence of economies in the areas such as inflation, budget deficit, public debt and stability of exchange rate (Atalay, 2007).
It is provided the convergence of countries that will be involved in the Economic and Monetary Union through the convergence in the real and nominal senses, and tried to secure the economic stability.

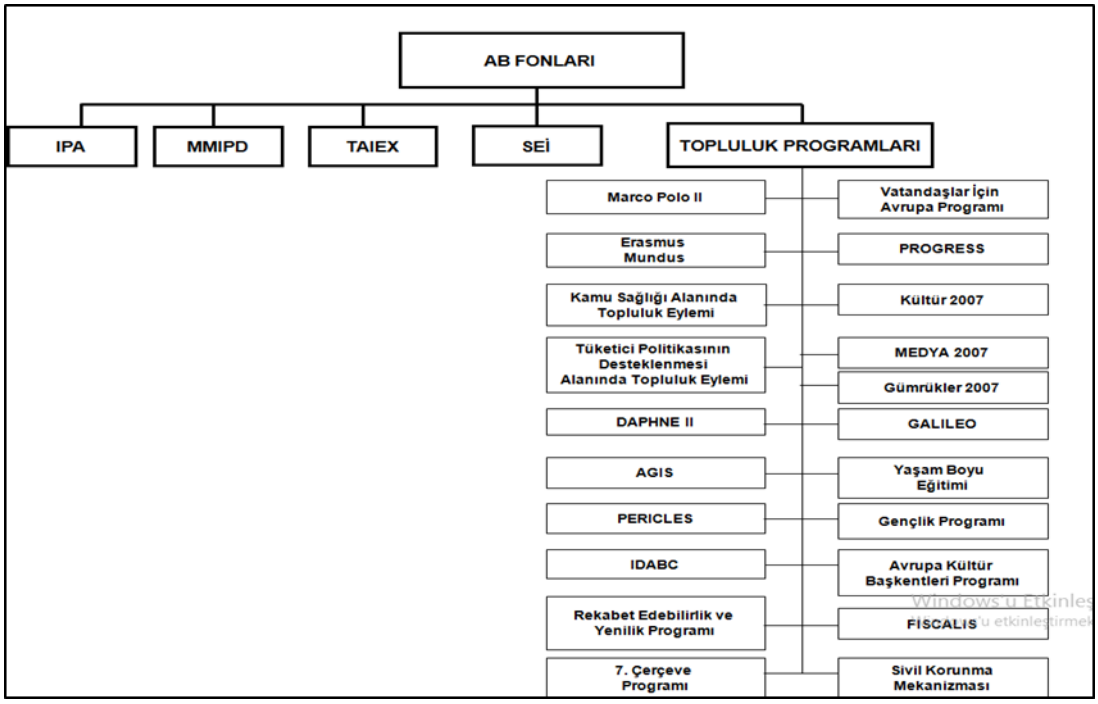
3. EUROPEAN UNION FUNDS

Various funds were allowed by EU for being used[2] by Turkey from 17 December 2001 in order that Turkey complies with the EU acquits communautaire during accession process of Turkey to European Union (EU), and in this context, to facilitate that Turkey fulfills its obligations under the Accession Partnership Document provided by EU and National Program issued by Turkey.
The second term of Instrument for Pre-accession Assistance (IPA) in the European Union's IPA II program started so as covering 2014-2020 as of 1 January 2014. Approximately 4.5 billion Euro was allocated by EU to our country

[1] Council of the European Union, **"Article 158 of Treaty, Establishing the European Communities"**, 2001
[2] Letter from Ministry of EU to the Ministry of Internal Affairs, **Letter related to EU Funds**, 2010

under the Instrument for Pre-accession Assistance based on the methods and principles changed during the new period (IPA II) for 7 years[3].

Table 1: EU funds



"EU Funds consist of (6) programs as follows:
a. Instrument for Pre-Accession Assistance (IPA),
b. Multi-Beneficiary and Multi-Annual Programming (MMIPD),
c. Technical Assistance and Information Exchange Office (TAIEX),
ç. Supporting of Integration Process to EU (SEI),
d. Support Program for Improvement in Management in the Central and Eastern European Countries (SIGMA),
e. Community Programs."[4]
Furthermore, Social Transformation (MATRA), Economic Transformation (PSO) and Environment Programs (G2G.NL)[5] are created by the Netherlands government in order to provide the assistance from EU Member countries to the EU candidate countries in accordance with the decision taken by EU Council.
The annual share is paid by the participant countries that are participant of Community Programs in order that they may benefit from those Funds only. Other funds are the donations and no share is paid. However, 25% is contributed to the section related to the material procurement of project budget in the projects that are implemented within the scope of IPA.

3.1. Pre-Accession Fiscal Cooperation Program (IPA)

[3] Ministry of EU, **Turkey-EU relations during 62nd Government,** 2014, s. 14.
[4] Ministry of EU, **Annotation related to EU Funds**, 2010
[5] Ministry of EU, **Turkey-EU relations during 62nd Government,** 2014, s. 10.

Upon giving to Turkey the candidate country status during 1999 Helsinki Summit, the fiscal cooperation mechanism between Turkey and European Union was restructured as being in other candidate countries. In this scope, "Framework Regulation related to Pre-Accession Financial Aid for Turkey" was adopted by EU Council as of 17 December 2001.

In the Pre-Accession Fiscal Cooperation Program, the Accession Partnership Document, Progression Report, adaptation to the acquits communautaire regarding the legal, administrative, economic and social priorities in the National Program and Pre-National Development Plan, creating the administrative capacity, economic and social adaptation projects are executed.

The Prime Ministry Circular, no. 2001/41 and dated 18 July 2001, was issued in order to program, implement, monitor, evaluate and direct the projects by Turkey itself, instead of by EU Commission. Pursuant to the provisions of Circular, the units[6] such as National Fiscal Aid Coordinator, Fiscal Cooperation Commission, National Fund and National Authorization Officer, Partnership Monitoring Commission and Central Finance and Procurement Unit are created.

The project offers, which are issued by the state institutions and organizations under the coordination of Secretary General of EU, are delivered to the EU Commission through the letter signed by the Minister of Foreign Affairs. Following the approval by (28) representatives from the member countries in PHARE Steering Committee of EU Commission, the "Financial Minute" is signed between EU Commission and Turkey and comes into force upon being published in the official journal. At the next stage, the financial source to be donated by EU to Turkey is transferred to the "National Fund" in the Undersecretariat of Treasury. National Fund is managed by the Central Finance and Contracts Unit (CFCU) on behalf of Undersecretariat of Treasury.

The "Fiscal Cooperation Committee", consisting of the representatives from the Ministry of Foreign Affairs, the Ministry of Finance, Undersecretariat of State Planning Organization, Undersecretariat of Treasury and Secretary General of European Union, was formed in order to provide the necessary harmonization between the works that are carried out at the framework of fiscal cooperation. Fiscal Cooperation Committee is responsible for distributing, implementing and evaluation of financial sources according to the priorities[7].

Furthermore, there is a "Joint Monitoring Committee", consisting of the National Financial Assistance Coordinator, National Authorization Officer, and the representatives from the Fiscal Cooperation Committee and European Commission, and meets at least once a year. Sector Monitoring Sub-committees were formed under the Joint Monitoring Committee. The Ministry of Internal Affairs is the member of Sector Monitoring Committee, no. 1 on Justice-Freedom and Security together with the Political Criteria. The reports from the Joint Monitoring Committee include the general matters related to the projects and those reports are also sent to the Ministry of Internal Affairs.

Memorandums of Understanding, which create the legal infrastructure related to this new structuring on fiscal cooperation between EU and Turkey, and the Central Finance and Contracts Unit and National Fund are formed through it, were signed on 14 February 2002. The aforesaid documents were approved by TGNA (Turkish Grand National Assembly) on 30 January 2003 and came into force upon being published in the Official Journal on 4 February 2003.[8] EU Commission passed its decision on which the created mechanism met the necessary requirements on 8 October 2003, and the actual implementation of projects within the scope of financial assistances was started from this date. In this scope, total budget size of (152) projects in all sectors is beyond Euro 1.5 billion involving;

(a) 18 projects amounting Euro 126 million in 2002,
(b) 28 projects amounting Euro 144 million in 2003,
(c) 38 projects amounting Euro 126 million in 2004,
(ç) 35 projects amounting Euro 300 million in 2005,
(d) 35 projects amounting Euro 441.650.000 on in 2006.[9]

[6] PM Circular, **PM Circular, no. 2001/41 and dated 18 July 2001,** http://www.ab.gov.tr/index.php?p=231&l=1
[7] PM Circular, **2001/41**
[8] Memorandum of Understanding between Turkey and European Commission related to Formation of Central Finance and Contracts Unit (CFCU), **Annex No. 1**, 14 February 2002, http://www.cfcu.gov.tr/files/addendum_no1_tr.doc
[9] Ministry of EU, Personal Interview, 2015.

The projects are implemented in the tender method, and the tenders are announced on service, procurement and currently the construction, even if in the less number. Significant number of project is implemented by using the twinning mechanism envisaging the cooperation of EU member countries with the concerned state institutions. In the twinning mechanism, Turkish state institutions are brought together with the state institutions of EU member countries and it is allowed them to work together. In the twinning mechanism, the representative from the state institution of one EU member country works in a Turkish state institution minimum for one year. Another method, which is not used frequently, is to conclude the contracts directly with the international organizations, especially which have the know-how on certain subjects.

In the Twinning project mechanism, the view is mentioned by EU Commission, stating that first, the work on corporate structuring and adaptation to EU acquits communautaire should be carried out, and that this work may be carried out upon working with a member country on legislation and best practices, and that at the second stage, the infrastructure projects may be implemented, and this system was implemented in the former candidate countries.[10]

30% of twinning projects consist of legislation (bill drafting, strategy document, action plan), 10% material procurement and 60% training provided by the foreign experts in Turkey. Project training also covers the business visits of less number of staff in the EU member countries. The subsistence and national travel allowances of staff, who participate in the business visit, are paid by EU from the project budget and international travel expenses by Turkey. The project offers related to the next year are sent by the state institutions to the General Secretary of EU in September per year.

The project offers, which are deemed proper by the General Secretary of EU, are notified to the EU Commission as "Turkish Project Offers", and following the examination by the Commission, the project offers, which had the pre-approval during the meeting held upon participation of the representatives from the concerned institutions and EU Commission under the coordination of Secretary General of EU, are listed.[11]

The project receipt, involving the details of listed project offers, is issued by the representatives from the concerned institutions and EU Commission and sent to the Secretary General of EU with the official letter from the concerned institution.

At the next stage, the project receipts are sent by the Secretary General of EU to the EU Commission with the letter signed by the Minister of Foreign Affairs.

The project receipts, which are approved by the Project Steering Committee, are circulated throughout the EU countries in order to determine the country that will implement the project. (The Project Steering Committee (PHARE Steering Committee)[12] is the affiliate of EU Commission's General Directorate of Enlargement and consists of the representatives from (28) member countries after 01 January 2007. It is a committee which passes the high-level decisions related to the projects that are implemented in the new member countries and candidate countries. The Committee meets (4) times a year. The officers of EU Commission avoid submitting change of decision which is passed to the Committee, because it is not easy to obtain the consensus of (28) member countries.

After the projects are approved in Brussels, the Financing Agreement is concluded between Turkey and EU Commission. This programming process takes about (9) months.

The country that will implement the project is determined by Turkey.[13]

The prepared project contract is signed by the officer from the selected country/international organization, officer from the concerned Ministry of country that offers the project, officer from the concerned institution, President of Central Finance and Contracts Unit and the Chairman of the Turkish Delegation of EU Commission. As is, the project contract is an international agreement.

"Direct Donation Program" was initiated covering the project implementation with the international organizations within the scope of Fiscal Cooperation in 2003. All costs are paid by EU from the project budget in Direct Donation Program. In case of project cancellation, the sanctions may be imposed such as;

a. Protesting Turkey at the Ministry of Foreign Affairs,

[10] Secretary General of European Union Directorate of Education and Corporate Structuring, **Twinning Mechanism and Turkey**, Ankara, 2011, s.1.
[11] a.g.e., s. 3.
[12] a.g.e., s. 8.
[13] a.g.e., s. 9.

b. Being obliged to compensate the expenses which are incurred by the Turkish state institutions from the project budget until such time, *(In case of cancelling a project which is implemented within the scope of Fiscal Cooperation Program, all expenses, incurred by the EU Commission for the project until such time, is claimed from the concerned country together with the legal interest as a legal obligation, and the said amount is requested from the concerned state institution.)*,

c. Pending the negotiations,

ç. Criticizing Turkey and the Turkish state institution, cancelling the project with the high expressions in the progression report issued by EU Commission,

d. Blocking our membership, representation in the international organizations and assigning the personnel in the BDK movements and missions that are implemented under the EU coordination.

e. In this scope, disregarding the project offers to be made by the Turkish state institution cancelling the project for the future and excluding it from the international organizations within EU constitution may be in question.

The Fiscal Cooperation Program is regulated by EU again as "Instrument for Pre-Accession" (IPA) so as being implemented during period covering 2007-2013. There are (5) main topics in the Instrument for Pre-Accession. Those are as follows;

a. Developing the Corporate Capacity,

b. Regional and Cross Border Cooperation,

c. Regional Development,

ç. Human Resources,

d. Rural Development.[14]

3.2. Multi-Beneficiary and Multi-Annual Programming (MMIPD)

The aim of program is to solve the problem of integration with EU which the Balkan countries encounter and to have the reforms that are necessary to become the member of EU implemented.

The project offers within the scope of MMIPD Program are made by EU Commission, Candidate Countries (Turkey, Croatia) Potential Candidate Countries (Albania, Bosnia-Herzegovina, Macedonia, Kosovo, Montenegro and Serbia) and EU Member Countries (minimum two countries).

The international organizations (United Nations, Organization on Security and Cooperation in Europe - OSCE, Interpol, Europol, Eurojust and South East European Cooperation Initiative-SECI) may also participate in the projects.

Implementation period of projects varies between (3) years and (6) years.

Secretary General of EU is responsible for the coordination of MMIPD Program in Turkey.

(2) Projects were offered by the EU Commission related to participation of Turkey in justice and internal affairs within the scope of MMIPD Program until today. The Ministry of Internal Affairs did not participate in the said projects (Project of Supporting the Social Institutions and Criminal Justice: Witness Protection Project in the Organized Crimes).

Since more than one country and international organizations participate in the projects within the MMIPD Program, it is almost impossible to cancel the project or to leave of any institution from the project. However, in case leaving from the project, EU Commission claims all expenses incurred for that country within the scope of project together with the legal interest until such time from the concerned country, and the said amount is also claimed from the concerned state institution.

3.3. Technical Support and Information Exchange Office (TAIEX)

It was established as the affiliate of EU Commission's General Directorate of Enlargement in 1996 in order to assist to the candidate countries of EU in the works of adaptation to legislation.[15] TAIEX Fund was made available to Turkey from 15 March 2002.

The budget of activities to be carried out within the scope of TAIEX is limited. The information exchange is provided via expert support, business visit, workshops and seminars in order to meet the short-term needs in

[14] a.g.e., s. 15.

[15] **General Information about TAIEX**, http://www.ab.gov.tr/index.php?p=42118, (Accession Date: 11.11.2015)

establishing the administrative structures that are necessary for adaptation of legislation and implementation in the candidate countries.[16]

For example, Gendarmerie General Commandership participated in (26) activities which were carried out by other state institutions and organizations within the scope of TAIEX with (101) staff during 2001-2008. (*The said activities are generally the Seminaries and Workshops on the Protection of Financial Interests of EU and Euro Forgery, Environmental Crimes, Crimes related to the Cultural Assets, New EU Legislation on Refuge and Immigration, Freedom of Expression, Anti-Terrorism, Illegal Trafficking of Narcotics and Human between Turkey and EU.*) (1) workshop and (1) business visit, among the offers made by Gendarmerie General Commandership within the scope of applications for the 3rd term of TAIEX in 2008, were accepted by EU Commission.

The execution of any activity, which is approved in TAIEX Fund, is fully under the initiative of institution which makes the offer. The activity is kept waiting in the program for two years, and at the end of two years, if it is not executed yet, it is omitted from the program itself, and the budget, allocated to the activity, is returned to the EU Commission.

3.4. Fund for Support Activities to Strengthen the European Integration Process-SEI

It is executed under the coordination of Secretary General of EU in order to meet the short-term technical support needs related to the works on project preparation and adaptation to EU acquits communautaire of institutions during the European Union (EU) adaptation process.

SEI Fund is also similar to TAIEX. However, the program of any activity in SEI is planned in coordination with the Secretary General of EU or Central Finance and Contracts Unit (CFCU). In the event that any activity within the scope of SEI is cancelled, the budget allocated to the activity is used by Secretary General of EU for another activity. SEI is executed in three fields. Those are;

a. Supporting the preparation of projects that are planned to be implemented by using EU funds (feasibility and detailing works for the projects),

b. Strengthening the adaptation to EU acquits communautaire (developing of corporate capacity and human resources),

c. Supporting of institutions responsible for coordination of EU Pre-Accession Fiscal Cooperation Program (such as Central Finance and Contracts Unit).17

The activities that may be demanded at this framework may be executed such as;

a. Issuing the technical specifications of projects (Methods of preparing the tender files on procurement of construction, audit and material in line with the PRAG (Practical Guide) rules, forming the EU legislation on tender),

b. Technical assistance activities (Administrative legislation examinations, issuing the bill drafts, etc. in order to adapt the EU acquits communautaire),

c. Works on increasing the awareness related to the EU Fiscal Cooperation process (training on project loop, etc.),

ç. Business visits, participation in the conferences, organizing the workshop or seminary in EU countries with SEI on the bases of aforesaid matters, however, it is not possible to make request such as including the material procurement or making construction.[18]

3.5. Support Program on Developing the Management in the Central and East European Countries (SIGMA)

SIGMA Program is a program which was started with the common initiative of EU and OECD in 1992. At the beginning, it was planned for Central and East Europe, but then, enlarged toward the Western Balkan countries.

Program targets a quality public management. In this scope, (9) primary areas were determined. Those are the design and application reform, external and internal audit, fiscal issues, legal framework, service to the citizen, justice, policy

[16] **Technical Support and Information Exchange Office (TAIEX) 2002,** http://ec.europa.eu/enlargement/taiex/index_en.htm, (Accession Date: 09.11.2015)

[17] Ministry of EU Directorate of project Implementation, **Activities of Supporting the Integration Process to European Union SEI**, Ankara 2012, s.6.

[18] a.g.e., s.12

and strategy, public integrity system, public expense management, public procurement regulation policies (Acar, 2011).

The organizations such as Anti-Fraud and Corruption Office (OLAF) of EU, European Agency for Restructuring (EAR), European Neighborhood and Partnership Instrument (ENPI) may participate in the SIGMA projects upon request by the institution which offers the project.

a. **Community Programs;**

There are (21) "Community Programs" available to Turkey in order that the activities related to integration of Turkey to EU are executed, except the projects which are executed within the scope of EU Fiscal Cooperation Program.

The community programs are created in order to support the placing of Europeanism consciousness and innovation and entrepreneurship understanding and to contribute to the creation of common solutions to the problems which Union encounters with upon developing the cooperation between the EU member countries.

The candidate countries must provide the contribution to the program cost in order to participate in the Community Programs.

The contribution is determined based on the Gross National Product or population of each country. Some part of the said contribution is paid from the EU's funds themselves in the payment of contribution in order to support the candidate countries. However, since there is not any amount to be donated in the funds allocated to Turkey from 2007, the Ministry of Foreign Affairs requests the institutions which would like to participate in the Community Programs to pay the contribution themselves. Under these circumstances, it is quite difficult that the institutions participate in the community programs.

The candidate countries should sign a Memorandum of Understanding involving the information about accession principles and contribution to be paid with the European Commission in order to participate in the Community Programs. The Memorandum of Understanding is signed individually for each program.

Turkey, which gained the candidate country status during the Helsinki Summit in 1999, acquired the right of participation in all EU programs which are open to the candidate countries as a principle. "Framework Convention on General Principle related to the Participation of Republic of Turkey in the Community Programs between the Republic of Turkey and European Community" was prepared in order to establish the legal basis for participation of Turkey in all Community programs which are open to all candidate countries (Karluk, 2014).

The aforesaid convention was approved by Turkey on 26 February 2002 and came into force upon being published in the Official Journal on 05 September 2002. Text of the same convention was approved by EU on 17 December 2001 and also came into the force upon being published in the Official Journal of EU on 02 March 2002 (Karluk, 2014). According to the Framework Convention which consists of total (10) articles, all programs that are open to the participation of candidate countries from East and Central Europe are also made available for participation of Turkey, and it is envisaged that Turkey shall contribute financially to the general budget of European Union for all programs which it will participate in. Through the contribution to be provided, the projects or initiatives prepared in Turkey are subjected to the same conditions, rules and procedures as those applied to the member countries.

3.6. AGIS Program

It is targeted to provide the high level of patronage to EU citizens in the fields of freedom, security and justice, developing the EU policies valid in such fields, information exchange, and to support the education and research.[19]

Three sub-programs were added to AGIS Program in 2007 as follows;

a. Prevention of and Fight against the Crime,

b. Criminal Justice,

c. Management and Prevention of the Results of Other Risks related to the Terrorism and Security[20].

3.7. PERICLES Program

The activities are carried out on increasing the awareness in currency, enhancing the mutual trust by developing the cooperation environment, and organizing the high level of education activities.

[19] Sakarya University International Relations Coordinatorship, **Financial Assistance Available to Turkey, Project Support and Donation Programs, 2009**

[20] AGIS Program

The third countries having the specialism on a specific field and EU candidate countries are invited to the program.
The staff of anti-fraud institutions, intelligence staff, the staff of national central banks and commercial banks, judicial staff and advocates specialized on this field may obtain the support from program.

3.8. Jean Monnet Program

It is a one year scholarship granted for master degree on headings of EU acquis communautaire. The French Jean Monnet, who was considered as the originator of EU, is the person who prepares the text of well-known Schuman Declaration advocating the idea of integrating Europe. Therefore, EU institutions attach the great importance to carry on his name, Jean Monnet.
The EU professorship chairs, established under the name of Jean Monnet in many European countries including Turkey, are supported and it is encouraged the establishment of new ones. Jean Monnet scholarships have been, for the first time, initiated with the agreement between Turkey and European Commission in 1989. 500 persons have benefited from the scholarship since 1990.
The participation is provided in the seminars which, especially are organized by the Gendarmerie of EU countries such as France, Spain and Portugal within the scope of "Framework Program on Cooperation of the Law Enforcement Officers and Judicial Authorities-AGIS program".
Moreover, besides the AGİS Program, program of Protection of Euro Against Fraudulent (PERICLES) and JEAN-MONNET Higher Education Scholarship Programs were participate in once of each.

3.9. Framework Programs

The Framework Programs were created by European Union within the scope of Community Programs in order to converge the various policies and applications of candidate countries in the science, research and technology development areas to each other from 1984.
EU Framework Programs are the primary Community Programs which multi-national research and technology development projects are supported within European Union (EU). The Framework Programs, which the first one started in 1984, are the multi-annual programs, and the scope and the budget allocated to the program are enhanced pro rata the years.
The primary objective of Framework Programs is to strengthen the scientific and technologic fundamentals, support the industrial competition and to encourage the interstate cooperation (Demirkıran, 2010). Within the scope of strategy which is mentioned during the Summit Meeting held by EU on March 2000 and called Lisbon Strategy, it is aimed that EU becomes the "the most dynamic information-based economy of the world".
The Framework Programs provide the financial support to the "projects" which will contribute to realizing of Lisbon objectives of EU and will create the economic and social value added in Europe (Demirkıran, 2010). No quota was allocated to the countries that participate in the Framework Programs of EU.
The financial support is provided as a result of objectively evaluation of projects which meet the requirements indicated in the project offer invitations by the referees. The legal entities that would like to take the share from this pool are supported on the basis of their project achievements disregarding their nationalities and whether they reside in the candidate or associated countries (Norway, Liechtenstein, Israel, Switzerland and Iceland).
The candidate or associated countries that participate in the Framework Programs have the same rights and responsibilities as the EU member countries. Framework Programs include;

a. The first framework program 1984-1987,

b. The second framework program 1987-1991,

c. The third framework program 1991-1994,

ç. The fourth framework program 1994-1998,

d. The fifth framework program 1998-2002 (The external participation was provided without payment of contribution by Turkey),

e. The sixth framework program 2002-2006 *(The participation was provided upon payment of contribution at Euro 231 million by Turkey, but only Euro 48 Million was returned),*

f. The seventh framework program 2007-2013 *(Euro 425 Million of contribution was paid by Turkey.).*

g. The 7th framework program, which started on 01 January 2007 and will be enforced until 2013, aims to collect all EU initiatives related to the research under the joint roof in order to achieve the Lisbon objectives (Akçam, 2006).

ğ. It is expected that the scope of 7th framework program, which was built upon the achievements of previous Framework Programs, would play a key role to re-implement the Lisbon Strategy together with its organization, application structures and administrative tools (Akçam, 2006).

h. The cases that includes 7. Framework Programme;

I. It is expected that it would take seven years, instead of four years different than other Framework Programs,

II. Emphasizing the research themes rather than tools,

III. Simplifying the activities and application tools,

IV. Focusing on research-development which meets the European industry's needs through the Technology Platforms and the activities of new Joint Technology Initiatives,

V. Forming the European Research Council which provides the support to the Europe's best scientific activities,

VI. Integration of international cooperation,

VII. Developing of Information Zones,

VIII. Forming the financial structure including the risk sharing in order to enhance the participation of private sector in the research activities,

IX. Having 9 sub-zones under the Special Cooperation Program.

ı. Legal and real entities, which are established in accordance with the national/international legislation and EU legislation, may apply to the Framework Programs. In this scope, the universities, research centers, industrial organizations and non-governmental organizations as well as the state institutions may also participate in the Framework Programs.

The minimum number of participant in the projects and the requested qualifications vary according to the project type. The primary requirement that is requested in all applications to the Framework Programs is the cooperation. In general, there must be minimum (3) different EU member countries, and (3) independent organizations from the candidate countries or associated countries in the project. After the minimum number of participant is obtained, the international organizations and third country's organizations may also participate in the projects.

3.10. MATRA, FLEX and G2G.NL Programs

There are PSO, MATRA, FLEX and G2G.NL Programs which are supported by the Netherlands' Government in accordance with the EU Commission's decision, except the funds made available by EU Commission.

MATRA means the "Social Transformation" in Dutch. This program aims to contribute to the formation of environment and structuring related to the implementation of EU acquits communautaire in the candidate countries, to support the civil society and private entrepreneurship, and to create the strong interaction mechanism between the citizens and public authorities during the candidature process.

The priority of National Program is taken as basis in the activities to be carried out within the scope of MATRA. MATRA Projects are limited with the transferring of specialty and information to the beneficiary country, technical assistance, consultancy and education activities and creating of mechanisms related to the implementation of EU acquits communautaire. The infrastructure development activities, material procurement, humanitarian aid, inspection, research and academic studies are not financed within the scope of MATRA.[21]

The project budget should maximum be Euro 400.000 and the project is completely financed from the MATRA budget, but no contribution is provided from the national budget. The equipment such as hardware, software and technical materials may be purchased with maximum 10% of the project budget. 15 MATRA Projects were executed in Turkey until today.

[21] Ministry of EU, MATRA,FLEX and G2G.NL Programs, http://www.ab.gov.tr/files/Mali_Yardimlar/Matra/list_of_projects_long_programmes_2008.xls (Accession Date: 09.11.2015)

The primary topics are determined as the riot policing, strengthening of justice, improvement of prison system, migration and development of Lisbon Strategy, strengthening the capacity of fighting against the organized crimes and anti-corruption within the MATRA Program for the period 2009-2010.
PSO (Programma Samenwerking Oost Europa) Pre-Accession Program aims to support Turkey in order that it meets the economic criteria necessary for its EU membership.
Program is carried out under the coordination of Netherlands' Ministry of Economy, and includes providing the financial support to the full-scale and long-term projects including the information and experience exchange between Turkey and Netherlands, transferring of business, material and service.
The business visits, seminary or short-term projects are also realized within the scope of PSO.
The state institutions and private sector firms may participate in the PSO Program individually or jointly.
15 PSO Projects were executed in Turkey until today.
The priorities are determined as protection of private sector from the crisis, strengthening of free market economy and financial management in conformity with EU in PSO Program during 2009-2010.
G2G.NL Program supports the projects related to the harmonization of primary and secondary EU acquis communautaire on environment and the environmental module within the big project.
G2G.NL Program is executed under the coordination of Netherlands' Ministry of Housing, Map Planning and Environment, and its total budget is Euro 4.300.000. The aim of G2G.NL is to support the state institutions in the EU candidate countries on development and implementation of national policy related to environment conforming to the EU acquis communautaire. 8 G2G.NL Projects were execute din Turkey until today.[22]
In the G2G.NL Program, the priorities are determined as protection of water resources, waste management, renewable energy and food safety and development of rural area for 2009-2010.

4. CONCLUSION

Determining which factors of EU candidate countries mostly play the role during the real convergence process is also very important regarding formation of policies of the candidate countries during the accession process.
It is assumed that good understanding of which factors direct the real convergence process of new candidate countries during the EU accession process and detailed examination of country examples would be loadstar for Turkey regarding the policies to be followed in the future period.
In this scope, it is considered that Turkey, which is strengthened and developed with the corporate twinning projects to be formed through EU funds and has the corporate structure in the EU standards, would be stronger in the journey to Europe.

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International Journal of Commerce and Finance, Vol. 2, Issue 1, 2016, 103-111

A COMPREHENSIVE ANALYSIS OF INTER-RELATIONSHIPS AMONG OVERALL SERVICE QUALITY, TRUST, SATISFACTION AND LEARNER'S LOYALTY WITHIN THE SUPPORTIVE VOCATIONAL EDUCATION AND TRAINING

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Abstract:

It is seen that education institutes use many techniques to increase the quality of the services being provided. However, as competition in the education sector has been rising dramatically, it is hard to differentiate the services offered. In this perspective, it is becoming hard to attract and keep loyal learners in education institutes. So, lifelong learning and continuing professional development are the two tools that enhance the level of loyalty to the education institutes. In this study, an attempt has been made to understand the factors that define learner's loyalty in the Vocational Education Institutes. In addition, the relation of trust to the Institute, satisfaction, and learner's loyalty variables to the service quality will be researched. In this sense, 184 questionnaires have been conducted to students who have attended the Public Oversight Board Education Program offered by Istanbul Commerce University's Lifelong Learning Center. Data has been analyzed by Structural Equation Modelling. According to the results of the study, education institutes who deal solely with the issue of trust, satisfaction, and learner's loyalty can have the potential to keep their learners on hand on a life-long basis thereby earning their loyalty to the fullest extent.

Keywords: *Lifelong learning, learner's loyalty, service quality, trust, satisfaction*

1. Introduction

One of the most important factors in a brand is the quality associated with the product. Especially service brands can be able to differentiate themselves in this manner. Education quality is defined as the level of meeting the functions and goals of the education. In cultural, social and political fields, education institutions have the power to attract and integrate with the society. In order to have qualified workforce, education institutes should perform in certain standards.

As competition is on the rise in recent periods, universities and complementary education institutions have generated strong marketing strategies. In order to differentiate their services from the competitor, education institutes should pay the most attention to perceived quality in services marketing.

Perceived quality has direct influence on the purchasing decision and loyalty. According Zeithaml et al (1996), in order to earn customer loyalty, companies try to exercise and keep a high level of service quality. This is why a company's overall success in the market is high related with wide and loyal customer portfolio and sustainability of such strategy is crucial in this sense. An important aspect of service quality is the level of customer satisfaction. The terminology of satisfaction is related with the concept of customer's choice as a means to satisfy his/her minimal needs or exceed such needs in the pre-purchase consideration. The dissatisfaction is the result of negative expectations. Based on the cause and effect relationship, the level of satisfaction is defined as the process that follows as result of revealing service quality as a result of post purchase dissonance. On the other side, satisfaction has roots in strong associations, images, preference and loyalty. Grönroos (1984) clarifies the concept of service quality in terms of perceived judgment that had emerged from customers comparing their expectations with the service they actually received in the context of their perception. In his study, the service quality is divided into two namely technical quality (what is done) and functional quality (how it is done). It is indicated that functional quality is more important when compared with the technical quality. Technical quality assures the guarantee of the quality in terms of assessing effective systems, procedures, and techniques. It is hard to measure and standardize the functional quality. Additionally, Grönroos (1984) identifies the service quality in two aspects which are listed as expected service and perceived service. Besides, Berry et al (1988) state that service quality is the major determining factor in brands and how brands compete within each other. Sasser et al (1978) reveals services performance in three aspects. These are listed as personnel level, facilities level, and material level. Parasuraman et al (1988) has done a research on four different services sector. Based on the research, 10 general items have been generated. These are tangibles, trust, responsiveness, competition, respect, credibility, security, accessibility, communication, and understanding. Afterwards, these items have been minimized into 5 by establishing the SERVQUAL. These 5 items are empathy, responsiveness, reliability, assurance, tangibles. In some studies, SERVQUAL scale is not sufficient in order to measure the total service quality considering scope and implementation.

In loyalty studies, trust is the main focus of interest. Moorman et al (1992) state the terminology trust as "a willingness to rely on an exchange partner in whom one has confidence, as the belief that a partner's word or promise is reliable and a party will fulfill his or her obligations in the relationship. According to Grönroos (1984), trust is built with the customer. This establishes a relationship with the customer. Especially in services sector, as employees engage in the "share of heart" of the customers, meeting the customer needs and ability solve customer problems honestly and skillfully are the two primary factors. Customer trust can solely be developed with the aid of offering detailed product merchandise availability along with the fashion knowledge. As positive service interaction with the company is being inferred and benefits arise from this interaction, trust starts to be developed. However, the factors of service quality need to be indexed extensively in this sequence.

In services marketing, customer loyalty is the overall target. The major concern of interest that is related with the terminology of loyalty is associated with the emergence of favorable attitudes towards a particular brand while customer end up purchasing repeatedly. In education institutions, learner's loyalty is defined as the learner's level of loyalty to the education institution and the loyalty to the services being offered. The loyalty in the education institutes depends upon keeping the loyal students and earning new students. In education institutions, learner's interactiveness process with the institution brings a high level of loyalty to the education institute. Learner's loyalty depends on the student's level of satisfaction it is being inferred from a certain institution. There are three points of interest that end up in the loyalty in the education institutes. These are listed as the level of belonging to the institution, the quality of the education, and the will to reselect the same institution.

Recently, many studies have been generated on the scope of life-long learning. Specifically, education institutions put the main effort in establishing a continuous relationship with the learner on the concept of customer orientation. Supportive vocational education is an additional education that has been offered to the students in addition to sufficient education that the students already have. So the students already have a level of proficiency in a certain field. In this terminology, the major aim to update the knowledge and skills as means to offer continuous vocational advancement.

The major goal of today's society is to offer more qualified goods and services thereby increasing economic output and the quality of the humans. This is why the qualifications of the workforce resources should be strengthened on a life-long basis. In this sense, vocational training serves the needs of meeting such goals. The needs to vocational

training can be classified in individual, social, economic, and national aspects. Among the many individual needs, it is shown that there is a need for development in the occupations that adults hold, putting the main focus on the issue of continuous enhancement in knowledge and skills. Thus, there is a need on behalf of such groups to attend vocational training programs. In terms of social aspects, vocational training helps people to be involved in social activities to the highest extent, share the social work among the society, and engage in the production activities thereby contributing to the overall sustainability of the society. Society's natural resources, workforce, and the level of benefits attained thereof eventually increase the welfare of the society. Thus, the vocational training serves to meet the needs of the workforce, increase the efficiency and quality in production, and use the resources based upon effectiveness, efficiency, and rationalization priorities. In this perspective, a great economic value is offered through vocational training. In the context of national aspects and concern that are related with the needs of vocational training, it can be said that it increases the individual's production capacity and efficiency of the national workforce, and promotes the economic and social importance of the activity performed (Alkan et al, 1996).

In practice, vocational training can vary in terms of serving different goals, training period, level, and types. One of the major vocational training is what is called "non-formal vocational education and training" where it is conducted on a life-long basis including all the activities such as training, production, consulting, and implementation. This type of vocational training aims to help individuals develop their qualifications and themselves through offering short term and additional training programs. Especially, supportive extensive vocational training targets to provide current up-to-date information or to renew information to individuals who already have a certain level of expertise and prior qualification earned on this field. In this globe, the other aspect of these programs is to offer continuous development to individuals. In the implementation phase of these programs, several approaches can be initiated. Certificate programs that are offered in higher education institutions can be studied in this perspective.

In such consumer services namely legal services, accounting services, and healthcare services, the concept of life-long learning and continuing development of professional competence is crucial. Especially, in accounting services, international education standards are being implemented (IES). The scope and goal of this standard is to promote the concept of life-long learning to the accounting professionals. However, it should be cited that life-long learning responsibility depends upon the learner's involvement to the process. According to Framework for International Education Standards for Professional Accountants, it is stated that "Continuing professional development refers to learning and development that develops and maintains capabilities to enable professional accountants to perform their roles competently". Professional Associations that are motivated to offer benefits to their shareholders (employees, companies etc.) should promote the concept of life-long learning as well. There is a direct relationship between continuing development of professional competence and high service quality (in terms of outcome). The process of life-long learning process starts at early ages. Then the individual attends the education program to become qualified as a professional accountant followed by advancement in individual's career. The continuous education still continues as a life-long basis even though the individual has received his/her license to actively take part in the work force.

In the supportive vocational education marketing in the scope of education institutes, trust, service quality, satisfaction, and loyalty formation policies are important to analyze. In order to keep sustainability, education's scope, content, service provider, and physical environment are the main considerations to take into account. Provided that such initiatives are taken into account, repeated sales would occur in the long run. It should also be noted that education lasts a long time and in terms of strategy formation, the purpose of the education institute as an attempt to set its positioning among the customers is to be the first brand recalled when a learner searches for an education institute to meet his/her needs and wants.

2. Method

Research Design

As data collection tool, a questionnaire was made based on theoretical framework driven by Wong & Sohal (2006)'s study which was done in retail environment. Overall service quality was adopted from Dabholkar et al. (2000) study, "it has an excellent overall service"; "has a service of very high quality"; "provides a high standard of service", and "delivers superior service in every way".

Trust was measured with three items studied by Morgan and Hunt (1994): "the employees of this institution can be trusted at all times"; "the institution can be counted on to do what is right", and "the employees of the institution have high integrity".

Four items for learner's loyalty were adopted from the Reconfigured Behavioral Intentions. Battery (Parasuraman et al., 1994): "I say positive things about this course to other people"; "I recommend this course to someone who seeks my advice"; "I encourage friends and relatives to get this course", and "I consider this institution as my first choice in the next few years".

Different than Wong & Sohal (2006)'s study, satisfaction was measured with 3 items following Brady et. al.(2001)."I am satisfied with my decision", "I made a wise judgment to join to this course", "When I finish the course, I thought I did the right thing".

The questionnaire contained 19 items in which 14 items were assigned to 4 latent variables (customer loyalty, service quality, trust, satisfaction,) and 5 items to demographics variables. The questionnaire design included two parts. The first section consisted of 14 items measuring learner's loyalty, service quality, trust, satisfaction. Items that had a standardized factor loadings below the 0,3 was deleted and not included to the further analysis (Joreskog, 1993). Then the measurement structure was comprised of 12 items. All items in the questionnaire section 1 were measured by Likert's five-point scale on a 5-point Likert type scale ranging from disagree strongly (1) to agree strongly (5). The second part of the questionnaire asked participants to complete 5 demographic questions regarding gender, age, educational status, professional title and professional seniority.

Sample and Data Collection

184 questionnaires have been conducted to students who have attended the Public Oversight Board Education Program offered by Istanbul Commerce University's Lifelong Learning Center. The sample of the study was consisted of students who have attended the Public Oversight Board Education Program offered by Istanbul Commerce University's Lifelong Learning Center. Employing convenience sampling, a total of 248 students participated to study and questionnaires were mailed to 248 students. One month later a second mailing was sent out and the data collection completed during a two-month period. A total of 192 completed questionnaires were obtained-response rate of 87,5 percent. From the total sample collected 184 questionnaires were valid and used for the final analysis.

Description of the Sample

Of the 184 participants, (learner) 69,3% were female while 30,7% were male. Ages of the respondents were 31 age to 40 age (17,2%), 41 age to 50 age (36,5%),51 age to 60 age (36,1%), over 60 age (10,3%). 77,7% of respondents were college graduate, 22,3% were postgraduate. While 62,7% of professional names of the respondents were Certified Public Accountant (CPA),37,3% were Sworn in Certified Public Accountant (Sworn-in CPA). Finally, distributions of the professional seniorities were as follows: 15,9% is under 15 years, 30% is 15 to 20 years, 18,5% is 21 to 25 years, 15% is 26 to 30 years and 20,6% is over 30 years. Table 1 more detailed address the demographic characteristics of the sample.

Table 1.
Demographic Results

		Frequency	Percentage (%)
Gender	Female	128	69,30
	Male	56	30,70
Age	31 age to 40 age	32	17,20
	41 age to 50 age	67	36,50
	51 age to 60 age	66	36,10
	Over 60 age	19	10,30
Employment Status	College Graduate	143	77,70
	Postgraduate	41	22,30
Professional Title	Certified Public Accountant (CPA)	115	62,70
	Sworn in Certified Public Accountant (Sworn-in CPA)	69	37,30
Professional Seniority	Under 15 years	29	15,90
	15 to 20 years	56	30,00
	21 to 25 years	34	18,50
	26 to 30 years	28	15,00
	Over 30 years	37	20,60

Data Analysis

The statistical techniques which are SPSS 21.0 and AMOS 21.0 were used in data analysis. While SPSS 21.0 was used to compute reliability, normality and descriptive statistics, a structural equation modeling (SEM) program, AMOS 21.0 was used to perform first order confirmatory factor analysis (CFA) to verify the appropriate structural model. In data analysis were followed the two-step approach recommended by Anderson and Gerbing (1988) and the analysis was made from two sections. In the first section, a first order confirmatory factor analysis was performed to specify the appropriate structure between latent variables and observed indicators and to test the validity constructs. In the second section, the structural equation model was examined to explain the relationship among customer loyalty, service quality, trust, satisfaction and the hypotheses of the relationships between latent variables were tested.

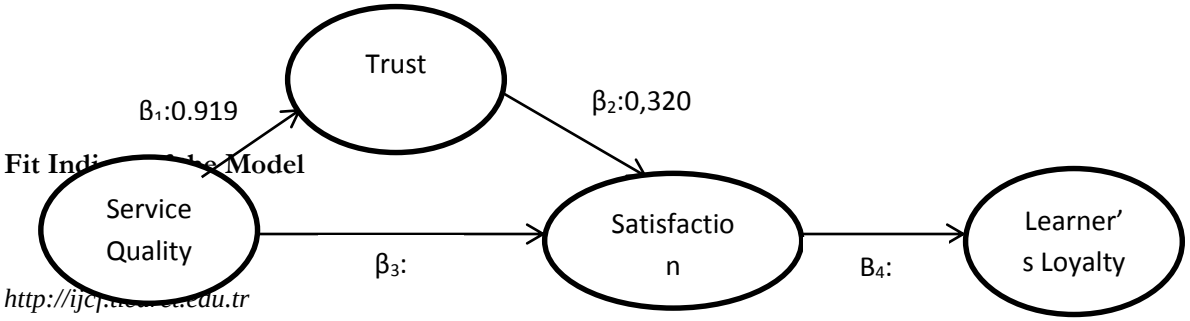
3. Results

Structural Model

The structural model analyses the interrelationships between constructs and how they influence directly or indirectly other constructs in the model (Byrne 2001).

In this study, an attempt has been made to understand the factors that define learner's loyalty in the Vocational Education Institutes relationships among learner's loyalty, service quality, trust, satisfaction, is examined through structural equation model. Figure 1 illustrates conceptual framework of the study.

Figure 1.
Conceptual Framework of the Study



Fit Indi… Model

Hu and Bentler (1999) suggested the model fit criteria for both measurement and the structural model. Accepted model should have (X^2)/df ≤3, Goodness of Fit (GFI) ≥0.90, Adjusted Goodness of Fit (AGFI) ≥0.80, Comparative Fit Index (CFI) ≥0.90, Root Mean square Residual (RMR)≤0.10, and Root Mean Square Error of Approximation (RMSEA)≤0.10.

Structural model to test the proposed model resulted in as indicated in table 2 the following fit statistics: X^2/df=2,695; GFI=0,953; AGFI=0,921; CFI=0,982, and SRMR=0,0226)

Table 2.

Results of Fit Indices of the Model

Model	X^2	df	X^2 / df	GFI	AGFI	CFI	SRMR
Measurement Model	123,978	46	2,695	,953	,921	,982	,0226
Structural Model	156,861	48	3,268	,940	,903	,975	,0269
Recommended Value	-	-	< 3.0 or 5.0	≥ 0,90	≥ 0,90	≥ 0,90	< 0,08

In assessing the structural model, all the fit measures indicated that most fit statistics met recommended values and the structural model was moderately acceptable.

Convergent and Discriminant Validity Measures

Convergent validity explains how well observed variables posited to a latent construct converges or shares a high proportion of variance. On the other hand, discriminant validity provides evidence that each construct can capture its own unique information not obtained from other constructs in the model. This means that each observed variable should be posited to one and only one construct, therefore any evidence of cross-loadings would be a violation of discriminant validity (Douglas, Mills & Phelan, 2010).

To determine convergent validity, Hair et al. (2010) recommends analyzing the factor loadings (path coefficients) and calculating the average variance extracted (AVE) and construct or composite reliability (CR). Fornell and Larcker (1981) suggest that AVE values be at least .500 while Fornell and Bookstein (1982) and Hair et al. (2010) state that CR values of at least .600 are acceptable.

Table 3 presents the convergent validity of all the constructs using composite reliability. All factor loadings in the measurement model were significant and ranged from .744 to .902 satisfying the convergent validity criteria. Composite reliability scores for each latent construct ranged from .852 to .900 whereas average variance extracted ranged from .657 to .770 as indicated in table 3.

Table 3.

Convergent Validity

Construct & Indicators	Factor Loadings	t-value	Composite Reliability	Average Variance Extracted
Service Quality			0,886	0,662
SQ1	0,885	19,014		
SQ2	0,866	18,552		
SQ3	0,744	18,863		
SQ4	0,749	λ set to 1		
Trust			0,900	0,751
TR1	0,902	λ set to 1		
TR2	0,893	27,321		
TR3	0,801	21,834		
Satisfaction			0,852	0,657
STF1	0,759	18,603		
STF2	0,847	19,736		
STF3	0,824	λ set to 1		
Loyalty			0,870	0,770
LY1	0,889	λ set to 1		
LY2	0,866	24,749		

Table 4 provides the correlations among latent variables of interest in the study and the correlations were specified as well.

Table 4.
Correlation Among Latent Variables

	1	2	3	4
SQ	1			
TRST	,821**	1		
SAT	,755**	,768**	1	
LOY	,837**	,804**	,759**	1

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

The intercorrelation between Trust and Service Quality (r=,821),Satisfaction and Service Quality (r=,755), Satisfaction and Trust (r=,768), Learner's loyalty and Service Quality (r=,837, Learner's loyalty and Trust (r=,804) and Learner's loyalty and Satisfaction (r=,759) were significant and all positive as shown under the table 2 on note.

Research Hypotheses Testing and Path Coefficients

Four hypotheses were proposed to assess the statistical significance of the proposed relationships among customer loyalty, service quality, trust, satisfaction and p-value was examined. The research hypotheses are:

H_1: Service Quality has a significance positive direct effect on Trust.

H_2: Trust has a significance positive direct effect on Satisfaction.

H_3: Service Quality has a significance positive direct effect on Satisfaction.

H_4: Satisfaction has a significance positive direct effect on Learner's loyalty.

The results of the hypothesis testing and standardized path coefficients for the model were explained below.

The results indicated that the first hypothesis was confirmed and service quality was found to influence trust positively were significant at p<0,001 level (H_1: β_1=0,919, p<0.001). Also in path coefficient was extracted that there was a positive and strong causation between service quality and trust.

Hypothesis two was confirmed and trust also had a positive direct influence on satisfaction (H_2: β_2=0,320, p<0.001).There was a positive but weak causation between trust and satisfaction.

Hypothesis three was supported in a same way. Service quality had a positive influence on satisfaction (H_3: β_3 =0,668, p<0.001). There was a positive and moderate causation between service quality and satisfaction.

Fourth hypothesis was confirmed and satisfaction had a significance positive effect on learner's loyalty (H_4: β_4=0,972, p<0.001). There was a positive and quite strong causation between satisfaction and learner's loyalty.

4. Conclusion:

As competition has been rising, the concept of marketing has changed based upon the changing needs and wants of the customers. Instead of high profitability, companies nowadays prefer loyal customers and loyalty has been the main focus of conducting business in the era of competition. Companies, therefore, adapt customer-oriented strategies. The high level of customer satisfaction eventually leads to the development of loyalty programs. Customers either complain or give up using the brand in the case that they are not fully satisfied. Changing needs of the consumers have to be identified and met in the Education sector within the context of services sector.

As depicted throughout the paper, a special interest has been devoted to the concept of life-long learning in the context of education institutes. In this globe, continuing professional development is directly related with the emergence of life-learning concept. Besides, learner's loyalty is another issue that has been researched throughout this paper. Learner's loyalty, as stated, depends upon trust to the Institute, satisfaction, and overall service quality. Overall, such relations in comparison to life-long learning and continuing professional development have been studied.

Based on the research outcome and analysis, it can be claimed that quality of the service (and the quality perception) received by the individual as a result of the education program is a major indicator of how a loyalty can be enhanced in education institutes. Besides, trust to the Education Institute is the primary aspect of how trust can be structured in these institutes. Education institutes who deal solely with the issue of trust, satisfaction, and learner's loyalty can have the potential to keep their learners on hand on a life-long basis thereby earning their loyalty to the fullest extent.

It is believed that this study would be a good reference to future studies in the scope of extending the applicable information to education institutes in establishing their loyalty formation policies. In the case that education institution image and lifestyle factors are being included in the model for further studies, different findings can possibly be reached.

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Special thanks to Asist. Prof. Dr. Mustafa C. Altunel

International Journal of Commerce and Finance, Vol. 2, Issue 1, 2016, 113-123

THE EFFECT OF CORPORATION REPUTATION ON ORGANIZATIONAL CITIZENSHIP BEHAVIOUR

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Abstract:

There is a growing interest of academicians and practitioners for corporate reputation since it is an important factor, which creates beneficial outcomes for the firms. In the literature, corporate reputation is studied on the ground of external stakeholders. However, employees as internal stakeholders are also as important as the external ones, and we know little about how corporate reputation affects employees' organizational behaviors. This study purposes to fulfill that gap and aims to identify the effect of corporate reputation an organizational citizenship behavior (OCB). As a result of the study, it was found that corporation reputation positively affects altruism, courtesy, civic virtue and consciousness while does not have any influence on sportsmanship

Keywords: *Corporate Reputation, Organizational Citizenship Behavior, SEM*

1. Introduction

There are various definitions and core concepts identified as basis of corporation reputation. Whetten and Mackey (2002) discuss that corporation reputation is a particular type of feedback, received by an organization from its stakeholders, concerning the credibility of the organization's identity claims (p. 401). Fombrun (1996) emphasizes that corporate reputation represents the net affective or emotional reaction. On that ground, it is an overall estimation derived from the extent to which the firm is well known; such as good or bad, reliable, trustworthy, reputable and believable (Brown, 1995; Levitt, 1965). Weigelt and Camerer (1988) group these attributes as economic and non-economic variables and besides that define a third attribute as firms' past actions.

There are differing approaches for corporation reputation. Economists look at reputation as either traits or signals. According to game theorists, reputation is a character trait, which helps firms to distinguish themselves form other firms. For signaling theorists, reputation has an informational content. On that ground both, game theorists and signaling theorists, acknowledge that reputations are actually perceptions held by external stakeholders (Fombrun and van Riel, 1997).

Corporation reputation is a multidimensional concept. Firm size positively affects corporation reputation such as bigger firms possess higher reputation (Fombrun and Shanley, 1990). Accounting performance and the firms's risk profile positively influence reputation (Roberts and Dowling, 2002). Besides media exposure, advertising, corporate social responsibility and community involvement are found to affect reputation (Bromley, 1993; Fombrun and Shanley, 1990; Garbett, 1988; (Sabate and Puente, 2003).

Corporation reputation creates several consequences for firms. If it is a positive perception then it yields to beneficial outcomes (Caruana and Chipcop, 2000). Corporation reputation positively influences the attitude of buyers (Brown, 1995), and the intention to purchase a service (Yoon et al., 1993). Firms with positive reputation attract investors, have a low cost of capital and a strong competitive ability (Fombrun and Shanley, 1990). Moreover, it positively affects perceived product quality and creates a barrier in the industry for competitor entry (Weigelt and Camerer,

1988). It has also been related to organization identification of employees. Since it provides a structure for attracting quality personnel, it is also linked to the inter-organizational co-operation or OCB (Dutton et al., 1994).

2. Theoretical Framework

2.1. Corporation Reputation

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2.2. Organizational Citizenship Behaviour (OCB)

OCB is defined as "individual behavior that is discretionary, not directly or explicitly recognized by the formal reward system, and that in the aggregate promotes the effective functioning of the organization" (Organ 1988, p4). In the case of OCB, it is important that the employees believe their manager will fairly reward and recognize OCBs. The employees display and sustain OCBs (Allen and Rush 1998; Haworth and Levy 2001).

OCB is a multidimensional concept including five dimensions (Organ 1988). These are altruism, courtesy, conscientiousness, sportsmanship, and civic virtue. Alturism means voluntarily helping other members of the organization to accomplish relevant tasks and solve problems in the organization. Conscientiousness involves the least amount of duties required by the contracted role such as not wasting time or organizational resources, staying late to help with a project, or volunteering to coordinate activities. Civic virtue is the willingness of employees to engage with the organization and show an interest in improving organizational processes and efficiency. Sportsmanship is demonstrating tolerance and abstaining from complaining or creating injustice in the organizational working environment. Finally, courtesy includes preventing work-related problems with other members by taking action. In that sense employees try to avoid conflicts among decisions and employees.

OCB is a personal choice (Chiu and Chen, 2005), but is is important since it have a positive effect on organizations. There are three main motives underlining OCB (Rioux and Penner 2001). These are (1) pro-social values, (2) organizational concern, and (3) impression management. Pro-social values constitute desire to help other and gain acceptance. Organizational concern is the pride in and care for the organization. And finally impression management is the desire to create and maintain a positive image.

Employees who have a positive corporate reputation perception are positively motivated to display pro-social behaviors (Çekmecelioğlu ve Dinçel, 2014: 83). Corporation reputation provides organizational commitment

especially for the employees and thus the employees adopt organizational identity while becoming integrated with the firm (Romenti, 2010). The reputation that the corporation has in the society is also projected to the employees as a positive outcome (Çekmecelioğlu ve Dinçel, 2014). When employees recognize a favorable reputation to their organization, they are more prone to generate belief-consistent feelings of identification, such as continuing to work at the company and support various voluntary, extra-role behaviors to improve service delivery or provide valuable suggestions to the firm (Morhart et al., 2009).

On that ground the research model is as seen in Figure 1.

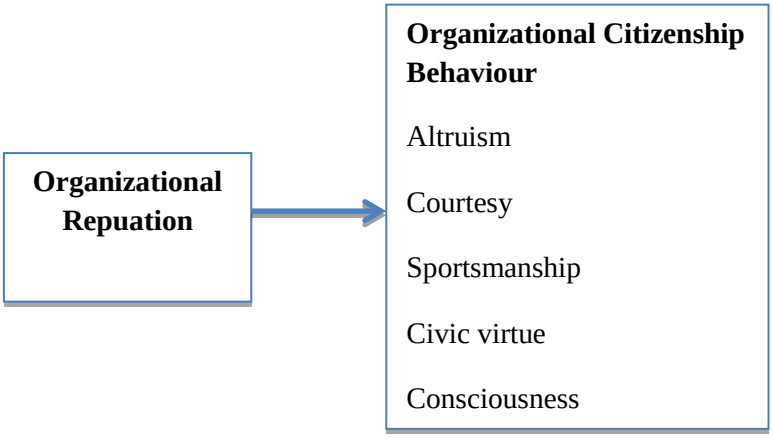

Figure 1: Research Model

And the research hypothesis are formulated as follows

H1: Corporate reputation positively affects civic virtue.
H2: Corporate reputation positively affects altruism.
H3: Corporate reputation positively affects consciousness.
H4: Corporate reputation positively affects sportsmanship.
H5: Corporate reputation positively affects courtesy.

3. Research Methodology

Sampling and Measurement

The data was collected from Kocaeli University students via face-to-face survey. A total of 458 valid and complete responses were included in the final analysis. The demographic and socio-economic variables of the respondents indicate that they are from both gender (with 38.7 % being female while 61.3 % being male), and they have an age range of 19-33.

The constructs were measured by using established scales. Corporate reputation was measured by Walker's (2010) scale, and OCB was measured by Padsakoff et al. (1990) scale. Corporate reputation was measured via eigth items while OCB was measured via 24 items. The research hypothesis was tested via Structural Equation Modeling by using SPSS 13.0 ve AMOS 6.0. Structural equation modelling combines the casual relationship among the variables in regression model with the factor structures obtained from the factor analysis (Babin et al., 1999). Yet all, SEM techniques are distinguished by two characteristics: (1) estimation of multiple and interrelated dependence

relationships and (2) the ability to represent unobserved concepts in these relationships and account for measurement error in the estimation process (Hair et al., 1998).

4. Research Findings

In the study, before testing the hypothesized relationships, the reliability of the scales was evaluated by Cronbach's alpha coeffficient. In Table 1 the results of the reliability analysis were given and as it is seen that Cronbach's alpha coefficient is 0.901 for corporate reputation and 0,843 for OCB. Both value are found as above the minimum required level of 0.70.

Table 1: Reliability Analysis

Ölçekler	Değişken Sayısı	Alfa Katsayısı (Güvenilirlik Analizi)
Corporation Reputation	8	0,901
OCB	24	0,843

After determining the internal consistency of the scales used in the research, the OCB is tested via confirmatory factor analysis. As a result of the confirmatory factor analysis, seven items were deleted from OCB scale. The final measurement model is presented in Figure 2.

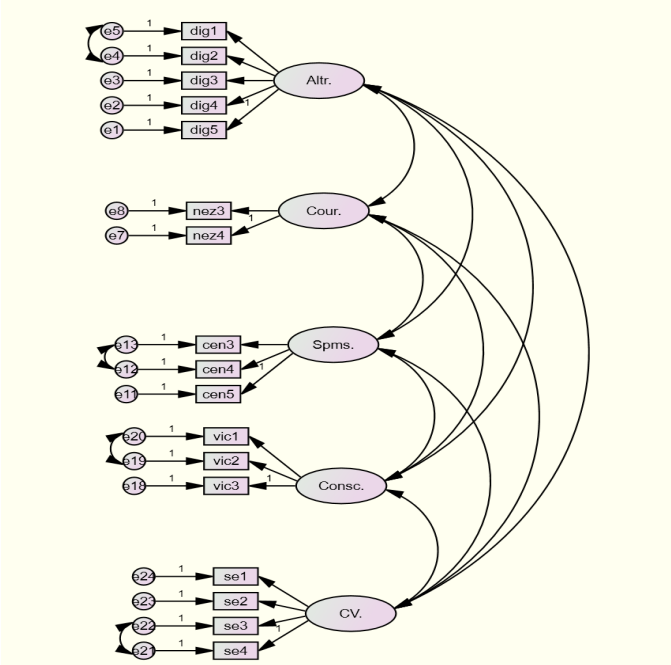

Figure 2: Model for Confirmatory Factor Analysis of OCB

In Table 2, the variables used in the confirmatory factor analysis were given. As it is seen in Table 2, in total 39 variables were used in the study. 17 of these variables are observed variables, while 22 of them are unobserved variables. The exogenous variables are 22 and consist observed variable and hidden. The endogenous variables are 17 and consist of error terms.

Table 2: The Variables Included in The Confirmatory Factor Analysis

Total variables	39
Observed variables	17
Unobserved variables	22
Exogenous variables	22
Endogenous variables	17

The goodness of fit measures found in the confirmatory factor analysis was presented in Table 3.

Table 3: Goodness of Fit Measures for Confirmatory Factor Analysis

Fit Measures	Measurement Model	Ideal Model	
Discrepancy (χ^2)	198,207	0.000	CMIN
Degrees of freedom	153	0	DF
P	0,000		P
Discrepancy / df (χ^2/sd)	1,888		CMINDF
Goodness of Fit	0,923		GFI
Adjusted Goodness of Fit	0,887		AGFI
Normed fit index	0,910	1.000	NFI
Relative fit index	0,983		RFI
Incremental fit index	0,988	1.000	IFI
Tucker-Lewis index	0,941		TLI
Comparative fit index	0,955	1.000	CFI
RMSEA	0,055	0,05<RMSEA<0,08	RMSEA
Hoelter ,05 index	191		HFIVE
Hoelter ,01 index	208		HONE

As can be seen from Table 3, in evaluating the goodness-of-fit between the model and the data the first measure is the likelihood ratio chi-square statistics. This value has a statistical significance (p=0.000). But, the chi-square statistics alone is not an enough measurement. It is recommended that when the sample size is over 200, because the Chi-square value is sensitive to the sample size, some other values also should be taken into consideration in the evaluation process (Sweeny et al., 1999). Therefore, other fitness measures also checked. First, we looked at the x^2/sd ratio, which is calculated by dividing chi-square value by the degrees of freedom. Closeness of this value to the zero means that there is goodness-of-fit between the data and the model (Yoon et al., 2001). In our research it was found as χ^2/sd = 1,888. So it can be said that there is a fitness between the data obtained and the research model. Another criteria in the evaluation of the data and the model fitness is the goodness of fit value (GFI) which was found as 0,923. In addition to that, the other criterias NFI (0.857), RFI (0,983), IFI (0,988), TLI (0,941) and CFI (0,955) also indicate the fitness. The closeness of this value to the one (1) represents the validity of the model. Besides, the RMSEA value of the model is 0.068. This falls well within the recommended levels of 0.05 and 0.08 (Garretson et al. 2002). At last, in order to determine the required minimum sample size to test the research hypothesis at the stated level of confidence interval Hoelter .05 and Hoelter .01 indexes were used. To test the hypothesis at %95 confidence interval level and 0.05 significance level, the required minimum sample size was determined as 191 and to test the hypothesis at %99 confidence interval level and 0.01 significance level, the required minimum sample size was determined as 208. As it can be seen from the Table 3, the sample size is much more than the required minimum sample sizes determined by Hoelter .05 and Hoelter .01 indexes.

Table 4: Factor Loadings

			Estimate
dig5	<---	Altr.	,754
dig4	<---	Altr.	,825
dig3	<---	Altr.	,817
dig2	<---	Altr.	,795
dig1	<---	Altr.	,650
nez4	<---	Cour.	,794
nez3	<---	Cour.	,865
cen5	<---	Spms.	,631
cen4	<---	Spms.	,619
cen3	<---	Spms.	,659
vic3	<---	Consc.	,668
vic2	<---	Consc.	,702
vic1	<---	Consc.	,563
se4	<---	CV.	,619
se3	<---	CV.	,648
se2	<---	CV.	,832
se1	<---	CV.	,717

The factor weights were given in Table 4. All of the factor weights are above 0,50 and the construct reliability was found as 0, 59 Construct reliability measures the internal consistency of the construct indicators and it is used to assess the measurement model (Hair et al., 1998). It is computed from the squared sum of factor loadings for each construct and the sum of the error variance terms for a construct and the explained variance was found as 0,52. After determining the reliability and the validity of the scales, the research hypotheses were tested via Structural Equation Modeling (SEM). The measurement model of the hypothesized relationships was presented in Figure 5.

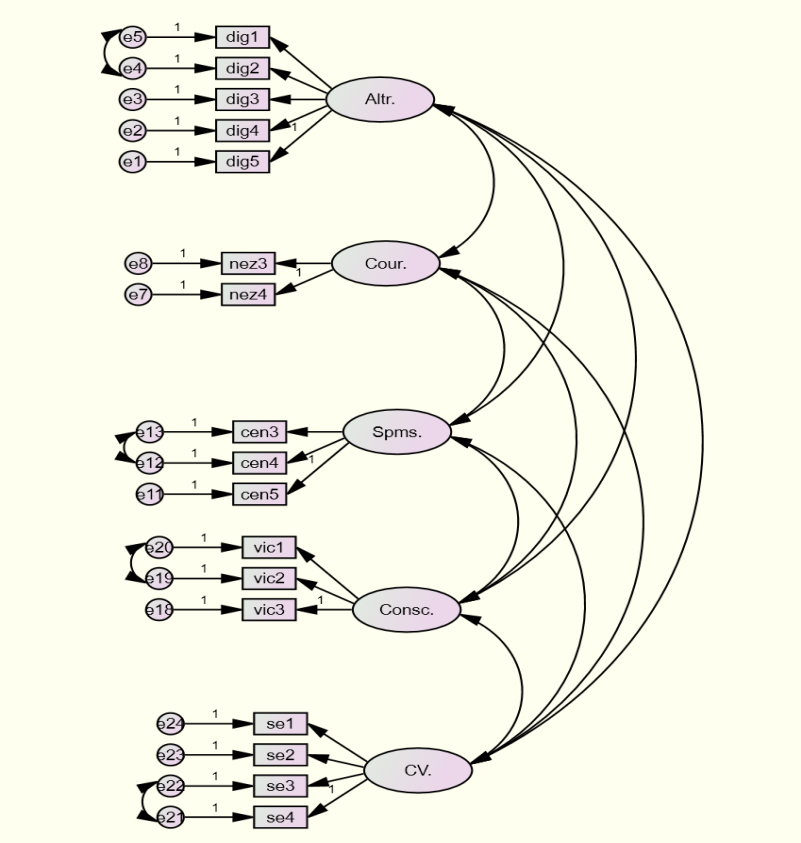

Figure 3: Model of Hypothesized Relationships

In Table 5, the variables used in the measurement model were given. As it is seen in Table 4, in total 61 variables were used in the study. 25 of these variables are observed variables, while 36 of them are unobserved variables. The exogenous variables are 31 and consist observed variable and hidden. The endogenous variables are 30 and consist of error terms.

Table 5: The Variables Included in The Measurement Model

Total variables	61
Observed variables	25
Unobserved variables	36
Exogenous variables	31
Endogenous variables	30

Table 6 displays the goodness of fit measures for the measurement model. And as it can be seen there is fitness between the model and the data.

Table 6: The Goodness of Fit Measures for Measurement Model

Fit Measures	Measurement Model	Ideal Model	
Discrepancy (X^2)	592,114	0.000	CMIN
Degrees of freedom	265	0	DF
P	0,000		P
Discrepancy / df (X^2/sd)	2,234		CMINDF
Goodness of Fit	0,848		GFI
Adjusted Goodness of Fit	0,814		AGFI
Normed fit index	0,842	1.000	NFI
Relative fit index	0,821		RFI
Incremental fit index	0,906	1.000	IFI
Tucker-Lewis index	0,892		TLI
Comparative fit index	0,905	1.000	CFI
RMSEA	0,065	0,05<RMSEA<0,08	RMSEA
Hoelter ,05 index	149		HFIVE
Hoelter ,01 index	158		HONE

The regression weights and the result of the hypothesis tests were given in Table 7. As a result of the study H1, H2, H4, and H5 is supported while H3 is unsupported. In that sense, corporation reputation positively affects altruism, courtesy, civic virtue and consciousness while does not have any influence on sportsmanship.

Table 7: Regression Weights

			Estimate	S.E	T Value	P	Standardized Regration Weights	Result of the Hypothesis Test
Altruism	<---	CR	,608	,095	6,392	***	,467	H1 supported
Courtesy	<---	CR	,464	,090	5,177	***	,366	H2 supported
Spmship	**<---**	**CR**	**-,021**	**,105**	**-,203**	**,839**	**-,014**	**H3 not supported**
Cons.	<---	CR	,399	,087	4,598	***	,380	H4 supported
C. Virtue	<---	CR	,466	,086	5,418	***	-405	H5 supported

Standardized regression weights present the possible change that will occur in dependent variable when there is one unit change in independent variable. On that ground, one unit change in corporate reputation will create an increase of 0,467 in altruism; 0,366 in courtesy; 0,380 in consciousness, and 0,405 in civic virtue. Besides Table 8 displays the R^2 values of the model. R^2 values were used to identify the explanatory power of the model. It displays the explained percentage of endogenous latent construct by exogenous latent variables (Sirohi, et al., 1998). In that study, it was found that corporate reputation explains 28% of altruism behavior, 13% of courtesy behavior, 14% of consciousness behavior and 16% of civic virtue behavior.

Table 8: R^2 Values of Measurement Model

	Estimate
Altruism	,281
Courtesy	,134
Sportmanship	,000
Consciousness	,144
Civic Virtue	,164

5. Conclusion:

As an inevitable result of today's world; survival of companies working in the work environment located in a great development and changes, are obliged to keep their hands competitiveness and to expend a lot of effort in order to continue to develop it. This effort forms in the long term, for all stakeholders in the company a sharing positive / negative reputation perception. For stakeholders, especially for the employees perceived corporate reputation represents much more. Corporate reputation providing significant benefits to the company in terms of customer Employees, partners, suppliers and organizations as a critical (Cravens et al. 2003) and strategic (Dierick and Cool, 1989; Barney, 1986; Weigelt and Camerer, 1988) element influences largely the attitude of the employee towards the institution where they work, as such ties ; behavior, confidence, loyalty and citizenship. Studies conducted in the near term, on the one hand while trying to expand definitional framework for corporate reputation (Dowling, et al., 2013), on the other hand the concept relations with different concepts have been investigated. Corporations with a positive corporate reputation, benefits in today's competitive environment because they have the potential to attract to customers and employees (Walsh et al., 2009; Karaköse, 2007). These corporations also have potential to attract investors. A good corporate reputation influences their buying decisions of customers increased the influence of advertising. A good corporate reputation, but also allows businesses to leave less damage from the crisis. (Chun, 2005).

It is examined how to be influenced organizational citizenship behavior by corporate reputation and whether the relationship between them is remarkable in this study. When other conducted studies examined it is seen that the relationship between corporate reputation and OCB didnt adresse all dimensions. Therefore, it is expected that this study will provide a positive contribution to the literature. Referred as Institutions' stakeholders; buyers, partners, employees and other interested parties , workers are in it stands out as one of the most important stakeholder of organizations. (Dolatabadi, et al., 2012). Organizational citizenship behavior is a form of prosocial behavior; altruism, courtesy, conscientiousness, sportsmanship and civic virtue of which consists of five dimensions, including employees of the institution and the work consists of attitudes and behaviors exhibited voluntarily. Organizational citizenship behavior, is defined by Organ (1988: 8) as; "Businesses that are not covered explicitly by the formal reward system, but to help the company fulfill its functions in an efficient manner, discretionary individual behavior". Organizational citizenship behavior is voluntary, as this behavior is not a requirement in the individual role definitions. Corporate reputation perceived by employees influence them to exhibit prosocial behavior working in referral and causes employee to show behavior beyond the determined the size of the standard in favor of corporate behavior. In other words, this behavior is a personal choice. Compared to others to have a certain corporate reputation makes it more attractive in the eyes of corporate employees and their behavior to provide more benefits in this direction. (Fombrun and Shanley, 1990). Likewise, business with a particular corporate reputation, is becoming more attractive for employees, it gives direction to the trust and loyalty to their institution (Fombrun, 1996).

It is also possible that there is the existence of qualitative research that is the assessment of the Corporate reputation and sense of dimension in terms of the managers (Reddiar, et al., 2012). In this context, the conducted studies show that the managers accepted the corporation reputation as financial asset try to develope it (Walsh et al., 2014). Senior managers and CEOs, they are aware that there is a major extent result of corporate reputation, in all their decisions they take into account that how their decisions effect to corporate reputation. It will not be wrong to say that, a corporation with a good reputation is also among successful enterprises in the industry. the success of the business is a total success of their employees. Considering that the success is a product of team working, demonstrating organizational citizenship behavior of employees is a key element of business success that emerges. Hence, creating a positive corporate reputation for a successful business, organizational citizenship behavior of employees to be nominated is an integral part.

In the field of business management, one of the most popular concepts in recent years is corporate reputation. Business managers should be aware that there is a measurable and manageable concept of corporate reputation. With results obtained by the study, corporate reputation affects the organizational citizenship behavior in a positive way, it was revealed that a significant relationship with all other dimensions except sportsmanship. This supports the theory

on the subject. Corporate reputation is intangible and invisible, but it is an asset that adds value to the company. At the same time, it can not be imitated by others, and instead is a very important strategic resource that could not be anything else. (Hall, 1992; Roberts and Dowling, 2002). Therefore, depending on the results of this research, a reputation management for the purpose of obtaining the necessary organizational citizenship behavior of employees working in support of business leaders, will have positive effects for both employees and businesses.

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International Journal of Commerce and Finance, Vol. 2, Issue 1, 2016, 125-136

MANAGERS' PERSONALITY TRAITS OVER MANAGEMENT STYLES AND DECISION-MAKING STYLES

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Abstract:

The paper seeks to offer a contribution to the extent literature on the role of managers' personality characteristics over management styles and decision-making styles. We have prepared a questionnaire which consists of Girgin's (2007) personality scale adaptation from Goldberg (1992), Kurban's (2015) decision-making scale adopted from Scott and Bruce (1995), and Yıldızhan's (2012) management style scale. The questionnaire is conducted among managers and employees in various sectors in Istanbul via the single random sampling method. Frequency analysis is applied to descriptive findings. In order to determine reliability and validity of the scales, reliability and factor analysis are performed. We have focused on investigating the impact of managers' personality traits on management styles and decision-making styles by applying the Multivariate Regression Model and Correlation Analysis. The result of the factor analysis revealed that the three dimensions (extraversion, neuroticism, conscientiousness) of big-five personality traits have a significant effect on some dimensions of managers' decision making and management styles.

Keywords: *Personality Traits, Management Styles, Decision-Making Styles, Multivariate Regression Model*

1. Introduction

Although there are many factors exist that are essential for organizations to alive, the crucial effect of managers should not be omitted. Decision making and management styles are main sources to create this effect. Undoubtedly, excluding the independent variables such as the size of organizations and the sector where they operate, also personality traits of the managers who implement these sources have considerable influence. In this context, the main purpose of the study is to investigate the relationship between personality traits of managers and their management styles, besides their decision making styles.

The first section of the study includes the definition of aforementioned concepts. Afterwards in the second section, the application that managers in various organizations participated is explained. To that end, in order to measure Big Five Personality Traits which has five dimensions - *Extraversion*, *Neuroticism*, *Agreeableness*, *Conscientiousness*, and *Openness to Experience*. Furthermore, the management classification which contains authoritarian, supporter, protective, unionist and laissez-faire management styles was applied. Finally; the relations among rational, intuitive, avoidant and spontaneous decision making styles were investigated. In the third section of the study, the findings and results were presented.

2. Literature Review

Under this section, the general knowlege is presented related with the big five personality traits, decision making styles and management styles by examining various studies in the literature.

2.1. The Big Five Personality Traits

In many academic studies human personality in organizations is an attractive topic especially to build the relationship between the personality characteristics and job related behaviors (Yakasai and Jan, 2015). There are different models of personality traits in field of psychology. But the five factor model often labeled Big Five (e.g., Digman, 1990; John, 1990; McCrae, 1992; McCrae and Costa, 1984 as cited in Bakker et al., 2006) is widely accepted and popular model for embodying individual differences in personality (Berglund et al., 2015, p.59). Based on the general researches about personality traits, starting from the initial studies by Cattell (1943) and Fishke (1949), to more recent studies by Goldberg (1981), Digman and Takemoto-Chock (1983), Costa and McCrae (1985), McCrae and Costa (1987), have concurred on (Mishra and Vaithianathan, 2015) Big Five is a useful typology or taxonomy for classifying the multitude of personality characteristics (Digman,1990; Goldberg, 1992, 1993; McCrae and Costa, 1987, 1989; McCrae and John, 1992 as cited in Caligiuri, 2006, p.222).

The Big Five Model consists of five personality traits which are Extraversion, Neuroticism, Agreeableness, Conscientiousness, and Openness to Experience.

Extraversion represents assertiveness, sociability, energy and positive emotions (Band, et al., 2014). Extraverted people are talkative, warm, cheerful, active, and enthusiastic (Paramanandam and Radhamani, 2014), self-confident, dominant and excitement seeking (Bakker et al., 2006) and capable in developing interpersonal relationship with others and externalizing their emotions (Therasa and Vijayabanu, 2015). According to Soldz and Vaillant (1999), extraversion is related to social success, preminence and self-promotion (Syed et al., 2015).
Neuroticism contrasts emotional stability and captures one's tendency to experience a variety of disruptive emotions and thoughts (Camps et al., 2016). Another definition of neuroticism states the degree some negative personality traits such as touchiness, unhappiness, impulsiveness, aggressiveness and anxiousness (Berglund et al., 2015). Neurotic people tend to be unhappy and feel uncertainty about their life circumstances (McCrae and Costa, 2008 as cited in Syed et al., 2015, p.184). Fear, anger, depression, easily inclined to stress, not able to control impulses, irritability, low self-esteem are significant indicators of neuroticism (Therasa and Vijayabanu, 2015). Highly neurotic individuals are insecure, anxious and more susceptible to stress than less neurotics (Costa and McCrae, 1992). Their moods tend to be capricious and their behaviors are impulsive. They are more susceptible to psychological stress, as they "are likely to interpret ordinary situations as threatening, and can experience minor frustrations as hopelessly overwhelming" (Widiger, 2009, p. 129 as cited in Giluk and Postlethwaite, 2015).

Agreeableness includes traits such as altruism, mild-mannered, trust and humble (John and Srivastava, 1999 as cited in Quintelier, 2014). According to Barrick and Mount (1991), people who have high agreeableness traits are adaptable, kind, collaborative, kind, helpful, patient, thoughtful and affectionate (Syed et al., 2015). They extremely like to have close interrelationships, interiorise positive approach and they have high life satisfaction (McCrae and Costa, 1991 as cited in Therasa and Vijayabanu, 2015). In the assessment of Costa and Mc-Crae (1995) agreeable people are more trustworthy than nonagreeable people who are manipulative, pessimistic and self-serving (Yakasai and Jan, 2015, p.16). They have also effort to build and keep harmony and prefer to use compromising strategies in dealing with any conflict (Camps et al., 2016).

Conscientiousness identifies task and goal directed, planful and organized behavior, such as thinking before acting, following norms and rules, delaying gratification, prioritizing tasks (Oliver and Srivastava, 1999, p.30). Highly conscientious people are self-disciplined, reliable, ambitious, thorough and efficient (Berglund et al., 2015). McCrae and Costa (1986); Costa et al. (1991) associated conscientiousness with self-discipline, achievement striving, dutifulness, and competence. Especially their persistency and self-discipline characteristics cause them to accomplish tasks or goal in a successful manner. This was demonstrated by some researches which are leaded by Piedmont (1993), Deary et al. (1996), and Deary et al. (2003).

Openness to experience defines the "openness" to new ideas and flexibility (Costa and McCrae, 1985) as cited in Mishra and Vaithianathan, 2015, p.16). This trait indicates the degree of intellectual curiosity, creativity (gender) and individual's tendency to learn, try new things, consider new ideas and change (Osatuyi, 2015). Individuals who have high traits in openness are imaginative, impulsive, open-minded, unprejudiced, curious and indulgent (Berglund et al.,

2015). They are not insistent on their own ideas or views, nor in their expectations toward others (Mondak, 2010 as cited in Quintelier, 2014, p.344). According to McCrae and John (1992), people who have openness traits tend to have more "need of variety, aesthetic sensitivity, and unconventional values than others (Syed et al., 2015, p.184).
Big Five Personality Traits has a significant effect especially on the decision making styles of managers and employees and the management styles of managers likewise the other management processess in organization. In this context decision making styles and the management styles are stated in the following sections.

2.2. Decision Making Styles

Rowe et al. (1984) has defined decision as "*an answer to some question or a choice between two or more alternatives*" (p. 3). Therefore, decision making ability is in relation with choosing an alternative from the pool (Hammond, 1999). As for decision making process Krumboltz and Hamel (1977) expresses that defining, creating, examining and acting upon collected information.

Decision making is a function according to Weiss (1983) that includes one's personal interests, information and ideology. Rowe and Mason (1987) put decision making process in an order as; 1) stimuli; 2) the response; 3) the reflection; 4) the implementation; and 5) the evaluation. Driver et al. (1993) classified decision styles with their model Five Basic Decision Styles of Information Use. Decisive, flexible, integrative, hierarchic and systematic were the five decision styles.

Rowe and Mason (1987) developed the Cognitive to Complexity Model and classified decision styles. These four basic styles are 1) directive, 2) analytical, 3) conceptual and 4) behavioral. Directive decision making style is having low tolerance for ambiguity and low cognitive complexity. The analytical decision making style is having high tolerance for ambiguity. The conceptual decision making style is having high level tolerance for ambiguity and high level cognitive complexity. The behavioral decision making style is having low level tolerance for ambiguity and low level cognitive complexity (Rowe and Mason, 1987; Rowe and Davis, 1996; Boulgarides and Cohen, 2001; Connor and Becker; 2003).

Decision making style was defined by Scott and Bruce (1995) as "*the learned habitual response pattern exhibited by an individual when confronted with a decision situation … it is not a personality trait … but a habit-based propensity to react in a certain way*" (Scott and Bruce, 1995, p. 820). They classified decision making styles in five dimensions —rational, intuitive, dependent, avoidant and spontaneous. *Rational style* depends on logical evaluation choices. *Inutiative style* prioritize feelings and the others' thoughts in decision making process. The managers who have a*voidant style* are tended to avoid to make decisions. *Spontaneous style* defines instant and prompt behaviors in decision making process (Scott and Bruce, 1995 as cited in Bavol'ar and Orosova, 2015, p.115). This decision making style which was developed by Scott and Bruce (1995) and adopted by Kurban (2015) was preferred in this study.

2.3. Management Styles

Management style is simply defined as "*a recurring set of characterisitics that are associated with the decisional process of the firm*" (Albaum and Herche, 1999, p. 8). The characterisitics may change due to the environment and culture where the organizations operate. Despite the fact that there are differences, an organization might be viewed as having a management style which is the sum of its managers, therefore management style becomes part of organization's culture. Poon et al. (2005) examined management decision making styles and compared national culture and management styles of Australia and China. More recently, Chia et al. (2007) observed Hong Kong, China, Taiwan, South Korea and Singapore. As a conclusion within these countries political and socioeconomic factors affect the values of managers.

According to Lewin et al. (1939; cited in Tomaskova and Kopfova, 2011) authocratic, participative and democratic management styles are the most common cited and used management styles. When a manager dictates orders to organization members and without any consultation makes decisions by him or herself this type of management style is called authocratic management style. Authocratic managers generally ignore their subordinates' advices (Knott, 2001). Disadvantege of authocratic management style is in longer term motivation will tend to decrease and employee turnover will increase. As for participative or often called also consultative management style, before a

manager implements a decision he/she consults partners, staff or employees their opinion. After taking their opinions, he/she modifies them into his/her decision and make a final decision (Tomaskova and Kopfova, 2011). In contrast to authocratic managers, democratic managers seek to consult and take advice from their subordinates and try to arrive at a consensus. Democratic management style is characterized by empowerment. Anyone has the decision making responsibility within a given framework. Therefore, individuals feel a sense of commitment and belonging to their organization and their motivation tends to increase (Kocher et al., 2013; Rotemberg and Saloner, 1993).

Another classification about management styles was made by Likert. Likert's System 4 management style has four types. System 1 is exploitative authoritative and managers of this style tend to motivate individuals by threats and punishment, and decisions are imposed to employees. System 2 is benevolent authoritative. Managers of this style tend to control less than System 1. In System 2 decisions are made by lower-level employees within the given limited framework, however majör decisions are made at the top. Top managers feel more responsibility. System 3 is consultative system. This type of management style is related to Human Relations Theory. Managers of this style tend to motivate subordinates through rewards; moreover, lower-level employees are free to make decisions related with their work. Top managers still have control over decisions, however they count their subordinates in action plans before setting goals. The last type is System 4 which is named participative system. System 4 is the most effective style of management. Whereas System 3 is related to Human Relations Theory, System 4 is related to Human Resources Theory. System 4 type of management style includes high level of participation, responsibility, motivation, communication and satisfaction (Likert, 1967, p. 48; cited in Hall and Leidecker, 1981).

The management style classification in this application bases on *authoritarian, protective, supporter, unionist and laissez-faire* management styles. *Authoritarian management style* is similar to McGregor's X Theory (Cem, 1971). This type of managers are close to communication and they tend to distrust to subordinates (Öztekin, 2002). *Protective management style* advocates human relations approach which Barnard, Mayo and Follett pioneered (Cem, 1971). Protective managers believe that in order to reach the targets they should guide subordinates. *Supporter management style*'s power source is organizational leadership. Besides, leader's power source is subordinates. *Unionist management style* assures self-control, self-management, self-realization and teamwork (Başaran, 1992). *Laissez-faire management style* is also mentioned liberal management style. Employees do their duty or work as they know, however managers do not control or interfere them (Cem, 1971).

3. Methodology and the Application

We have prepared a survey in order to measure the role of managers' personality characteristics over management styles and decision-making styles. Managers and employess who worked in various companies in Istanbul form the population of this study. The questionnaire is conducted among managers and employees. Participants are from various sectors in Istanbul. As for sampling method, the single random sampling method is chosen.

The questionnaire starts with 4 demographic questions and involves in four separate categories the instruments of managers' personality traits, decision-making styles and management styles in this research. The questionnaire packs took about 15-20 minutes to complete. All of the variables used in the second, third and fourth sections of the questionnaire were measured with a Likert-type scale. Responses were elicited on a 5-point Likert scale ranging from totally disagree (1) to totally agree (5). The questionnaire consists of Girgin's (2007) personality scale adaptation from Goldberg (1992), Kurban's (2015) decision-making scale adopted from Scott and Bruce (1995), and Yıldızhan's (2012) management style scale. Questionnaires were sent to all participants via e-mail. The numbers of returning questionnaires were 282 and 12 of them which were not valid questionnaire, were not included in the analysis. 270 questionnaires were included in the study.

Factor Analysis and Reliability Tests

In order to determine reliability and validity of the scales, Cronbach Alpha reliability values and factor analysis are performed. After Correlation Analysis and Multivariate Regression Model is used to explain the relaitonships among managers' personality traits, decision-making styles and management styles. SPSS for Windows 21.0 program is used to analyze the data.

The results of the factor analys were seen that the structure of decision making and management styles factors were formed as expectedly. But in spite of the fact that personality traits' two dimensions (*agreeableness* and *openness to experience)* were excluded from the model due to the results of factor and reliability analysis. The final model of the study includes 3 personality traits, 5 decision making styles and 5 management styes factors. The other dimensions of the Cronbach alpha values were more than 0.70 which indicate that the dimensions used for each variable are accepted as reliable according to these results.

It was decided to be done factor analysis because questions of all factors have Kaiser-Meyer-Olkin Measure of Sampling adequacy higher than 0,60 and Bartlett's test of sphericity, value of sig.; 0.000. Since value of significance is lower than 0,05, it means there is a strong relationship among the variables. Three items with a factor load under 0.50 were excluded from the management styles scale. These all factors with their names, their factor loadings, explained variance are presented in Table 1, Table 2, Table 3.

Table 1. Results of Factor and Reliability Analysis of Personality Traits

Factor Name	**Number of Items**	**Cronbach alpha**	**Variance explained**	**KMO Test and Bartlett p value**
Extraversion	6	,742	14,766	
Conscientiousness	6	,702	13,486	
Neurotic	8	,751	12,277	
Total			56,42	0,804 and 0,00

Table 2. Results of Factor and Reliability Analysis of Management Styles

Factor Name	**Number of Items**	**Cronbach alpha**	**Variance explained**	**KMO Test and Bartlett p value**
Authoritarian	7	,747	30,245	
Protective	9	,827	7,685	
Supporter	9	,924	7,131	
Unionist	8	,817	6,270	
Laissez-faire	6	,730	4,958	
Total			56,288	0,929 and 0,00

Table 3. Results of Factor and Reliability Analysis of Decision Making Styles

Factor Name	**Number of Items**	**Cronbach alpha**	**Variance explained**	**KMO Test and Bartlett p value**
Rational	5	,703	12,948	
Intuitive	5	,852	11,915	
Dependent	5	,794	11,543	
Avoidant	5	,772	10,024	
Spontaneous	4	,727	9,995	
Total			56,427	0,796

4. Research Findings and Results

4.1. Demographic Characteristics of Samples

Demographic characteristics of samples are displayed in Table 4. There were 46 (17%) female and 224 (83%) male participants. Majority of the participants were between the age of 35 and 44 years (52,6%), followed by 31,1% with 45-54 years. 55,9% of employees are university graduated. The highest percentage of employees (73%) had between 1-5 years in this workplace.

Table 4. Demographic Characteristics of Samples

	Variables	Frequency	Valid Percent
Gender	Female	46	17,0
	Male	224	83,0
Age	18-24	1	,4
	25-34	34	12,6
	35-44	142	52,6
	45-54	84	31,1
	55 and over	9	3,3
Education	High School	21	7,8
	University	158	58,5
	Master	83	30,7
	Doctorate	8	3,0
Total Working Time in This Workplace	1-5	197	73,0
	6-10	52	19,6
	11 years and over	21	7,5

4.2. Correlation Analysis

Correlation analysis conducted to examine the relationships among all dimensions of personality traits, decision making and management styles show the p<.01 and p<.05 level of significance. Table 5 presents the correlation matrix for all dimensions.

Table 5. Correlation Analysis Results

Factors	Rational	Intuitive	Dependent	Avoidant	Spontaneous	*Authoritarian*	*Protective*	*Supporter*	*Unionist*	*Laissez-faire*
Extraversion	,005	,012	,153*	,197**	,173**	-,005	-,130*	-,144*	-,058	,113
Conscientiousness	,467**	,079	-,053	-,261**	-,045	,055	,163**	,240**	,085	-,148*
Neurotic	-,323**	,217**	,120*	,414**	,216**	,204**	-,115	-,173**	-,101	,357*

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

*. Correlation is significant at the 0.05 level (2-tailed).

It is seen in Table 5 that there is a positive relationship between the extraversion managers and dependent, avoidant, spontaneous decision making styles (r= ,153, r= ,197, r= ,173). There is a negative relationship between the extraversion managers and protective, supporter management styles (r= -,130, r= -,144). There is a positive relationship between the conscientiousness managers and rational decision making styles (r= ,467). In contrast there is a negative relationship between the conscientiousness managers and avoidant decision making styles (r= -,261). There is a positive relationship between the conscientiousness managers and protective, supporter management styles (r= ,163, r= ,240) and there is a negative relationship between the conscientiousness managers and laissez-faire management style (r= -,148). There is a positive relationship between the neurotic managers and intuitive, dependent, avoidant, spontaneous decision making styles (r= ,217, r= ,120, r= ,414, r= ,216). There is a negative relationship between the neurotic managers and rational decision making style (r= -,323). In contrast there is a positive relationship between the neurotic managers and authoritarian, laissez-faire management style (r= ,204, r= ,357). There is a negative relationship between the neurotic managers and supporter management style (r= -,173).

4.3. Regression Analysis

Multiple regression models were applied to examine effect of three dimensions of personality traits on decision making and management styles. Table 6 indicates regression results for three dimensions personaity traits' on decision making styles. Table 7 regression results for three dimensions personaity traits' on management styles.

Table 6. Regression Results for Three Dimensions Personaity Traits' on Decision Making Styles

Decision Making Styles	Rational	Intuitive	Dependent	Avoidant	Spontaneous
Personality Traits	β	β	β	β	β
Extraversion	-	-	0,13*	-	0,12*
Conscientiousness	0,40*	0,16*	-	-0,16*	-
Neurotic	-0,22*	0,28*	-	0,34*	0,19*
F	31,46	6,97	2,78	22,3	5,74

Sig. (p) F Change	0,00	0,00	0,04	0,00	0,01
R2	0,26	0,07	0,03	0,21	0,06
*p<0,05					

*β coefficient is significant at the 0.05 level

The F-statistics indicates the overall significance of the models at the 0.05 level implying that the regression model is reliable for prediction. R^2 values show that; three dimensions of personality traits' explains 26% of the change of rational decision making style, 7% of the change of ıntuitive decision making style, 3% of the change of dependent decision making style, 21% of the change of avoidant decision making style, 6% of the change of spontaneous decision making style.

The results suggest that extraversion personality has a positive effect on dependent (β = 0,13) and spontaneous (β = 0,12) decision making style. Conscientiousness personality has a positive effect on rational (β = 0,40) and ıntuitive (β = 0,16)decision making style. Also it has a negative effect on avoidant (β = -0,16) decision making style. Neurotic personality has a negative effect on rational (β = -0,22)decision making style and it has a positive effect on intuitive, (β = 0,28) avoidant (β = 0,34) and spontaneous (β = 0,19) decision making style.

Table 7. Regression Results for Three Dimensions Personaity Traits' on Management Styles

Management Styles	Authoritarian	Protective	Supporter	Unionist	Laissez-faire
Personality Traits	β	β	β	β	β
Extraversion	-	-	-	-	-
Conscientiousness	,129*	,145*	,210*	-	0,34*
Neurotic	,262*	-	-	-	-
F	5,75	3,96	7,75	1,31	13,2
Sig F	0,01	0,00	0,00	0,27	0,01
R2	0,06	0,04	0,08	0,01	0,13
*p<0,05					

*β coefficient is significant at the 0.05 level

Depending on theTable 7 results of regression analysis, unionist management style does not fit with model due to F-test p value. The other F-statistics indicates the overall significance of the models at the 0.05 level implying that the regression model is reliable for prediction. Also extraversion has not any effect on authoritarian, protective, supporter and laissez-faire management styles.

R^2 values show that; two dimensions of personality traits' explains 6% of the change of authoritarian management style, 4% of the change of protective management style, 8% of the change of supporter management style and 13 % of the change of laissez-faire management styles.

The results suggest that conscientiousness personality has a positive effect on authoritarian (β = ,129), protective (β = ,145), supporter (β = ,210) and laissez-faire management styles (β = 0,34). Neurotic personalityonly has a positive effect on authoritarian (β = ,262) management style.

5. Conclusion

In this study the main purpose is to investigate the effects of managers' personality traits on their decision making and management styles due to the limited studies including these three concepts together. This study is one of the very few that reveals the link among personality traits, decision making and management styles. In this context the literature is reviewed and the research model is developed. The research has some limitations such as the limited number of female participiants, time and location constraint.

The results highlight that although conscientiousness has a positive effect on rational and inutiative decision making styles, it has a negative effect on avoidant decision making style. Neuroticism has a positive effect on three dimenssions of decision making styles including inutiative, avoidant and spontaneous styles. On the contrary, it has a negative effect on rational style. Finally extraversion has positive effect on both dependent and spontaneous decision making styles.

With regard to management styles, the results illustrate that conscientiousness has positive effect on authoritarian, protective, supporter and laissez-faire management styles. Besides, only neuroticism has positive effect on authoritarian management style. Depending on the results of regression analysis, unionist management style does not fit with model due to F-test p value. Extraversion has not any effect on authoritarian, protective, supporter and laissez-faire management styles.

Further studies may aim to investigate unionist management style and extraversion personality trait. Additionaly, these studies may consider the constraints related with sample size, gender distribution and location.

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International Journal of Commerce and Finance, Vol. 2, Issue 1, 2016, 137-146

A COMPARISON OF OPTIMAL PORTFOLIO PERFORMANCES OF THREE OPTIMIZATION METHODS

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Abstract:

This study compares performances of three portfolios established based on Markowitz optimization, shrinkage optimization, and Black-Litterman optimization. BIST30 companies are used to test the results. Markowitz optimization is unrestricted, thus generates the highest possible utility. However, portfolio weights display high values of short- selling needs. Shrinkage optimization restricts short selling needs gradually, but it does not block short- selling. On the other hand, Black- Litterman model totally prohibits short- selling. Results show that the lowest utility is originated by Black- Litterman model. Shrinkage model generates average returns and less- than- average risk. Therefore, shrinkage ratio is a strong candidate for future portfolio building. The results also suggest that short selling should be included in portfolio activities to maximize performance. Short- selling improves portfolio performance significantly

Keywords: *Optimization techniques, portfolio choice and investment decisions.*

1. Introduction:

Increasing investments to stock markets has special importance in emerging countries. Finance policies are established in a way to attract more investors and increase financial trust, efficiency, and profits from the stock exchanges. Efficiency and returns can be measured short- term and long- term and it is expected that policies are set to attract more long- term investors. As number of long- term investors increase in a stock market, volatility reduces, trust is built and efficiency increases. Thus, increasing profitability and efficiency has a special importance in stock markets.

This article compares the performances of three optimization models by using stocks from BIST30. The optimization models to compare are Markowitz optimization, shrinkage optimization, and Black- Litterman model of optimization. The results suggest that Markowitz optimization provides the highest return and risk combination for an investor. That optimization is very attractive for risk- lover investor type. Black- Litterman optimization provides very low return and risk combination, which could be a good address for risk- averse investors. However, the return is lower than the short- termed treasury bills. Therefore, Sharpe ratio of Black- Litterman portfolio is negative. On the other hand, shrinkage portfolio presents a higher than medium return, and a medium risk that would be very attractive for a medium risk- averse investor.

The results have some suggestions to investors. Avoiding risk is an advice for every investor, however taking risk is the main way of making profits. Limiting short- selling would benefit highly risk- lover investors in extreme market conditions but on the other hand, it would harm medium risk- lover investors. Shrinkage portfolio in this study, allows short- selling up a medium level. The performance of the portfolio is remarkable. On the other hand, Black Litterman portfolio is suffering from restrictions.

One contribution of this article is that it is the first article that compares the three optimization methods using Turkish stock market to our knowledge. Second, portfolio selection period is three years, which represents the long-term investments. Representing long- term investments is a rare choice, for most of previous studies form portfolios for 3- or 6- months. Third, the performances of the three method are so clear that they suggest a policy: Use more short- selling.

The paper is organized as follows. Section 2 reviews the literature of Markowitz optimization, shrinkage optimization, Black- Litterman optimization and empirical studies that compare optimization methods in Turkey. Section 3 explains the theoretical foundations of the three models. Section 4 introduces data and hypothesis of the study. Section 5 presents empirical results. Section 6 concludes.

2. Literature Review

a. Markowitz Optimization

The first model that explains investment behavior in mathematical terms is Markowitz optimization model based on Markowitz's cornerstone work in 1952 (Markowitz, 1952). Markowitz, detailed his idea in a book (Markowitz, 1959). In his book, he introduces a quadratic utility function that depicts attitude of a risk- averse investor. A risk averse investor likes higher return but is afraid of higher risk: therefore, he holds a tradeoff between risk and return. Markowitz define risk by using several tools, most accepted of which, is standard deviation. By maximizing the utility function, an investor maximizes her return and minimizes risk (Rubinstein, 2002). Asset returns that have negative correlation with each other should be selected for a portfolio so that the total risk of the portfolio will be reduced (Markowitz, 1952).

Benefits of Markowitz (Mean- Variance) optimization can be summarized as follows (Michaud,1989): Optimization provides a framework for investor constraints in the model setup, investor is free to choose a level of risk; exposure to various risk factors, stock universe, and performance benchmarks can be chosen; performance of portfolio is not directly dependent on the performance of individual stocks; due to simplicity in implementation, it allows timely portfolio changes.

Similarly, the two most important problems with the Markowitz model can be summarized as following (Michaud, 1989; Norstad, 2011): First, it is a purely mathematical model, it does not have investment sense and the portfolios may not have investment value. Performance of a portfolio depends on the structure of variance- covariance matrix. Therefore, unintuitive portfolios can come out. Second, the model maximizes estimation errors. Risk and return estimates are subject to estimation errors. The model overweighs securities with large estimated returns, negative correlations, and small variances. It underweights securities with small estimated returns, positive correlations, and large variances. Therefore, estimation can be large. Intuitive constraints should be added to the model to reach meaningful portfolios.

b. Shrinkage Optimization

Due to sensitivity of portfolio weights to mean and variance of portfolios and also due to large estimation errors, classical Markowitz optimization needs to be improved (Elton and Gruber, 1973; Jobson and Korkie, 1981; Jorion, 1985; Jorion, 1986; Bengtsson and Holst, 2002; Chan, Karceski and Lakonishok, 1999; Disatnik and Beninnga, 2007; Laloux, Cizeau, Bouchaud and Potters, 1999; Laloux, Cizeau, Bouchaud and Potters, 2000; Ledoit and Wolf, 2003; Ledoit and Wolf, 2004; Plerou,Gopikrishnan, Rosenow, Amaral and Stanley, 1999; Won, Lim, Kim and Rajaratnam, 2009). A shrinkage method is an improvement which suggests mixing of covariance matrix with a smaller version of itself. A covariance matrix contains the interactions of all asset returns. We call the matrix a pure- diagonal matrix if we demote the covariances between assets to zero, and keep only the variances with the same asset. A pure- diagonal matrix assumes no relationship among assets, and therefore imposes certainty to the problem. We can assign weight to covariance matrix and pure- diagonal matrix in order to create a mixed covariance matrix. In this framework, the covariance matrix represents the Markowitz world; and the pure- diagonal matrix represents the certainty case, in which assets have no covariance. This method partly protects us from the disadvantages of Markowitz optimization. However, this method is not a new method that hedge against the problems caused by Markowitz; it only diminishes the problems. Besides, the choice of the weight for covariance and pure diagonal matrix has no prescription, it usually is a personal decision and depends on experience or solved by trial- and- error method (Pollak, 2011).

c. Black Litterman Optimization

Black and Litterman model was first published in 1991 (Black and Litterman 1991a). Black and Litterman (1991b), He and Litterman (1999), and Litterman (2003) are the examples of papers from the authors are the following contributions of the authors that completes the technical details. Several other researchers contributed the model by introducing updates, calibrations, and other applications (Bevan and Winkelmann, 1998; Satchell and Scowcroft, 2000; Drobetz, 2001; Firoozye and Blamont, 2003; Herold, 2003; Idzorek, 2005; Mankert, 2006; Bertsimas, Gupta and Kallus, 2013; Meucci, 2006; Meucci, 2008; Giacommeti, Bertocchi, Rachev and Fabozzi, 2007; Krishnan and Mains, 2005; Beach and Orlov, 2007; Braga and Natale, 2007; Martellini and Ziemann, 2007; Esch and Michaud,2012;Walters, 2014). Among all, one study is more important for this paper. Fusai and Meucci (2003) introduce a non- Bayesian version of the model. Their model is also called the shrinkage model. This model is largely used in applications.

d. Empirical Studies that Compare Optimization Methods in Turkey

Caliskan (2010) and Caliskan (2011) form several short termed portfolios from BIST30 companies to compare the performances of Markowitz and Black- Litterman optimization techniques. Zerey and Terzi (2015) form an efficient portfolio from BIST30 companies by employing Finnet Portfolio Advisor Program. The program makes selections based on Markowitz optimization theory. Similarly, Topal and Ilarslan (2009) form a portfolio from BIST30 based on Markowitz optimization by using Excel Solver. Kardiyen (2007) uses mean absolute deviation model, which transforms the portfolio optimization problem in linear programming to form an optimal portfolio in BIST30. Toraman and Yuruk (2014) test Markowitz quadratic base programming model to form efficient portfolios from BIST100 companies. Genel (2004) tests portfolio optimization by genetic algorithms. He finds that genetic algorithms perform at least as good as Markowitz optimization, in many cases they perform much better. Ayan and Akay (2013) develop new measures of performance, and a new optimization technique. Their empirical tests on BIST30 companies show that the new method is more efficient than modern portfolio theory optimization results.

3. Model

The optimization problem for all methods can be defined as following (Beninga, 2008, p. 261-266).

$$Max\ \theta = \frac{E(r_x)-c}{\sigma_x} \tag{1}$$

s.t.

$$\sum_{i=1}^{N} x_i = 1, \qquad x_i = 1, \dots, N \tag{2}$$

where

$$E(r_x) = x^T.R = \sum_{i=1}^{N} X_i \,.\, E(r_i) \tag{3}$$

$$\sigma_p = \sqrt{x^T.\ S_x} = \sqrt{\sum_{i=1}^{N}\sum_{j=1}^{N} x_i.x_j.\sigma_{ij}} \tag{4}$$

E(rx) in equation (1) represents the expected return of the portfolio, c is a lower benchmark on returns (such as the risk- free rate), σx represents the volatility of the portfolio. The object of the maximization problem is to maximize the Sharpe ratio. By this means, return at a certain level of risk is maximized. The only restriction of the maximization is the restriction on weights, which is presented in equation (2). X represents the number of assets in

the portfolio. The sum of weights should be equal to 1. The last two equations display how expected return (Eqution 3) and volatility (equation 4) of the portfolio are computed. Expected return is the arithmetic average of asset returns, while volatility is the geometric average of asset volatilities of asset returns and their covariance terms. Each optimization type mentioned below uses these terms.

a. Markowitz Optimization

We solve the below optimization problem for implications purposes in Markowitz optimization (Benninga, 2008, p. 357):

$$\begin{bmatrix} Efficient \\ Portfolio \\ Proportions \end{bmatrix} = \begin{bmatrix} Var - Covar \\ Matrix \end{bmatrix}^{T} * \left\{ \begin{bmatrix} Expected \\ Portfolio \\ Returns \end{bmatrix} - Risk - free\ Rate \right\}$$

b. Shrinkage Method

This model is an enhanced version of Markowitz model. The only difference from the Markowitz optimization is to establish shrinkage variance- covariance matrix. In this paper, I adopt the following formula (Benninga, 2008, p. 308):

$$\begin{bmatrix} \text{Shrinkage} \\ \text{Var} - \text{Covar} \\ \text{Matrix} \end{bmatrix} = \lambda . \begin{bmatrix} Var - Covar \\ Matrix \end{bmatrix} + (1-\lambda) . \begin{bmatrix} Pure - Diagonal \\ Matrix \end{bmatrix}$$

According to the formula above, shrunk variance- covariance matrix is a convex combination of sample variance-covariance matrix and pure- diagonal matrix. The shrinkage factor λ is selected to maximize expected accuracy of the formula. This method is especially successful in small samples of assets. The intensity of shrinkage will tend to zero as sample size increases. Shrinkage factor being 0 is equal to Markowitz optimization (Schäfer and Strimmer, 2005).

c. Black- Litterman Model

Black- Litterman model can be perceived as a developed model of shrinkage optimization. Black- Litterman approach solves the problem of shrinkage optimization by weighting the variance- covariance matrix based on market capitalization (Benninga, 2008, p. 355-356). In this paper, we follow Benninga (2008, p. 359) methodology and solve the below equation:

$$\begin{bmatrix} Benchmark \\ Portfolio \\ Returns \end{bmatrix} =$$

$$\begin{bmatrix} Var - Covar \\ Matrix \end{bmatrix} \begin{bmatrix} Benchmark \\ Portfolio \\ Proportions \end{bmatrix} \left[\begin{bmatrix} Benchmark \\ Portfolio \\ Proportions \end{bmatrix}^{T} \begin{bmatrix} Var - Covar \\ Matrix \end{bmatrix} \begin{bmatrix} Benchmark \\ Portfolio \\ Proportions \end{bmatrix} \right] \begin{pmatrix} Risk - free \\ Rate \end{pmatrix}$$

4. Data and Hypothesis

We use BIST30 stocks to test the hypotheses. We obtain stocks' daily prices for 31.12.2012- 31.12.2014 period from Bloomberg. PGSUS prices were not available for most of the analysis period; therefore, we exclude this stock from analysis. We also obtained daily prices of XU100 index, which is a capitalization-weighted index composed of

national market companies in Turkey (Bloomberg, 2016). We use it as a proxy for market return. We use Turkish treasury bills annual compound rate as a proxy for risk- free asset in the market. We obtain these rates from the statistics database of Republic of Turkey Undersecretariat of Treasury website (http://www.treasury.gov.tr/en-US/Mainpage). Market capitalization of companies were obtained from Finnet.

In order to compute daily stock returns, we deploy the following formula:

$$Rt=\ln(Pt+1/Pt) \quad (5)$$

Where Rt is the daily stock return at day t, and Pt is the daily stock price at day t. Then we computed excess returns over the risk- free rate:

$$\text{Excess returns}= Rt- Rf,t \quad (6)$$

The correlation table of excess returns is provided in Table 1. The table shows that some stocks have quite high correlations whereas others have lower or even negative correlations. Having negative correlations among asset returns ensures that there will be efficiency from diversification when we establish a portfolio.

Table 1: Correlation Table for Daily Returns of BIST30 Companies

Correlation Table	ULKER	AKBNK	ARCLK	ENKAI	EREGL	FROTO	GARAN	ISCTR	KCHOL	KRDMD	OTKAR	PETKM	SAHOL	SISE	TCELL	THYAO	TOASO	TUPRS	YKBNK	DOAS	BIMAS	VAKBN	CCOLA	TAVHL	HALKB	TKFEN	TTKOM	KOZAL	EKGYO
ULKER	1	0.37	0.34	0.29	0.29	0.34	0.38	0.41	0.39	0.36	0.34	0.32	0.37	0.38	0.24	0.44	0.40	0.29	0.41	0.35	0.36	0.41	0.30	0.32	0.39	0.32	0.30	0.15	0.05
AKBNK		1	0.53	0.41	0.45	0.50	0.90	0.87	0.68	0.61	0.49	0.54	0.75	0.59	0.49	0.59	0.52	0.55	0.87	0.55	0.49	0.85	0.40	0.34	0.84	0.57	0.54	0.32	0.03
ARCLK			1	0.39	0.36	0.51	0.54	0.53	0.53	0.43	0.42	0.38	0.52	0.49	0.33	0.45	0.50	0.45	0.56	0.47	0.39	0.54	0.36	0.35	0.53	0.41	0.44	0.23	0.06
ENKAI				1	0.32	0.34	0.40	0.43	0.38	0.33	0.29	0.36	0.39	0.38	0.33	0.38	0.32	0.33	0.42	0.36	0.36	0.42	0.25	0.31	0.42	0.34	0.32	0.21	-0.03
EREGL					1	0.33	0.45	0.48	0.43	0.48	0.32	0.42	0.41	0.42	0.34	0.44	0.37	0.32	0.47	0.35	0.32	0.46	0.31	0.36	0.46	0.36	0.35	0.23	-0.01
FROTO						1	0.50	0.50	0.55	0.42	0.43	0.36	0.52	0.48	0.36	0.45	0.56	0.46	0.51	0.48	0.42	0.51	0.36	0.33	0.49	0.44	0.43	0.21	0.02
GARAN							1	0.88	0.65	0.59	0.50	0.56	0.73	0.58	0.47	0.59	0.51	0.51	0.88	0.57	0.46	0.86	0.41	0.34	0.85	0.56	0.52	0.29	0.03
ISCTR								1	0.65	0.63	0.53	0.56	0.74	0.60	0.50	0.61	0.50	0.51	0.88	0.55	0.46	0.86	0.42	0.37	0.85	0.60	0.54	0.30	0.03
KCHOL									1	0.51	0.48	0.45	0.70	0.53	0.42	0.54	0.52	0.57	0.68	0.50	0.49	0.65	0.40	0.35	0.65	0.52	0.49	0.33	0.04
KRDMD										1	0.43	0.53	0.53	0.49	0.38	0.53	0.44	0.43	0.62	0.48	0.37	0.63	0.35	0.33	0.64	0.52	0.41	0.23	0.00
OTKAR											1	0.41	0.46	0.44	0.33	0.47	0.41	0.38	0.53	0.46	0.34	0.55	0.29	0.29	0.50	0.44	0.35	0.22	0.00
PETKM												1	0.52	0.51	0.37	0.48	0.35	0.41	0.58	0.42	0.36	0.58	0.35	0.30	0.59	0.49	0.41	0.19	0.01
SAHOL													1	0.57	0.48	0.57	0.49	0.57	0.75	0.51	0.49	0.73	0.41	0.39	0.71	0.55	0.55	0.28	0.00
SISE														1	0.44	0.55	0.49	0.46	0.61	0.46	0.46	0.58	0.32	0.37	0.59	0.48	0.50	0.24	0.06
TCELL															1	0.46	0.34	0.36	0.50	0.40	0.32	0.50	0.25	0.28	0.48	0.42	0.47	0.18	0.03
THYAO																1	0.45	0.43	0.60	0.51	0.41	0.60	0.38	0.33	0.59	0.55	0.50	0.24	0.05
TOASO																	1	0.42	0.52	0.53	0.38	0.50	0.30	0.34	0.50	0.47	0.45	0.24	0.01
TUPRS																		1	0.54	0.37	0.44	0.51	0.35	0.34	0.51	0.46	0.47	0.27	-0.01
YKBNK																			1	0.56	0.49	0.88	0.43	0.38	0.86	0.59	0.52	0.31	0.03
DOAS																				1	0.34	0.55	0.31	0.26	0.56	0.48	0.39	0.24	0.02
BIMAS																					1	0.46	0.36	0.36	0.45	0.39	0.42	0.23	0.00
VAKBN																						1	0.40	0.35	0.88	0.58	0.54	0.31	0.01
CCOLA																							1	0.25	0.41	0.33	0.36	0.20	0.05
TAVHL																								1	0.37	0.32	0.31	0.23	0.05
HALKB																									1	0.57	0.52	0.31	0.00
TKFEN																										1	0.48	0.18	0.01
TTKOM																											1	0.24	-0.01
KOZAL																												1	-0.01
EKGYO																													1

The sample characteristics of stocks are displayed in Table 2. Average annual returns range within -15% (KOZAL) and 12% (OTKAR). Minimum return is -21,40% (KOZAL) and maximum return is 15,92% (OTKAR). Median values are very close to zero, showing that number of positive and negative return days are almost even. Standard deviations range from 1,75% (TTKOM and BIMAS) to 3,42 (KOZAL). 22 of 29 companies have slightly negative skewness, indicating small left- tail risk. Kurtosis ranges between 5,96 (TOASO) and 0,84 (AKBNK). Beta ranges between 1,39 (HALKB) and 0,59 (ENKAI). Alpha is almost zero for all stocks. Sharpe ratio ranges between -4% (KOZAL) and 5% (OTKAR).

Table 2: Sample Characteristics of the Daily Returns

Summary Statistics	ULKER	AKBNK	ARCLK	ENKAI	EREGL	FROTO	GARAN	ISCTR	KCHOL	KRDMD	OTKAR	PETKM	SAHOL	SISE	TCELL
Average	0.09	-0.03	0.04	0.04	0.07	0.06	-0.03	-0.03	0.03	0.02	0.12	0.07	-0.02	0.05	0.00
Median	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Standard Deviation	2.16	2.26	2.07	1.81	1.87	2.18	2.36	2.14	1.80	2.64	2.65	1.83	2.08	2.15	1.65
Skewness	0.27	0.09	-0.19	-0.36	-0.19	-0.72	-0.01	-0.34	-0.04	0.12	0.71	0.06	-0.26	-0.27	-0.30
Kurtosis	3.96	0.87	1.85	2.08	1.40	5.75	2.73	1.75	2.14	4.29	5.77	2.73	3.04	1.27	1.48
Minimum	-13.80	-9.87	-10.77	-10.54	-8.38	-15.53	-14.15	-11.24	-9.34	-16.03	-11.62	-10.35	-12.88	-10.96	-6.99
Maximum	11.33	9.25	8.85	7.25	7.81	8.53	12.40	7.54	8.29	12.78	15.92	8.87	8.42	7.18	6.18
Beta	0.68	1.32	0.84	0.59	0.67	0.87	1.38	1.24	0.89	1.17	1.00	0.75	1.11	0.96	0.63
Alpha	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
R-squared	0.24	0.83	0.40	0.26	0.31	0.38	0.83	0.82	0.60	0.48	0.35	0.41	0.69	0.48	0.35
Sharpe Ratio	0.04	-0.01	0.02	0.02	0.04	0.03	-0.01	-0.01	0.02	0.01	0.05	0.04	-0.01	0.02	0.00

Table 2 (Continued): Sample Characteristics of the Daily Returns

Summary Statistics	THYAO	TOASO	TUPRS	YKBNK	DOAS	BIMAS	VAKBN	CCOLA	TAVHL	HALKB	TKFEN	TTKOM	KOZAL	EKGYO
Average	0.04	0.10	0.05	-0.05	0.07	0.03	-0.02	0.00	0.11	-0.06	-0.07	0.00	-0.15	-0.02
Median	0.15	0.00	0.01	0.00	0.20	0.00	0.21	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Standard Deviation	2.35	2.53	1.94	2.14	2.97	1.75	2.41	2.12	2.33	2.43	2.07	1.75	3.42	2.15
Skewness	-0.34	-0.50	-0.22	-0.32	-0.93	-0.19	-0.36	0.02	0.01	-0.24	-0.86	-0.03	-0.28	-0.41
Kurtosis	4.39	5.96	1.80	3.08	5.94	2.51	2.27	1.12	1.57	3.60	5.51	0.79	4.00	4.92
Minimum	-16.18	-19.59	-9.14	-12.14	-17.26	-8.24	-11.58	-8.66	-8.47	-13.17	-14.82	-6.86	-21.40	-13.30
Maximum	10.34	13.35	6.81	9.66	12.78	7.60	11.14	7.72	9.19	13.64	7.16	6.78	14.38	11.35
Beta	1.09	1.00	0.81	1.24	1.22	0.68	1.38	0.69	0.70	1.39	0.89	0.73	0.80	0.03
Alpha	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
R-squared	0.52	0.38	0.42	0.82	0.41	0.37	0.80	0.26	0.22	0.79	0.45	0.42	0.13	0.00
Sharpe Ratio	0.02	0.04	0.03	-0.02	0.02	0.02	-0.01	0.00	0.05	-0.03	-0.03	0.00	-0.04	-0.01

We impose no restrictions on Markowitz optimization model. Therefore, it is expected that Markowitz portfolio performs better than the shrinkage portfolio. Black- Litterman model uses market capitalizations as a weight for the variance- covariance matrix (we can call it a restriction). Therefore, Markowitz portfolio is expected to perform better than Black- Litterman, too. Since the restrictions on Shrinkage portfolio is less than the restrictions on Black- Litterman portfolio, we expect shrinkage portfolio performs better than Black- Litterman portfolio. We use Sharpe ratios as a measure of performance measure. Our hypothesis can be stated as the following:

H0: SRMarkowitz > SRShrinkage >SRBlack- Litterman,
H1: Otherwise.

5. Analysis

This study establishes three portfolios from daily stock returns of BIST30 firms for January 2013- December 2015 period and compares portfolio performances. The first portfolio is optimized by Markowitz model principles; thus we call it Markowitz portfolio. we compute variance- covariance matrix and asset weights based on the method described in Benninga (2008, p. 294-301). The weights obtained from Markowitz optimization is presented in the first column of Table 3. The weights contain many negative values. Negative weights correspond to short selling. In turn, there are weights greater than 1. Investor borrows and sell the assets which have negative weights, and buys the assets which have weights more than 1.

Short- selling is the sale of a security that is not owned by the seller. tHe seller borrows the security to pay back in the future, sells the security in the market. After a while, the seller buys the security from the market and pays back to the lender. Investors apply short- selling when they believe that the price of the security will decline. They aim to make profits from the price difference. The implication is that borrowing costs less than the profits made from capital gains. Short selling contains risks in its stem, but at the same time it can benefit an investor by yielding extra returns. Short- selling reinforces the high- risk, high- return attributes of portfolios. Sobaci, Sensoy and Erturk (2014) shows that short selling increases the performances of investments in BIST.

Table 3: Portfolio Weights based on 3 optimization models

	Markowitz Optimization	Shrinkage Optimization	Black Litterman Optimization
ULKER	0.55	0.53	0.02
AKBNK	0.56	-0.21	0.08
ARCLK	-0.13	0.10	0.03
ENKAI	0.07	0.14	0.05
EREGL	0.94	0.63	0.04
FROTO	0.00	0.24	0.03
GARAN	0.48	-0.17	0.08
ISCTR	0.18	-0.32	0.05
KCHOL	0.81	0.16	0.09
KRDMD	0.13	0.11	0.00
OTKAR	1.25	0.72	0.01
PETKM	1.92	0.76	0.01
SAHOL	-0.94	-0.35	0.05
SISE	0.36	0.25	0.02
TCELL	-0.49	-0.32	0.06
THYAO	0.57	0.24	0.03
TOASO	1.19	0.60	0.03
TUPRS	1.28	0.50	0.05
YKBNK	-3.62	-0.73	0.04
DOAS	0.65	0.33	0.01
BIMAS	-0.17	0.00	0.04
VAKBN	1.55	-0.09	0.03
CCOLA	-0.17	-0.13	0.02
TAVHL	1.27	0.68	0.01
HALKB	-2.35	-0.57	0.03
TKFEN	-2.72	-1.05	0.00
TTKOM	-0.87	-0.38	0.06
KOZAL	-0.94	-0.47	0.01
EKGYO	-0.37	-0.20	0.03
SUM	1.00	1.00	1.00

The second portfolio is shrinkage portfolio. we computed variance covariance matrix, pure diagonal matrix and the shrunk matrix based on the methods defined in Benninga (2008). we determined the shrinkage factor at 0.5. There is no academic research and intuition behind the value of shrinkage factor. It is basically determined by practical factors and risk- averseness of the researcher. A medium value would represent a more or less risk neutral behavior. Benninga (2008) uses the shrinkage factor as 0,3; however, this value is attained by trial- and- error. There is no mathematical intuition has been developed for this value to our knowledge. The weights obtained from shrinkage optimization is presented in the second column of Table 3. There are short- sales, but their number and density is much lower than that of Markowitz optimization. This method allows short sales, but limit them at lower amounts. Therefore, it contains less risk than Markowitz optimization technique.

The last model is Black- Litterman optimization. We followed the methods described in Benninga (2008, p.358) to form the portfolio. The weights are presented in the third column of Table 3. There are no negative weights, and all stocks earn positive but small weights. This method was developed in a way that does not allow short- selling, and thus preferred by risk- averse investors.

Lastly, performances of the portfolios are compared. To do that, I compute the expected daily returns of each portfolio by using the weights. Then, I compute annual average return and annualized standard deviation of each portfolio; and lastly I compute Sharpe ratios of each portfolio. Sharpe ratio is the most applied performance measure in finance. It measures the excess return- risk tradeoff. The higher the Sharpe ratio, the higher the performance. Annual average returns, standard deviations, and Sharpe ratio of each portfolio is presented in Table 4. The Sharpe ratios of the three portfolio are 0,54; 0,49; -0,03. It is clear that the highest performance belongs to Markowitz portfolio. Shrinkage portfolio is a step behind the Markowitz. However, the performance of Black_ Litterman is way behind the other two portfolios. First of all, Sharpe ratio of Black-Litterman portfolio is negative because the annual average return of the portfolio is less than the annual average return of the risk- free rate. Secondly, even though the ranking is expected to be in this order, the very low performance of Black- Litterman is surprising as former studies in the field finds Black- Litterman almost as successful as Markowitz if not more (Caliskan, 2011).

Table 4: Performance of Portfolios

	Markowitz Portfolio	Shrunk Portfolio	Black Litterman Portfolio	Rf
Annual Average Return	0.17	0.09	0.00	0.00
Annual Standard Deviation	0.32	0.17	0.05	0.00
Sharpe Ratio	0.54	0.49	-0.03	

These results suggest that investing by the highly risk-averse instincts would harm investors in the Turkish stock market. Turkey is an emerging market and it is highly risky by the nature. Sharing higher level of risk would benefit the investor in the long- run. It also suggests that prohibiting short- sales mitigates the efficiency of financial portfolios and cause redundant efforts to increase yields.

6. Conclusion:

The results of this article suggest that Markowitz optimization provides the highest return and risk combination for an investor. Risk- seeking investor would love this type of portfolios. Black- Litterman optimization provides very low return and risk combination, which could address highly risk- averse investors. However, the annual average return of Black- Litterman portfolio is lower than the return of the short- termed treasury bills. Therefore, Sharpe ratio of Black- Litterman portfolio is negative. On the other hand, shrinkage portfolio presents a higher than medium return, and a medium risk that would be very attractive for a medium risk- averse investor.

As a conclusion, we can suggest investors not to avoid risk all the times. Limiting short- selling would benefit in negative extreme market conditions but on the other hand, it would harm medium risk- lover investors. Shrinkage portfolio in this study, allows short- selling up a medium level. The performance of the portfolio is remarkable. On the other hand, Black Litterman portfolio is suffering because restrictions on short- selling prohibits the portfolio from making profits. Turkish Stock Exchange does not put short- selling restrictions on stock or derivatives market. The results of this paper, along with Sobaci, Sensoy and Mutahhar (2014) support this policy.

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International Journal of Commerce and Finance, Vol. 2, Issue 1, 2016, 147-156

CAUSALITY RELATIONSHIP BETWEEN IMPORT, EXPORT AND GROWTH RATE IN DEVELOPING COUNTRIES

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Abstract:

In this paper, we tried to determine the relationship between imports, exports and growth rate in developing countries. Within this scope, 6 developing countries (Argentina, Brazil, China, Malaysia, Mexico and Turkey) were analyzed in this study. In order to achieve this purpose, annual data for the periods between 1961 and 2014 was tested by using Engle Granger co-integration analysis, Vector Error Correction Model and Toda Yamamoto causality analysis. According to the result of the analysis, it was determined that there is not any relationship among three variables in Brazil and Mexico. On the other hand, we defined that increase in export causes higher growth rate in Argentina. Moreover, it was concluded that there is a causal relationship from import to export in China and Turkey. Furthermore, it was determined that export causes higher import in Malaysia. Therefore, it can be concluded that the relationship between import, export and growth rate is not same for all developing countries..

Keywords: *Economic Growth, Import, Export, Engle-Granger Causality Analysis, Vector Error Correction Model, Toda Yamamoto Causality Test*

1. Introduction

The relationship between export and growth rate is always discussed in the literature. Some people think that increase in export amount leads to increase in growth rate. If countries can increase export amount, this will lead to increase in GDP amount because export is one of the component of GDP (Hossain, 2014. In addition to them, there are also some studies in which a relationship was defined from GDP growth to export rate (Shihab, et. al., 2014). In other words, it is thought that increasing in growth rate provides export growth. The main reason behind this situation is that by increasing GDP growth rate, a country can increase its efficiency. Owing to this situation, it can increase its competitive advantage in international market which causes exports to go up. However, some people also argue that there is not such a relationship between export and growth rate. They assert that this relationship depends on the type of the country and period (Bahmani-Oskooee, 2009), (Jung and Marshall, 1985).

Furthermore, import plays an important role in the relationship between export and growth rate (Kim, Lim and Park, 2009). Some of the researchers have the view that import causes higher exports by providing higher quality intermediate goods (Bas, 2009). Therefore, according to this view, import can also lead to higher economic growth. Similar to export and growth rate relationship, there are also some views that come up with the idea that there is not a relationship between import and export or economic growth (Ajmi, et. al., 2015).

Moreover, economic growth is also one of the objectives of developing countries (Khan and Reinhart, 1990). They made many programs in order to achieve economic growth. Increasing export and import amount is one of these programs (Balassa, 1985). Therefore, the studies related to explain the relationship between economic growth, export and import are significant. Because of this situation, in this study, we tried to analyze the relationship between growth rate, export and import in developing countries. As a result of this analysis, it may be possible to suggest an economic policy to developing countries.

This paper is organized as follows. After the introduction part, we will give information about the similar studies in the literature and empirical results of them. The third section of this paper reviews the empirical results of our study. The final section gives information about the conclusion of the study.

2. Literature Review

There are many studies in which the relationship between export and growth rate is analyzed in the literature. On the other hand, only few studies look for the effect of import on growth rate and export. Some of these studies are emphasized on the table below.

Table 1: Studies Related to the Relationship between Growth Rate, Export and Import

Authors	Method	Scope	Direction of Causality
Gibba and Molnar (2016)	VEC	Gambia	Export → Growth Rate
Alkhateeb et. al. (2016)	VEC	Saudi Arabia	Export → Growth Rate Growth Rate → Export
Ajmi, et. al. (2015)	VAR	South Africa	There is no relationship.
Araujo, et. al. (2015)	Granger Causality	Brazil	Export → Growth Rate Growth Rate → Export
Hossain (2014)	Granger Causality	Bangladesh, India, Pakistan and Sri-Lanka	Export → Growth Rate
Shihab, et. al. (2014)	Granger Causality	Jordan	Growth Rate → Export
Achchuthan (2013)	Regression	Sri Lanka	Export → Growth Rate Import → Growth Rate
Fan and Nie (2013)	VAR	China	Import → Export
Rahman and Shahbaz (2013)	VECM	Pakistan	Import → Export
Pistoresi and Rinaldi (2012)	Cointegration Analysis	Italy	Import → Growth Rate
Shahbaz and Rahman (2012)	VECM	Pakistan	Import → Growth Rate
Bas (2009)	Regression	Argentina and Chile	Import → Export
Gerni, Emsen and Değer (2008)	Regression	Turkey	Import → Export
Awokuse (2005)	Granger Causality	Korea	Export → Growth Rate Growth Rate → Export
Mah (2005)	Cointegration Analysis	China	Export → Growth Rate Growth Rate → Export

Tuncer (2002)	Toda Yamamoto	Turkey	Import → Growth Rate Growth Rate → Import
Mallick (2002)	Cointegration Analysis	India	Export → Growth Rate Growth Rate → Export
Thornton (1996)	Granger Causality	Mexico	Export → Growth Rate
Doraisami (1996)	Cointegration Analysis	Malaysia	Export → Growth Rate Growth Rate → Export
Oxley (1993)	Granger Causality	Portugal	Export → Growth Rate
Ghartey (1993)	Wald Test	Taiwan, USA and Japan	Export → Growth Rate Growth Rate → Export
Dodaro (1993)	Regression	87 different countries	Export → Growth Rate
Marin (1992)	Granger Causality	4 OECD Countries	Export → Growth Rate
Segerstrom, et . al. (1990)	Dynamic General Equilibrium Model	USA	Growth Rate → Export
Kunst and Marin (1989)	VAR	Austria	Export → Growth Rate Growth Rate → Export
Ram (1985)	Regression	73 different countries	Export → Growth Rate
Findlay (1984)	Descriptive Statistics	USA	Growth Rate → Export

Sources: Authors

Gibba and Molnar made a study so as to understand the relationship between export and growth rate in Gambia. They tested the data for the period between 1980 and 2010 by using vector error correction method. As a result of the analysis, a causality relationship was defined from export to the growth rate (Gibba and Molnar, 2016). There are also many studies that reached the similar conclusion (Hossain, 2014), (Thornton, 1996), (Oxley, 1993), (Dodaro, 1993), (Marin, 1992), (Ram, 1985). In addition to them, there are also some studies in which the causality from growth rate to the export was identified (Shihab, et. al., 2014), (Segerstrom, et . al., 1990), (Findlay, 1984).

Furthermore, Alkhateeb and others also analyzed the relationship between exports and economic growth in Saudi Arabia. Within this context, they used the data for the years between 1980 and 2013. Additionally, vector error correction model was also used in order to achieve this objective. Finally, they concluded that there is a causal relationship both from export to growth rate and from growth rate to export (Alkhateeb et. al., 2016). Araujo and others (2015), Awokuse (2005), Mah (2005), Mallick (2002), Doraisami (1996), Ghartey (1993) and Kunst and Marin (1989) reached the same conclusion by using different method.

Moreover, some studies also concluded that increase in import causes the growth rate to increase (Achchuthan, 2013) (Pistoresi and Rinaldi, 2012), (Shahbaz and Rahman, 2012), (Tuncer, 2002). Furthermore, Fan and Nie (2013), Rahman and Shahbaz (2013), Bas (2009) and Gerni, Emsen and Değer (2008) concluded that rise in import leads to increase in export by providing better quality intermediate goods. However, Ajmi and others did not find any causality relationship between export, import and growth rate for South Africa (Ajmi, et. al., 2015).

3. Research and Application

3.1. Data and Methodology

In order to analyze the relationship between export, import and growth rate in developing countries, annual data of 6 developing countries (Argentina, Brazil, China, Malaysia, Mexico and Turkey) for the periods between 1961 and 2014 was used in this study. This data was obtained from World Bank. In addition to this situation, we also used Engle Granger Co-integration Analysis, Vector Error Correction and Toda Yamamoto causality approaches so as to achieve this objective. Within this context, EViews 8.0 program was used.

3.2. Methods Used in This Study

3.2.1. Engle-Granger Co-integration Analysis

Engle Granger co-integration analysis was used in order to see whether there is a long run relationship between the variables. The first requirement of this analysis is that both of the variables should be stationary with the same degree. After that, error term series are provided as a result of the regression analysis made between these variables. If the series are stationary, then it means that there is a long term relationship between these two variables. The result of this analysis is so important that the type of the causality test will change according to the result of co-integration analysis (Engle and Granger, 1987).

3.2.2. Vector Error Correction Model

Vector Error Correction Model (VECM) is mainly used in order to determine whether there is a causal relationship between the variables. If there is a co-integration among the variables, standard Granger causality test cannot be used in this situation (Granger, 1969). VECM is very helpful for the conditions in which variables are not stationary at their level values and become stationary with their first differences (Engle and Granger, 1987). The equation of VECM is shown below.

$$\Delta X_t = a + \sum_{i=1}^{m} B_i \Delta X_{t-i} + \sum_{i=1}^{n} C_i \Delta Y_{t-i} + \sum_{i=1}^{o} D_i \Delta Z_{t-i} + \mu EC_{t-i} + \varepsilon_i$$

In this equation, μ demonstrates the error correction parameter that helps the variables to achieve long run relationship. Because of this situation, this parameter should be statistically significant and negative in order to reach this objective.

3.2.3. Toda Yamamoto Causality Test

Toda Yamamoto causality test also analyses causal relationship between the variables. However the main difference of this analysis from Granger causality test is that there is no requirement that the variables should be stationary. In addition to this situation, co-integration does not have to exist among the variables. The sum of maximum integration number and lag interval in VAR model is used as a lag interval in Toda Yamamoto analysis (Toda and Yamamoto, 1995).

3.3. Results of the Model

In order to define the relationship between export, import and growth rate in Argentina, Brazil, China, Malaysia, Mexico and Turkey, first of all, we made stationary analysis. After that, we made Engle-Granger co-integration analysis for these variables according to the results of the unit root tests. Just then, depending on these results, we made VECM causality tests. In addition to them, we also tested the variables by using Toda Yamamoto causality tests in order to reach better results.

3.3.1. Unit Root Tests

In order to understand whether the variables are stationary or not, we made Zivot-Andrews unit root test. The details of this analysis were given on the table below.

Tablo 2: Zivot Andrews Unit Root Test

Variable	Zivot Andrews Unit Root Test	
	Level p Value	First Difference p Value
Export Argentina	0.0000	-
Export Brazil	0.0493	-
Export China	0.0000	-
Export Mexico	0.0222	-
Export Malaysia	0.0002	-
Export Turkey	0.0003	-
Import Argentina	0.0000	-
Import Brazil	0.0764	0.0009
Import China	0.0003	-
Import Mexico	0.0210	-
Import Malaysia	0.0081	-
Import Turkey	0.0551	0.0165
Growth Rate Argentina	0.0103	-
Growth Rate Brazil	0.0230	-
Growth Rate China	0.0479	-
Growth Rate Mexico	0.0007	-
Growth Rate Malaysia	0.0102	-
Growth Rate Turkey	0.1471	0.0037

Sources: Authors

Tests As a result of this analysis, it can be understood that the variables of import of Brazil, import and growth rate of Turkey are not stationary on their level values. Owing to this situation, co-integration test will be performed in order to identify the relationship between import and growth rate of Turkey.

3.3.2. Engle-Granger Co-integration Analysis Results

Because the variables of import and growth rate of Turkey are stationary with their first differences, co-integration between these variables will be examined. In this process, firstly, we made regression analysis between these two variables. As a result, we provided error term series of this analysis. The results of unit root test of these error term series are given below.

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Tablo 3: Unit Root Test Results of Error Terms

Error Term Series	ADF Test	Phillps Perron Test	Zivot Andrews Test
	Level p Value	Level p Value	Level p Value
Import – Growth Rate (Turkey)	0.0000	0.0001	0.0415

Sources: Authors

As it can be seen from the table above, all error term series are stationary. This situation shows us that there is a long term relationship between import and growth rate of Turkey. Therefore, VECM causality relationship should be used for these variables.

3.3.3. Vector Error Correction Model (VECM) Analysis Results

So as to make VECM causality analysis, first of all, lag intervals for the variables should be defined. With respect to the variables of import and growth rate of Turkey, optimal lag interval is calculated as "2". These lag intervals were calculated according to Akaike Information Criteria and Shwartz Criteria. The details of this analysis were given below.

Tablo 4: Lag Interval Analysis

Lag	LR	FPE	AIC	HQ
0	18.82436	201.0599	10.97935	11.00864
1	18.82465	157.2649	10.73338	10.82127
2	12.18792*	140.5155*	10.61965*	10.76613*
3	6.622071	141.6593	10.62524	10.83032
4	5.037689	147.7092	10.66257	10.92623

Sources: Authors

After that, VECM analysis was performed so as to define whether there is a causal relationship between these variables. The results of this analysis were emphasized below.

Tablo 5: Vector Error Correction Model between Import and Growth Rate in Turkey

Country	Causality Direction	Lag Interval	p Value	Result
Turkey	Import → Growth Rate	2	0.3399	There is not causality relationship
	Growth Rate → Import	2	0.5649	There is not causality relationship

Sources: Authors

The p values on the table above give information about causality relationship. If this value is less than 0.05, this means that a relationship is analyzed. According to the results, it was determined that there is not a causal relationship between import and growth rate in Turkey.

3.3.4. Toda Yamamoto Causality Analysis Results

As we emphasized before, there is need to calculate maximum integration degree and lag interval in VAR model. As a result of unit root test results, maximum integration degree was calculated as "1". Furthermore, lag interval in VAR model was calculated as "1" for Argentina, Brazil and China whereas it is "2" for Malaysia, "3" for Mexico and "4" for Turkey. Because the sum of these two numbers are used in Toda Yamamoto analysis, lag interval was accepted as "2" for Argentina, Brazil and China, "3" for Malaysia, "4" for Mexico and "5" for Turkey. The results of this analysis were emphasized below.

Tablo 6: Toda Yamamoto Results

Country	Causality Direction	Lag Interval	p Value	Result
Argentina	Import → Export	2	0.2040	There is not causality relationship.
	Growth Rate → Export	2	0.5117	There is not causality relationship.
	Export → Import	2	0.2611	There is not causality relationship.
	Growth Rate → Import	2	0.7717	There is not causality relationship.
	Export → Growth Rate	2	0.0218	There is a causality relationship from export to growth rate.
	Import → Growth Rate	2	0.0888	There is not causality relationship.
Brazil	Import → Export	2	0.0628	There is not causality relationship.
	Growth Rate → Export	2	0.0702	There is not causality relationship.
	Export → Import	2	0.1788	There is not causality relationship.
	Growth Rate → Import	2	0.5640	There is not causality relationship.
	Export → Growth Rate	2	0.2168	There is not causality relationship.
	Import → Growth Rate	2	0.2145	There is not causality relationship.
China	Import → Export	2	0.0020	There is a causality relationship from import to export.
	Growth Rate → Export	2	0.6287	There is not causality relationship.
	Export → Import	2	0.1950	There is not causality relationship.
	Growth Rate → Import	2	0.3155	There is not causality relationship.
	Export → Growth Rate	2	0.9426	There is not causality relationship.
	Import → Growth Rate	2	0.7283	There is not causality relationship.
Malaysia	Import → Export	3	0.1486	There is not causality relationship.
	Growth Rate → Export	3	0.7675	There is not causality relationship.
	Export → Import	3	0.0214	There is a causality relationship from export to import.

	Growth Rate → Import	3	0.1934	There is not causality relationship.
	Export → Growth Rate	3	0.5362	There is not causality relationship.
	Import → Growth Rate	3	0.2451	There is not causality relationship.
Mexico	Import → Export	4	0.6737	There is not causality relationship.
	Growth Rate → Export	4	0.9526	There is not causality relationship.
	Export → Import	4	0.3232	There is not causality relationship.
	Growth Rate → Import	4	0.5000	There is not causality relationship.
	Export → Growth Rate	4	0.2521	There is not causality relationship.
	Import → Growth Rate	4	0.0639	There is not causality relationship.
Turkey	Import → Export	5	0.0255	There is a causality relationship from import to export.
	Growth Rate → Export	5	0.4673	There is not causality relationship.
	Export → Import	5	0.9757	There is not causality relationship.
	Growth Rate → Import	5	0.0571	There is not causality relationship.
	Export → Growth Rate	5	0.1433	There is not causality relationship.
	Import → Growth Rate	5	0.3056	There is not causality relationship.

Sources: Authors

According to the result of Toda Yamamoto analysis, it was determined that there is not any relationship among three variables in Brazil and Mexico. On the other hand, we defined that increase in export causes higher growth rate in Argentina. Moreover, it was concluded that there is a causal relationship from import to export in China and Turkey. Furthermore, it was determined that export causes higher import in Malaysia.

4. Discussion and Conclusion

In this study, we tried to define the causal relationship between growth rate, export and import in developing countries. Within this scope, annual data of Argentina, Brazil, China, Malaysia, Mexico and Turkey for the period between 1961 and 2014 was analyzed. In addition to them, Engle-Granger co-integration analysis, VECM and Toda Yamamoto analysis were used in this study so as to achieve this objective. First of all, we made unit root test to the variables of growth rate, export and import. In this process, we used Zivot Andrews unit root test. As a result of this analysis, it can be understood that the variables of import of Brazil, import and growth rate of Turkey are not stationary on their level values.

Owing to this situation, Engle-Granger co-integration test will be performed in order to identify the relationship between import and growth rate of Turkey. As a result of co-integration analysis, it was identified that there is a long term relationship between import and growth rate of Turkey. Therefore, VECM causality analysis was implemented to these variables. In addition to them, we also used Toda Yamamoto analysis so as to achieve better results.

According to the result of this analysis, it was determined that there is not any relationship among three variables in Brazil and Mexico. On the other hand, we defined that increase in export causes higher growth rate in Argentina. Moreover, it was concluded that there is a causal relationship from import to export in China and Turkey. Furthermore, it was determined that export causes higher import in Malaysia. In conclusion, it can be said that the relationship between growth rate, import and export is not similar for all developing countries. Due to this situation, it is impossible to make suggestion to developing countries with respect to the policy related to growth rate, export

and import. This situation is similar to many studies in the literature (Bahmani-Oskooee, 2009), (Jung and Marshall, 1985).

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International Journal of Commerce and Finance, Vol. 2, Issue 1, 2016, 157-168

THE ROLE OF COLLABORATIVE ADVANTAGE FOR ANALYZING THE EFFECT OF SUPPLY CHAIN COLLABORATION ON FIRM PERFORMANCE

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Abstract:

Collaboration plays a critical role in a globalized, rapidly changing and competitive world, as the resources of an individual company are limited to compete with the challenges of the era. Supply chain collaboration is defined as a partnership process where two or more autonomous firms work closely to plan and execute supply chain operations towards common goals and mutual benefits. Supply chain collaboration results in collaborative advantage, the strategic benefits gained over competitors through supply chain partnering, and these both increase firm performance of the partners. In this research, the effect of supply chain collaboration on firm performance has been investigated by distributing a survey to Turkish companies which have been responded by 150. The role of collaborative advantage in this relation has also been measured. The results of the research suggest that there is a positive correlation between supply chain collaboration and collaborative advantage. The results also prove that supply chain collaboration positively affects firm performance. It is also proven that the mediator role of collaborative advantage on the effect of supply chain collaboration on firm performance is statistically significant.

Keywords: *Supply chain collaboration, Collaborative advantage, Firm performance*

1. Introduction

Improvements in supply chain have gained more importance as customer's demands have increased to purchase better quality products with a cheaper price. It's obvious that these improvements are not independent from the environment of the company. Companies have to align their processes according to the requirements of the market and the outer world. They have searched for collaboration possibilities with their supply chain partners in order to improve the efficiency of their operations and to respond the market requirements quickly. Open innovation is a paradigm change starting in 1990's and open innovation relationship can be extended to the customers, supply resources, universities and independent research companies/experts and competitors (Karabulut; 2015). Supply chain collaboration provides network, partnership and mechanism for supply chain innovations (Liao & Kuo; 2014). The literature studies show that supply chain collaboration has positive impacts on firm performance. Stank et al (2001) mentions that the collaboration within the company as well as outside the company has positive effects on company performance. Inter-organizational collaboration also creates competitive advantage (Jap, 1999).

This study begins with background part where literature studies are presented about supply chain collaboration, collaborative advantage and firm performance. Background section is followed by hypothesis development part where arguments are developed. The research methodology, introduced after hypothesis development part, explains the measures and the samples. The data is analyzed by Baron and Kenney method and confirmed by Sobel test. In the final part, discussions and implications are presented and the study concludes with the suggestions for future research.

2. Background

The studies about supply chain collaboration began in 1990's. The examples for these studies are VMI (Vendor-managed Inventory), CPFR (Collaborative Planning Forecasting and Replenishment), continuous replenishment, e-collaboration systems. Wal-Mart has made a planning and forecasting collaboration with the supplier Warner-Lambert, and as a result achieved an improvement in the stock level from 87% to 98%, a shorter lead time from 21 days to 11 days, more accurate sales orders and 8,5 million USD increase in sales. Similarly, General Electric (GE) has made collaboration with the retailers and switched to order based production and full truck orders, which resulted in the reduced inventory costs for all parties, 12 % reduction in delivery costs and more profitable sales (Simatupang & Sridharan, 2005).

Supply chain collaboration is an active participation of all supply chain partners in order to achieve common goals (Liao & Kuo; 2014; s.296). In other words, it's the joint work of two autonomous firms working jointly to plan and execute supply chain operations by achieving higher gains than they would have by themselves (Simatupang & Sridharan, 2002). Lambert et al. (1999) define supply chain collaboration as the level of relationship in which supply chain partners share risks and benefits in order to reach a higher performance that they would have by acting themselves. Supply chain collaboration can also be defined as the close and long terms relationships where supply chain partners share information, resources and risks in order to achieve common goals (Bowersox, Closs, & Stank, 2003) (Golicic, Fogginn, & Mentzer, 2003).

Even though supply chain collaboration and supply chain integration have been used interchangeably in the beginning of the studies, they have different meanings. Integration implies a unique, integrated and central management whereas collaboration covers combined management and relational tools (Nyaga, Whipple, & Lynch, 2010).

Initial studies on supply chain collaboration focus more on process integration and give less importance to the creation of information and communication factors (Simatupang & Sridharan, 2005). However, problems on the communication cause misunderstandings and conflicts among the supply chain partners and are regarded as the failures of collaborations (Tuten & Urban, 2001). Communication is a glue that keeps supply chain together by means of balanced, two-sided, multi-level contacts and messages (Chen & Paulraj, 2004) (Mohr & Nevin, 1990).

There are three levels of collaboration named as vertical, horizontal and lateral (Simatupang & Sridharan, 2002). Vertical collaboration refers to the collaboration with the suppliers and the customers in the chain and covers the manufacturers, distributors, carriers and the retailers. Horizontal collaboration, on the other hand, covers the information and resource sharing of the competitors and the parties that are not linked with the firm in order to have joint benefits (Badea, Prostean, Goncalves, & Allaoui, 2014, s. 119). Lateral collaboration aims to gain more flexibility by sharing the capabilities in both vertically and horizontally.

The results of the collaboration change by the duration. For example, short term benefits are that the meeting of the needs of all the supply chain partners whereas in the long run, the gains are serving to customers in a better way by creating common plans and improvements (Simatupang & Sridharan, 2002).

Supply chain collaboration provides cost reduction and increase in revenues (Lee, Padmanabdan, & Whang, 1997). It allows supply chain partners to respond to the changing demands and meeting the needs of the customers by flexible options (Simatupang & Sridharan, 2005). Decision and incentive alignment affect the responsiveness of the firm (Fisher, 1997). Supply chain collaboration allows a company to benefit the market opportunities (Uzzi, 1997). The collaboration among the supply chain partners can also result in the new product ideas (Kalwani & Narayandas, 1995). The companies that share their resources can create joint competitive advantage. Production lead time and capacity utilization are also positively affected by supply chain collaboration (Ramanathan, 2014). Handfield (2002) and Sheu et al (2006) suggest that supply chain collaboration reduces purchasing costs and increases the competitive advantage of the firm by reducing costs. Supply chain collaboration results in flexibility, efficiency, competitive advantage and reduction of risks (Nyaga, Whipple, & Lynch, 2010). Çağlıyan's (1999) study with Turkish companies proves that collaborative firms have better firm performance.

The dimensions of supply chain collaboration are information sharing, goal congruence, decision synchronization, incentive alignment, resource sharing, collaborative communication and joint knowledge creation. Information sharing can be defined as the partners' sharing of market trends, new technologies, new process management information to create value (Liao & Kuo, 2014). It can also be defined as a company's level of sharing the relevant, confidential, accurate and complete information with its supply chain partners (Angeles & Nath, 2001) (Cagliano,

Caniato, & Spina, 2003) (Sheu, Yen, & Chae, 2006). Information sharing is the heart (Lamming, 1996), nerve center (Chopra & Meindl, 2001), lifeblood (Stuart & McCutcheon, 1996), essential ingredient (Min, et al, 2005), key requirement (Sheu, Yen, & Chae, 2006) and foundation (Lee & Whang, 2001) of supply chain collaboration. The aim of information is to keep up-to-date information about expectations, future plans and promotions and it needs transparency (Badea, Prostean, Goncalves, & Allaoui, 2014). Confidentiality, timing and accuracy of information sharing are also important for information sharing and the communication should be two ways. Depending on the facilities and systems provided technology, thousands of messages are transferred in seconds, preventing the errors in transmission. The contracts established taking the interactions of the users in the chain will facilitate the e-trade and allow companies using different systems to work jointly (Manthou, Vlachopoulou, & Folinas, 2004).

One of the other benefits of supply chain collaboration is the "collaborative advantage". Collaborative advantage is a relational view of intercompany competitive advantage (Dyer & Singh, 1998). It expresses the addition of the common benefits created by the gathering, exchange and improvement of the resources to the collaborating partners (Dyer & Singh, 1998). It's the joint competitive advantage focusing on the joint value creation (Cao & Zhang, 2011). The studies by Mentzer et al. (2001), Stank et al. (2001) and Manthou (2004) state that the collaborating partners gain more benefits than they would have if they operated by themselves. According to Jap (2001), collaborative advantage is the joint competitive advantage. It is also defined as the benefit gained over the competitors by supply chain collaboration (Cao & Zhang, 2011, s. 166). Vangen and Huxham (2003) define collaborative advantage as the synergic results achieved by companies by collaborative activities rather than individual actions. The studies of Jap (1999) show that collaboration increases common benefits, and provides that the partners gain more benefits than they would have if they acted alone. The creation of the collaborative advantage may be ruined if the collaborating partners search for their own goals rather than the common goals, as the effects of actions on supply chain partners will be neglected (Chopra & Meindl, 2007).

In their studies, Cao and Zhang (2010) have proven that collaborative advantage directly improves firm performance. Min et al (2005) state that the business synergies are not seen immediately but the possible long term benefits are strategic and attractive.

There are five dimensions of collaborative advantage named as process efficiency, offering flexibility, business synergy, quality and innovation. The process efficiency is defined as the level of cost advantage of the collaborative process compared to the processes of their competitors (Bagchi & Skjoett-Larsen, 2005). It may cover joint decision making processes. Process efficiency is one of the success criteria and the profitability indicators (Cao & Zhang, 2011, s. 167). The second dimension, offering flexibility is the extent to which one company's supply chain network supports the launch of new product and services depending on the environmental changes. It can also be named as customer responsiveness. Business synergy can be defined as the extent to which supply chain partners unite their complementary and relevant resources in order to gain extraordinary benefits (Cao & Zhang, 2011). According to Ansoff (1998), this relationship results in more returns to the resources than the resources alone. This joint result is provided by physical resources like production equipment and by non-visible resources like technology expertise, customer knowledge and company culture (Itami & Roehl, 1987). Quality is defined as the extent that a company offers quality products that create value together with its supply chain partners (Li, Ragu-Nathan, Ragu-Nathan, & Rao, 2006). A higher market share and profitability are expected from the companies who can quickly offer quality products and innovations to customer needs. The last dimension of collaborative advantage, innovation, is defined as the degree that the supply chain partners work together to develop new products, services and processes. As the product life cycles have shortened due to competition, there is a need for companies to innovate more frequently. The companies that have good relations with their supply chain partners can improve their skills for product and process developments (Kaufman, Wood, & Theyel, 2000).

Firm performance, which is the independent variable in this study, is defined as how well a firm accomplishes its financial goals compared to the competitors (Li, Ragu-Nathan, Ragu-Nathan, & Rao, 2006). There are many tools to measure firm performance like return on investment (ROI), return on sales, and increase in revenues, cash flow and market share. In this research, the firm performance has been measured as one component through the survey.

3. Hypothesis Development

Based on the literature research presented in the previous section, this study aims to answer the following questions: Is collaborative advantage affected by supply chain collaboration? Does collaborative advantage affect firm performance? Is firm performance affected by supply chain collaboration? Does collaborative advantage have a mediator role in the relation between supply chain collaboration and firm performance? To be able to analyze these questions, below hypotheses have been developed.

Hypothesis 1: Supply chain collaboration positively affects collaborative advantage

Hypothesis 2: Collaborative advantage positively affects firm performance.

Hypothesis 3: Firm performance is positively affected by supply chain collaboration.

Hypothesis 4: Collaborative advantage has a mediator role in the effect of supply chain collaboration on firm performance.

The research model, developed by the literature review and the hypotheses, can be seen in Figure 1 as follows:

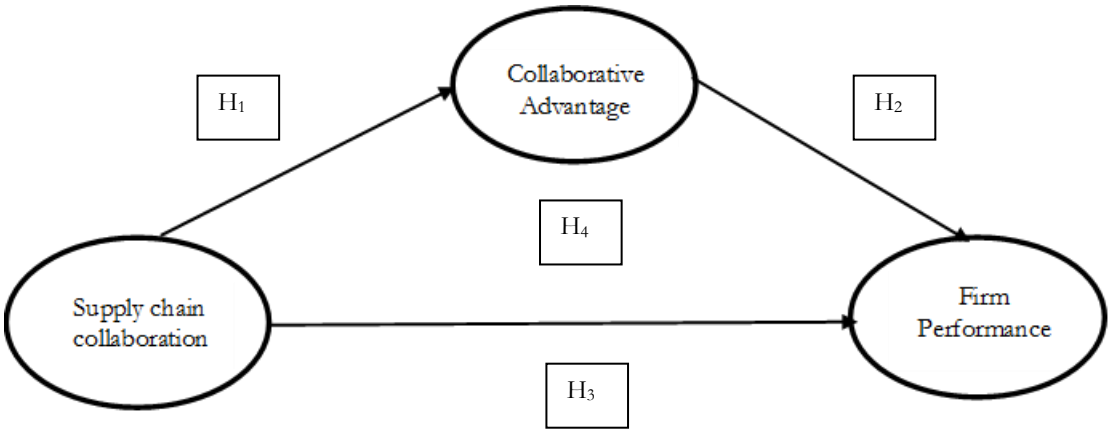

Figure 1. Conceptual Model

4. Research Methods

4.1. Measures and Sampling

In order to find answers to the questions identified in previous section, a questionnaire with Likert-5-scale was formed. In the questionnaire, the scale developed by Cao and Zhang (2010) by analyzing the literature reviews for supply chain collaboration and collaborative advantage, has been used. In order to measure the firm performance, Akgün et al.'s (2007) scale which they have developed from Ellinger et al.'s (2002) has been used. The questionnaire was sent to 210 companies operating in various cities in Turkey and 150 questionnaires were answered.

4.2 Construct Validity and Reliability

In order to make a correct evaluation, Principal Component Analysis, which is used to express many variables by using a few main variables, has been made. There have been question reductions for collaborative advantage and supply chain collaboration variables.

The results for collaborative advantage can be seen in Table 1. Kaiser-Meyer-Olkin value of the analysis is 0,744 showing that Principle Factor Analysis can be made. Bartlett's Test of Sphericity test has a p value smaller than 0,05, which also means that the data is suitable for Principle Factor Analysis.

Table 1. Factor Analysis Results for Collaborative Advantage

Factor Name	Statement	Factor Weight	% of Variance	Reliability (Cronbach α)
Innovation	54. Our firm with supply chain partners has time-to-market lower than industry average	,905	%25,276	0,896
	52. Our firm with supply chain partners introduces new products and services to market quickly.	,882		
	53. Our firms with supply chain partners has rapid products development.	,861		
	55. Our firms with supply chain partners innovates frequently.	,691		
Quality	48. Our firms with supply chain partners offers products that are highly reliable	,935	% 23,260	0,934
	49. Our firms with supply chain partners offers products that are highly durable	,920		
	50. Our firms with supply chain partners offers high quality products to our customers.	,897		
Business Synergy	44. Our firm and supply chain partners have integrated IT Infrastructure and IT resources	,915	% 17,729	0,788
	45. Our firm and supply chain partners have integrated knowledge bases and know-how.	,857		
	46. Our firm and supply chain partners have integrated marketing efforts	,679		

Process Efficiency	37. Our firm with supply chain partners meets productivity standards in comparison with industry norms.	,806	% 13,655	0,629
	38. Our firm with supply chain partners meets on-time delivery standards in comparison with industry norms.	,726		
	Total		%79,92	
	Kaiser-Meyer-Olkin Measure of Sampling Adequacy	,744		
	Bartlett's Test of Sphericity Approx. Chi-Square	1193,429		
	sd	66		
	p	,000		

Table 2 shows the results for supply chain collaboration. Kaiser-Meyer-Olkin value of the analysis is 0,776 which also shows that Principle Factor Analysis can be made. Bartlett's Test of Sphericity test for supply chain collaboration also has a p value smaller than 0,05, which also means that the data is suitable for Principle Factor Analysis.

Table 2. Factor Analysis Results for Supply Chain Collaboration

Factor Name	**Statement**	**Factor Weight**	**% of Variance**	**Reliability (Cronbach α)**
Information sharing	1. Our firm with supply chain partners exchange relevant information	0,847	% 19,324	0,856
	2. Our firm with supply chain partners exchange timely information	0,844		
	3. Our firm with supply chain partners exchange accurate information.	0,833		
	4. Our firm with supply chain partners exchange complete information	0,806		
Synchronizati on	12. Our firms with supply chain partners jointly develop demand forecasts	0,890	% 17,781	0,872

	13. Our firms with supply chain partners jointly manage inventory	0,810		
	14. Our firms with supply chain partners jointly plan on product assortment	0,781		
	11. Our firms with supply chain partners jointly pln promotion events	0,768		
Joint Knowledge Creation	32. Our firm and supply chain partners jointly assimilate and apply relevant knowledge	0,917	% 14,492	0,845
	31. Our firm and supply chain partners jointly search and acquire new and relevant knowledge	0,822		
	33. Our firm and supply chain partners jointly identify customer needs	0,632		
Goal Congruence	9. Our firm and supply chain partners agree that our own goals can be achieved through working toward the goals of the supply chain	0,862	% 13,456	0,806
	8. Our firm and supply chain partners have agreements on the importance of improvements that benefit the supply chain as a whole.	0,857		
	10. Our firm and supply chain partners jointly layout collaboration implementation plans to achieve the goals of the supply chain.	0,552		
	7. Our firm and supply chain partners have agreement on the importance of collaboration across the supply chain	0,548		
ce Sh ur	24. Our firm and supply chain partners share equipments (e.g. computers, networks, machines)	0,865	% 10,870	0,791

	25. Our firm and supply chain partners pool financial and non-financial resources (e.g. time, Money, trainig)	0,812		
	Total		% 75,922	
	Kaiser-Meyer-Olkin Measure of Sampling Adequacy	,776		
	Bartlett's Test of Sphericity Approx. Chi-Square	1550,325		
	sd	136		
	p	,000		

Cronbach's alpha values for each dimension of both supply chain collaboration and collaborative advantage show a high internal consistency. 79,92 % of collaborative advantage is explained by the variables and this is 75,922 % for supply chain collaboration.

4.3 Test of Hypotheses

The hypotheses have been tested by means of multiple linear regression analysis. The Baron and Kenny (1986) method has been used to measure the mediator effect. According to the Baron and Kenny method, the below conditions must be present for a variable to be named as a mediator:

1. A change in the independent variable causes the mediator variable to change.
2. A change in the mediator variable causes the dependent variable to change.
3. When the mediator and the independent variables are included to the analysis together, the influence of independent variable on dependent variable to decrease or completely disappear. (Baron & Kenny, 1986)

Before making an analysis using Baron and Kenny method, significant correlation among the variables should be secured by hierarchical regression. In Table 3, the correlation results according to Pearson correlation coefficient for all three variables can be seen. The results show that there is a significant correlation among the variables.

Table 3. Correlations among all variables

Variables	1	2	3
SCC	-	-	-
CA	,731**	-	-
FP	,233**	,435**	-

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

Note: SCC: Supply Chain Collaboration, CA: Collaborative Advantage, FP: Firm Performance

As correlation prerequisite is proven, Baron and Kenny analysis can be made. In order to make the analysis, 3 models with the below details have been established.

Model 1: $FP = \beta_0 + \beta_1.SCC + \varepsilon$ (Hypothesis 3)

Model 2: $CA = \beta_0 + \beta_2.SCC + \varepsilon$ (Hypothesis 1)

Model 3: $FP = \beta_0 + \beta_1.SCC + \beta_2.CA + \varepsilon$ (Hypothesis 2 and 4)

When the models are tested, below results are received:

Table 4. Coefficients

	Model 1	Model 2	Model 3
β1	0,233*	-	-0,184
β2	-	0,731*	0,570
R2	0,054	0,535	0,205
Adjusted R2	0,048	0,531	0,194
F	8,461*	170,018*	18,971

* significant at 5% level

According to these results received by Baron and Kenney analysis, H1, H2, H3 and H4 hypotheses are accepted. Supply chain collaboration affects collaborative advantage in a positive way. Firm performance is also positively affected by supply chain collaboration. Collaborative advantage has a mediator role on the effect of supply chain collaboration on firm performance.

R2 value is also positively affected meaning that more of the variance in firm performance can be explained by the mediator variable.

In order to make verify the Baron and Kenney results, the Sobel test was also run. Sobel test is one of the methods used for measuring the mediator effect (Sobel, 1982). The results of Sobel test verify the Baron and Kenney method results. Sobel test results can be seen in Table 2. Therefore, the mediator role of collaborative advantage on the effect of supply chain collaboration on firm performance is proven.

Table 5. Sobel test results

The mediator effect of collaborative advantage	Z value	Standard error	p
Supply chain collaboration→collaborative advantage →firm performance	4.39618182	0.10606022	0.00001102

5. Discussion and Implications

The study results throw that firm performance is positively affected by supply chain collaboration. This result is in line with the literature information (Lee, Padmanabdan, & Whang (1997); Simatupang & Sridharan (2005); (Fisher, 1997); Uzzi (1997); Kalwani & Narayandas (1995); Ramanathan (2014); Handfield (2002); Sheu et al (2006); Nyaga, Whipple, & Lynch (2010); Çağlıyan (1999)). Another result of the study is that supply chain collaboration has a positive impact on collaborative advantage which also proves the literature research (Cao & Zhang (2011), Mentzer et al. (2001); Stank et al. (2001); Manthou (2004); Vangen and Huxham (2003); Jap (1999); Chopra & Meindl (2007), Cao and Zhang (2010); Min et al (2005)).

Another result of the study is that, the mediator role of collaborative advantage on the effect of supply chain collaboration on firm performance is statistically significant. This means that the relation between supply chain collaboration and firm performance is more significant, when the mediator variable collaborative advantage is in place.

As a managerial implication, these results show that companies should participate in collaborations where collaborative advantage can be created; and when they are in collaboration, they have to achieve the common goals of collaboration instead of the individual targets of the company. These conditions will affect the firm performance in a positive way. The selection of the partner that the company will collaborate is critical. Therefore, the managers should pursue the ways that helps to select the best collaborating partner.

6. Constraints and further research

The survey for this study has been distributed to 210 companies in various cities of Turkey and 150 responses have been received. Further research can be made by a larger number of respondents, which will increase the size of the sampling and the relation of supply chain collaboration, collaborative advantage and firm performance can be analyzed for a larger group in Turkey.

Besides, the questionnaire has been sent to only one person in each company resulting in a constraint of unique resource tendency. Further research can be held by taking the questionnaire results from more than one person in the company, by directing independent variable questions and dependent variable questions to different people in the company.

7. Conclusion

This study reveals that supply chain collaboration has a positive effect on collaborative advantage and also firm performance. Firm performance is also positively affected by collaborative advantage. When the mediator role of collaborative advantage in the effect of supply chain collaboration on firm performance has been analyzed, the results show that the mediator effect of collaborative advantage is statistically significant. As a managerial implication, companies have to collaborate with supply chain partners by which they gain more collaborative advantage, so that the collaboration partners can have better firm performance results.

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International Journal of Commerce and Finance, Vol. 2, Issue 1, 2016, 169-176

THE INFLUENCES OF RELATIONSHIP MARKETING IN THE HOUSING BROKERAGE MARKET

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Abstract:

Many companies and salesmen try to build and maintain long-term relationship with their customer. The influences of relationship marketing activities are important issue of the housing brokerage Market. The aims of study are to learn the impacts of relationship marketing on customer satisfaction and customer loyalty in the housing brokerage Market. The researchers survey the customers and use the regression analysis method to test the relationships between relationship marketing, customer satisfaction and customer loyalty in Taiwan. The research results show that the relationship marketing positively impacts on customer satisfaction and customer loyalty, then customer satisfaction positively impacts on customer loyalty. Customer satisfaction plays a mediating role between relationship marketing and customer loyalty. Besides, the study confirm that brokers' expertise moderates the relationship of relationship marketing process. The findings suggest that the brokers' relationship marketing and expertise empirically impact on the customers.

Keywords: *Housing brokerage market, Relationship marketing, Customer satisfaction, Customer loyalty*

1. Introduction:

Relationship marketing is the bond of the customer and the company (Berry, 1995), and create and maintain good relationship between the buyer and the supplier (Gummesson, 1998). Relationship marketing activities of a company including financial, social and structural bond (Berry and Parasuraman. 1991). Relationship investment strategies would increase customers' relationship quality and behavioral loyalty toward the firm (De Wulf, Odekerken-Schroder and Iacobucci, 2001).

In the housing brokerage market or real estate agent industry, communication and results are the most important factors (Dabholkar and Overby, 2006), process factors are linked with service quality, and outcome factors are linked with customer satisfaction. (Dabholkar and Overby, 2005). Tuzovic (2009) confirm that the demand of specific service attributes between renters and buyers are different in the real estate industry and real-estate firms should pay attention to the training of agents.

Many managers and sales realize the importance of the relationship marketing, however, how to create and maintain customer relationship is difficult in the housing brokerage market. The price of the real estate or housing are high. Many consumers have few experience to buy or to rent the real estate or housing. The housing brokers are difficult to maintain long term relationship with the customers. Few prior literatures study the influences of relationship marketing and brokers' expertise on customers' satisfaction and loyalty. Therefore, the purposes of the research are to study the relationships among relationship marketing, customer satisfaction and customer loyalty in the housing brokerage market, and to explore the moderating roles of housing brokers' expertise in the linkages between relationship marketing, customer satisfaction and customer loyalty.

2. Literature Review

Relationship marketing activities included three bonds: (1) financial bond: encouraging consumer to buy by price inducement; (2) social bond: establishing social relationship with customers; (3) structural bond: providing the customers with values, scarce or expensive to obtain (Berry and Parasuraman, 1991). In the real estate industry, Dabholkar and Overby (2005) proposed that process factors are linked with service quality and outcome factors are linked with customer satisfaction. Dabholkar and Overby (2006) suggest that seven factors are important in real estate agent service: communication, effort, advertising, guidance, professionalism, representation, and results, with communication and results being the most important. Tuzovic (2009) found the service attributes differences between renters and buyers in real estate industry, such as description of properties, knowledge/experience and honesty of brokers, and relationship with the brokers. The researches show that housing brokerage firms should know the importance of relationship marketing activities, brokers' knowledge, experience, and expertise.

2.1. Relationship Marketing, Satisfaction and Loyalty

The relationship marketing activities of companies influence on customers. Chiu et al., (2005) confirm that the financial, social, and structural bonds improve customer values and customer loyalty for stayers; only the structural bond impacts on customer's utilitarian value and customer loyalty for dissatisfied switchers; the social bond affects customer's hedonic value, and the structural bond affects the customer's utilitarian value for satisfied switchers. Chen and Chiu (2009) find that: first, the financial and structural bonds impact on online shoppers' satisfaction; however, the social bond does not; second, the financial, social, and structural bonds have more positive impacts on female customers' satisfaction; third, the financial bond is more successful for short-term customers, however, the structural bond is more important for long-term customers. Dagger and O'Brien (2010) indicate that the impacts of relationship benefits on customers' satisfaction, trust, commitment, and customer loyalty are different between novice and experienced customers. Mimouni-Chaabane and Volle (2010) point out that the five benefits, including of monetary savings, exploration, entertainment, recognition, and social benefits, have different impacts on customer satisfaction, loyalty, and perceived relationship investment of the firm. The results show that the dimensions of relationship marketing have different influences on customers.

Garbarino and Johnson (1999) demonstrate that overall satisfaction is the primary mediator between the component attitudes and future intentions for the low relational customers, and trust and commitment are the key mediators between component attitudes and future intentions for the high relational customers. Balaji (2015) suggest that relationship investments, satisfaction, and commitment play a critical role on customer loyalty, however, the effect of relationship satisfaction on loyalty decreases as the length of the relationship increases. Though many relationship marketing theories emphasize the importance of trust and commitment, Palmatier et al. (2009) argue that customer gratitude plays a mediating role between relationship marketing investments on purchase intentions, sales growth, and share of wallet. Lee, Kim and Pan (2014) indicate that relationship marketing investments affect both customers' gratitude and satisfaction, and relationship marketing investments were also more associated with gratitude than satisfaction. Relationship investment affects relationship quality and behavioral loyalty (De Wulf et al., 2001). Liang and Wang (2006) confirm a positive relationship between service quality, satisfaction and relationship investment and suggest that financial products need different service and relationship investment. Han et al. (2011) argue that both core service and service encounter performances affected customer satisfaction, and customer satisfaction mediated the effects of service performances on switching intention completely. The results show the chain relationship of relationship marketing, customer satisfaction and customer loyalty. Therefore, the study propose the hypotheses in the housing brokerage market:

H1: Relationship marketing positively impacts on customer satisfaction.
H2: Relationship marketing positively impacts on customer loyalty.
H3: Customer satisfaction positively impacts on customer loyalty.
H4: Customer satisfaction mediates the relationship between relationship marketing and customer loyalty

2.2. The moderating roles of housing brokers' expertise

Customer relationship management is an important challenge for managers. In airline industry, interpersonal relationships, domain expertise, customer orientation, and service recovery performance are the major factors of relationship quality (Cheng, Chen and Chang, 2008). Expertise is service provider's knowledge and experience (Johnson and Grayson, 2005). Johnson and Grayson (2005) confirm that service provider's expertise, product performance and satisfaction with previous interactions are associated with cognitive trust, then impacts on affective trust, sales effectiveness and future interactions.

Service provider expertise and customer sociability are important to relationship success in the healthcare settings (Spake and Megehee, 2010). Andreassen and Lindestad (1998) confirm that corporate image impacts customer loyalty directly whereas customer satisfaction does not and the finding was consistent with high and low service expertise. The results show that the service providers' expertise would not influence on the customers. However, Ou et al. (2012) suggest that salesperson expertise, ethical sales behavior, service performance, corporate reputation, and corporate performance impact on relationship quality, and relationship quality has positive effects on commitment and loyalty. The results show that salesperson expertise would influence on the customers' perceptions.
Paulssen et al. (2014) argue that social bonding is the only one effective relationship marketing strategy in the high risk situations, when perceived low risk, customers' brand satisfaction determines brand loyalty, whereas when perceived high risk, customers' brand trust determines brand loyalty. The results show that relationship process between service providers and customers moderate by customers' risk perceptions. Echchakoui (2015) confirms that perceived risk partially mediate the relationship between salesperson expertise and customer loyalty. The study propose that salesperson expertise would moderate the relationship process between customers and the housing brokers. The researchers propose that housing brokers' expertise moderate the relationship of relationship marketing, customer satisfaction and customer loyalty. Based on the above researches, the study propose the hypotheses in the housing brokerage market:

H5: The effect of relationship marketing on customer satisfaction increases with expertise.
H6: The effect of relationship marketing on customer loyalty increases with expertise.
H7: The effect of customer satisfaction on customer loyalty increases with expertise.

3. Research Method

3.1. Procedures and samples

The researchers use convenient sampling method to survey the housing brokers' customers in Taiwan. The study collect samples through questionnaires. In the survey, respondents were asked to choose specific one housing broker who had served them within one year and select their perceptions about the housing broker.
The authors distributed 250 questionnaires and collected 210 useful samples, and response rate was 84%. The samples were composed of 110 (52.4%) males and 100 (47.6%) females. There were 33 (15.7 %) respondents who were less than 30 years of age; 80 (38.1 %) who were between 31 and 45; 81 (38.6%) who were between 46 and 60 years; 16 (7.6 %) who were over the age of 61. The respondents' education level were: 45 (21.4 %) were high school or under; 52 (24.8 %) were college; 81 (38.6%) were university; 16 (7.6 %) were graduate level. There were 39 (18.6 %) respondents who work in public services or school; 48 (22.9 %) in manufacturing industries; 68 (32.4 %) in service industries; 26 (212.4 %) were housewife and 29(13.8%) were others. There respondents were 73 (52.4%) single and 137(65.2%) married.

3.2 Measures

According to the previous researches, the authors developed 8 items to measure participants' relational marketing perceptions to the housing brokers (Chiu et al., 2005), 3 items to measure customer satisfaction (De Wulf et al., 2001), 5 items to measure customer loyalty (Kim et al., 2009; Palmatier et al., 2009), including of word-of-mouth and purchasing intentions. We developed 3 items to measure participants' perceived the housing brokers' expertise (Johnson and Grayson, 2005). For all items, the researchers use a 5-point Likert scale (1=strongly disagree; 5=strongly agree).

4. Research Results

4.1. Reliability and Validity

Table 1. presents the mean, stander deviation, and correlation matrixes of the study. The researchers use Cronbach's α coefficients to evaluate the measurement reliabilities of the study. The Cronbach's α of the relationship marketing, customer satisfaction, customer loyalty and housing brokers' expertise are .902, .809, .888, and .805. The Cronbach's αcoefficients of measurements are all higher than 0.7 and show that the internal consistency of the scales are good (Nunnally, 1978). Besides, the composite reliabilities of all variables are all higher than 0.7 and the correlation between any two variables are lower than Cronbach's α of the variables (Table 1), the results indicate that the discriminant and convergent validities of the scales are good (Fornell and Larcker, 1981; Gaski and Nevin 1985).

Table 1. Mean, stander deviation, and correlation matrixes

	Relationship Marketing	Satisfaction	Loyalty	Expertise
Relationship Marketing	(.902)			
Satisfaction	.692***	(.809)		
Loyalty	.775***	.737***	(.888)	
Expertise	.791***	.747***	.791***	(.805)
Mean	3.732	3.757	3.736	3.730
S.D	.636	.679	.704	.703

***p <.001, numbers in parentheses are Cronbach's α.

4.2. Hypotheses Testing

The researchers use regression analysis method to test the hypothesis. The empirical results are showed in Table 2. In the model 1 and model 2, the results show that relationship marketing significantly impacts on customer satisfaction (β=.692, t=13.816, p<.001***) and customer loyalty (β=.775, t=17.696, p<.001***). In the model 3, the results show that customer satisfaction significantly impacts on customer loyalty (β=.737, t=15.743, p<.001***) in the housing brokerage market. The empirical results show that the hypothesis 1(H1), hypothesis 2(H2) and hypothesis 3(H3) of the study are all supported. The results indicate that the housing brokers' relationship marketing would increase their customers' satisfaction and loyalty, and improving customer satisfaction would increase customer loyalty. The housing brokers should maintain relationship with their customers, such as financial, social and structural bonding tactics, to increase customers' satisfaction and loyalty.

In the model 4, the researchers test the mediating role of customer satisfaction between relationship marketing and customer loyalty. Following the suggestions of Baron and Kenny(1986), the mediating role exists when the main effect of relationship marketing on customer loyalty become insignificant or reduced when another variable, customer satisfaction, is added to the regression analysis. Including of two independent variables to the model 4, relationship marketing and customer satisfaction, the impacts of relationship marketing and customer satisfaction on customer loyalty are still significant but the β coefficient of relationship marketing is reduced from .692(t=13.816, p <.001***) in the model 1 to .508(t=9.314, p<.001***) in the model 4. The regression results of model 1, 3 and 4 show that customer satisfaction partially mediates the relationship between relationship marketing and customer loyalty in the housing brokerage market. Therefore, the fourth hypothesis of the study (H4) is partly supported.

Table 2. Regression Analysis

Dependent Variables	Satisfaction	Loyalty		
	Model 1	Model 2	Model 3	Model 4
Independent Variables				
Relationship marketing	.692***	.775***		.508***
	(13.816)	(17.696)		(9.314)
Satisfaction			.737***	.386***
			(15.743)	(7.067)
Adj R^2	.476	.599	.541	.675
Results	Supported	Supported	Supported	Partially supported

*** p <.001, numbers in parentheses are *t value*.

To test the moderating roles of housing brokers expertise, the study follow the suggestions of Baron and Kenny(1986). In the model 5 and 6 of Table 3, the regression analysis results show positive and significant interaction effect of housing brokers expertise and relationship marketing on customer satisfaction (β=.834, t=6.246, p< .001***) and customer loyalty (β=.790, t=6.875, p<.001***). The results support the hypotheses H5 and H6 of the study. The results indicate that the effect of relationship marketing on customer satisfaction and customer loyalty is greater when customer perceived the higher level of housing brokers' expertise. Besides, the results of the model 7 show positive and significant interaction effect of housing brokers expertise and customer satisfaction on customer loyalty (β=.936, t=9.099, p<.001***). The results support the hypotheses H7 of the study. The results indicate that the effect of customer satisfaction on customer loyalty is greater when customer perceived the higher level of housing brokers' expertise.

Table 3. Moderating Analysis of Housing Brokers' Expertise

Dependent Variables	Satisfaction	Loyalty	
	Model 5	Model 6	Model 7
Independent Variables			
Relationship Marketing	-.092	.033	
	(-.685)	(.289)	
Relationship Marketing × Expertise	.834***	.790***	
	(6.246)	(6.875)	
Satisfaction			-.126
			(-1.228)
Satisfaction × Expertise			.936***
			(9.099)
Adj R^2	.557	.672	.671
Results	Supported	Supported	Supported

*** p <.001, numbers in parentheses are *t value*.

5. Conclusion

5.1. Discussions

Many managers know the importance of relationship marketing activities, however, how to develop and maintain the relationship with customers is a challenge in the housing brokerage market. The price of housing and real estate is a huge amount, and most people have few chance to deal with the housing brokers. For housing brokers, learning the influences of relationship marketing activities is important issue.

The research study the influences of relationship marketing and the results are as followings: First, the relationship marketing positively impacts on customer satisfaction and customer loyalty, and customer satisfaction positively

impacts on customer loyalty in the housing brokerage market. The results are consistent with previous researches (e.g., Chen and Chiu. 2009; Chiu et al., 2005). The results indicate that housing brokers should invest the relationship marketing activities with their customers, including of financial, social and structural bonds, to increase customer satisfaction and loyalty would. The results also confirm that relationship between relationship marketing and customer loyalty is partially mediated through customer satisfaction in the housing brokerage market.

Second, the study empirically confirm the moderating roles of the housing brokers' expertise in the relationship marketing process. The housing brokers' expertise moderate the relationship of relationship marketing on customer satisfaction, relationship marketing on customer loyalty, and customer satisfaction on customer loyalty. The findings suggest that relationship marketing leads to higher customer satisfaction and customer loyalty as housing brokers' expertise increases. Similarly, customer satisfaction leads to higher customer loyalty as housing brokers' expertise increases. The results show that salesperson expertise could improve the customer relationship process. The housing firms should pay attention to the staff trainings to improve the level of brokers' expertise and then increasing the influences of the housing brokers' relationship marketing activities.

5.2 Limitations and future directions

There are some limitations of the study. First, the research use a cross section method to survey the housing brokers' customers, future researches should investigate the influences of relationship marketing using a longitudinal method by tracking and observing the same group of housing customers. Second, the study explore the relationship among relationship marketing, customer satisfaction and loyalty, and the moderating roles of brokers' expertise, future research could study the impacts of other variables, such as relational characteristics.

Third, the study only examine the research hypotheses in the Taiwan housing brokerage market, future research could study the relationship across different service industries, areas or countries.

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International Journal of Commerce and Finance, Vol. 2, Issue 1, 2016, 14-24

MARKET LIQUIDITY, ANALYSTS COVERAGE, AND OWNERSHIP CONCENTRATION: EVIDENCE FROM ASE

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Abstract:

This research investigates the association between analyst coverage, ownership concentration and market liquidity in Amman Stock Exchange (ASE). Using a unique dataset about information asymmetry, several proxies related to the information asymmetry are used to clarify certain aspects of market liquidity. In a sample of 131 companies with comprehensive data collected from company guides and Datastream, information asymmetry measured by analysts' coverage is found to be an important determinant of market liquidity. In particular, market liquidity is lower where firms have larger analysts coverage and where firms are denoted with high degree of ownership concentration. The effect of analysts coverage is, however, found to be more marked in firms with high levels of ownership concentration. The study provides theoretical and empirical improvement of market liquidity literature towards an understanding of the information asymmetry proxies in ASE. Policymakers, after the 2007-2009 scandal have formed governance codes that highlight the importance of disclosure requirements as key responsibility of financial analysts. The link between analysts coverage and market liquidity established in this research provides evidence for insider investors on the roles and potential effectiveness of analysts in carrying this responsibility.

Keywords: *Analysts Coverage, Ownership Concentration, Market Liquidity, ASE*

JEL Codes: *G14 and G32*

1. Introduction

We examine the association between ownership concentration, analysts coverage and market liquidity. There are two conflicting views on the effects of ownership concentration on market liquidity: adverse selection and trading hypotheses. The former argues that when large shareholders possess superior information about the firm's prospects compared to minority shareholders, an adverse selection problem arise, which decreases market liquidity (e.g., Easley & O'Hara 1987; Glosten & Milgrom 1985; Grossman & Stiglitz 1980; Kyle 1985; Rubin 2007). Nevertheless, the latter suggests that minority shareholders trade more often, which increases market liquidity (e.g., Demsetz 1968; Merton 1987; Schwartz & Shapiro 1992). Prior literature on the relationship between ownership concentration and market liquidity is far from conclusive (e.g., Attig et al., 2006; Brockman et al., 2009; Ginglinger & Hamon 2007; Heflin & Shaw 2000; Jacoby & Zheng 2010; Naes 2004). Interestingly, there is few evidence on how analyst coverage is associated with market liquidity. This paucity of evidence motivates our study.

Moreover, we test the association between ownership concentrations, analysts' coverage and market liquidity on Amman Stock Exchange (ASE) who is often regarded as one of the most successful Arab countries in protecting investors (i.e. minority investors) relative to its economic size. Therefore, Jordan offers an ideal setting to examine the degree of information asymmetry in the region. In particular, little evidence documents with respect to the relationship of ownership concentration, analysts' coverage and market liquidity. This relationship is important to capital market participants mainly minority shareholders given the role of analysts' forecasts in transforming the private information into public that leads to higher market liquidity (e.g. Brennan & Subrahmanyam, 1995; Roulstone 2003; Jiang et al. 2011). Others (e.g.,Van Ness et al. 2001; Easley et al. 1998) document a negative relationship between analysts coverage and market liquidity. These studies assume that financial analysts have a greater motivation to follow firms with higher ownership concentration. Thus, the relationship between analysts coverage and market liquidity is also expected to be positive (negative) when the firm's ownership is concentrated (dispersed). To sum up, although scholars report that analysts coverage and ownership concentration is related to market liquidity, empirical evidence on this relationship is mixed.

We include a sample of ASE firms for the period of 2005-2013. In investigating the relationship between analysts' coverage, ownership concentration and market liquidity, we incorporate a number of control variables that are important determinate of market liquidity such as shares price, return volatility and firm size in the OLS models. Our findings indicate that firms with larger number of analysts following have higher proportional bid-ask spread and

lower trading activity measures (i.e., turnover ratio by volume and trading volume). Moreover, we notice that firms with higher ownership concentration have a wider proportional bid-ask spread and lower turnover ratio by volume and trading volume. Interestingly, we show that the effects of analyst following on market liquidity are more pronounced in concentrated firm. Our findings are consistent with Rubin (2007) who document a negative association between ownership concentration and market liquidity. And in the line with the findings of Jiang et al. (2011) show that firms with larger analysts' coverage have lower market liquidity.

Our study adds to the literature that investigates the association between ownership concentrations, analysts' coverage and market liquidity the following two points. First, by documenting a relationship between analysts following and market liquidity, we show that financial analysts are linked with the information environment of the firms. We also infer that financial analysts may access the precision of private information of the firm's prospects when ownership concentration is higher, which in the line with the adverse selection hypothesis.

Second, our study adds to the literature on the market liquidity. To the best of our knowledge, this study is the first of its kind to links ownership concentration, analyst coverage and market liquidity in ASE. Our findings are important given the significant effect of analysts coverage in reducing the degree of information asymmetry between insider and outsider investors. Our findings document that analysts coverage is an important determinant of market liquidity in highly concentered firms.

The remainder of this article is organized as follows. In section 2, we form our hypotheses. We present our methodology and the research model in section 3 and discuss the sample selection in section 4. We highlight the results in section 5 and document our conclusions in section 6.

2. Literature Review and Hypothesis Development

Blockholders have an informational advantage over minority shareholders with regarding the firm's private information and possess economies of scale in the collection of information (e.g., Brockman et al., 2009; Heflin & Shaw 2000; Jacoby & Zheng 2010). As a result, we conjecture that blockholders may trade in that private information. Theories offer a clear expectation on the association between ownership concentration and market liquidity. For example, Coffee (1991) was among the first to point out that the active role of large shareholders and the liquidity of their shares cannot go hand on hand. Others (Glosten & Milgrom, 1985; Copeland & Galai 1983) also argue that large shareholders are informed investors who may trade against uniformed investors. As a result, market makers increase the bid-ask spread, which leads to lower market liquidity.

Nevertheless, the empirical studies that have examined the impact of blockholders on market liquidity have been inconsistent (Brockman et al., 2009; Heflin & Shaw 2000; Jacoby & Zheng 2010). For instance, Kini & Mian (1995) document a significant and positive relationship between blockholders and bid-ask spread for 1063 NYSE listed firms for 1985. Moreover, Heflin & Shaw (2000) investigate the impact of blockholders on market liquidity, measured by quoted, effective, adverse selection components of bid-ask spread and depth, in 260 US listed firms, over the period from 1988 to 1989. They report a positive relationship between blockholders and, the quoted and effective bid-ask spread, and adverse selection spread components.

Furthermore, Rubin (2007) examines the effect of blockholders on market liquidity using a sample of 1369 NYSE firms for the period 1993-2003. He documents a negative relationship between blockholders and dollar volume and a positive relationship between bid-ask spread and price impact ratio. Similar to that vein, Brockman et al. (2009) and Jacoby & Zheng (2010) examine the relationship between blockholders and market liquidity and report a negative relationship between them. Following this series of empirical studies, we form the relationship between ownership concentration and market liquidity as follows:

H1: There is a negative association between shareholder concentration and stock market liquidity.

Many shareholders do not have the potential to analyse the information in firm's earnings forecasts. In making trading decisions, they depend on the recommendations from financial analysts. As a result, an effective way for managers to influence market liquidity is to provide financial information directly to financial analysts. By improving the firm's information environment through higher quality financial reports and more disclosure, firms can reduce the the degree information asymmetry which leads to a higher market liquidity (e.g. Copeland & Galai 1983; Welker, 1995).

Nevertheless, the relationship between analysts following and market liquidity will depend on whether the firm is concentred or dispersed (i.e., firms who are more (less) concentrated are more (less) likely to to be followed by financial analysts. On the one hand, in concentrated firms blockholders may access valuable private information and thus they can create an adverse problem in the capital market (e.g., Jiang et al. 2011; Zhou 2011). These studies suggest that the adverse selection risk faced by market makers may be negatively correlated with the number of analysts following the firm. In turn, this implies that the bid-ask spread may be lower for firms followed by a larger number of financial analysts. Following this series of reasoning, we form the relationship between analysts coverage and market liquidity as follows:

H2: There is a negative association between analysts following and market liquidity

In summary, the review of the empirical papers that investigate the influences of ownership concentration and analysts' coverage on market liquidity reveals several important gaps in the literature. In the first place, the number of empirical studies in this area is clearly limited and this explains the few papers that were discussed in the empirical review. In addition, the review indicates the need for this study in the ASE since most of the above-mentioned studies come from the US and developed markets (Chiang & Venkatesh 1988; Dennis & Weston 2001; Kini & Mian 1995; Rubin 2007; Jiang et al. 2011). However, as discussed previously, the differences in corporate governance arrangement, codes' rules and regulations between countries justify the need for more country-specific studies especially from the MENA countries. To the best of our knowledge, this study is the first of its kind in the ASE that investigates the effect of ownership concentration and analysts' coverage on market liquidity.

3. The Methodology and Model

This study depends on linear regression using the method of ordinary least square (OLS). We run linear regressions using the proportional bid-ask spread (PBAS), turnover by volume (TRVO), then trading volume (VO) as measures for stock market liquidity. Generally, the relationship that relationship between ownership concentration, analysts coverage and market liquidity can be written as follows:

$$LIQ_{it} = \alpha_0 + \beta_1 BKO_{it} + \beta_2 ANAL_{it} + \gamma_1 MV_{it} + \gamma_2 P_{it} + \gamma_3 VOL_{it} + \sum_{i=1}^{n} IND + \sum_{i=1}^{n} YEAR + \varepsilon_i \ldots\ldots\ldots (1)$$

LIQit	Market liquidity variables: information friction (proportional bid-ask spread) and real friction (trading volume and turnover by volume)
ANALit	Number of analysts who follow the firms
BKOit	Proportion of aggregate blocks of at least 3% of the firm's outstanding shares held by outside investors
MV it	The natural logarithm of the market capitalization as a proxy for firm size
P it	Price per share
VOL it	Return volatility measured by the standard deviation of daily returns
IND	A dummy variable for industry
YEAR	A dummy variable for each year of the eight years from 2005-2013, 2005(y1), 2007 (y2)……. 2013 (y9)
εit	Unobservable individual-specific effect

The model includes three control variables –size, return volatility and share price- that previous studies document that they are related to the firm's information asymmetry and that may affect the association between ownership concentration , analysts coverage and market liquidity. We measure firm size (MV) as the natural logarithm of market capitalization at the end of the fiscal year. Previous research report that firm size has a positive impact on market liquidity as stated by Anderson & Fraser (2000). In addition, larger firms, on average, release more information than

smaller firms release and had more analyst coverage and are thus subject to more scrutiny by the investment community than smaller firms (e.g., Brennan & Subrahmanyam 1995). Thus, we expect a positive relationship between MV and market liquidity.

We control for the volatility in returns (VOL) because it reflects information uncertainty. Prior studies (e.g., Mclnish & Wood 1992; Stoll 1978; Tinic & West 1972; Jegadeesh & Subrahmanyam 1993) have confirmed that there is a positive relationship between price volatility and bid-ask spread. We measure volatility of share price as the standard deviation of daily returns. Moreover, we include the share price (P) to control for price discreteness and acts as a proxy for market depth; that is, low prices are associated with higher market depth (Jegadeesh & Subrahmanyam 1993; Welker 1995; Stoll 2000). Thus, this study measures the annual stock price using the average of the daily closing prices.

4. Sample Selection and Descriptive Statistics

4.1. Sample Selection

We choice our sample from the population of Amman Stock Exchange (ASE) firms over the period 2005-2013. We extract data on ownership concentration from the companies' guides, analysts' coverage data from the I/B/E/S database, and accounting and market data from DataStream. The sample contains all firms with comprehensive data for the main variables used in the empirical analyses. Our main sample consists of 131 non- financial firms.

4.2. Descriptive Statistics

Table 1 shows descriptive statistics for the variables used in the empirical tests. The mean (median) value of ownership concentration (BKO) is 34% (23%).Furthermore, the mean (median) of the analysts following (ANAL) is 9.64 (5). For market liquidity proxies, Table 1 reports that the mean (median) of proportional bid- ask spread (PBAS) and trading volume (VO) are JD 0.03 (JD 0.01) and JD 28546 (JD 7549.3), respectively indicating that our sample contains of relatively liquid firms. For firm characteristics, mean (median) firm size (MV) and return volatility (VOL) are JD 157.53 (JD 20.70), 9.4% (8.4%), respectively revealing that our sample contains of relatively larger and less risky firms. The mean (median) of share price is JD 2.39 (JD 1.6).

Table 1
Descriptive Statistics

Table 1 presents descriptive statistics for the dependent variables and independent variables. Total number of firms is 131 over the period 2005-2013. Variable definitions are given in Appendix 1.

	Mean	Median	Standard Deviation	Max	Min
VOL (%)	9.4%	8.4%	4.2%	29.5%	0
MV in millions JD	157.53	20.70	653.86	10445.04	1.01
VO in thousand	28546.09	7549.3	65606.02	875496.4	0
PBAS in pence	0.0307	0.0063	6.1020	0.50	0
P	2.39	1.6	4.38	46.51	0.03
TR (%)	1.35	0.34	2.9	31.62	0
BKO (%)	34%	23%	36%	95%	0
# of ANAL	9.64	5	10.41	35	0

Table 2 shows the Pairwise correlations among the variables used in the empirical results regressions. The table shows that blockholders (BKO) is negatively correlated with turnover by volume (TRVO) and trading volume (VO), showing that the firms with higher block ownership have lower market liquidity. Analysts coverage (ANAL) is insignificantly positively correlated with turnover by volume (TRVO) and negatively with proportional bid-ask spread (PBAS). For market liquidity measures, turnover by volume (TRVO) is significantly positively related with

trading volume (VO). While, proportional bid- ask spread (PBAS) is negatively correlated with turnover by volume (TRVO) and trading volume (VO).

Table 2
Correlation Matrix

Table 2 shows Pairwise correlation matrix for the variables used in the empirical results. Numbers are significant at 5% and more. Variable definitions are given in Appendix 1.

	TR	VO	VOL	MV	P	PBAS	BKO	ANAL
TR	1.00							
VO	0.82*	1.00						
VOL	-0.01	0.02	1.00					
MV	0.08*	-0.04	-0.04	1.00				
P	-0.23*	-0.20*	0.01	0.05	1.00			
PBAS	-0.04	-0.19*	0.04	-0.06	-0.25*	1.00		
BKO	-0.32*	-0.21*	-0.01	-0.01	-0.27*	0.01	1.00	
ANAL	0.04	-0.04	0.02	0.02	0.13*	-0.01	-0.01	1.00

5. Results and Analysis

5.1. The Effect of Ownership Concentration and Analysts Coverage on Market Liquidity

We test the relationship between ownership concentration, analysts coverage and market liquidity. Table 3 reports the estimation results of the OLS dummy year and industry effects regression models. Column (1) reports the results of the proportional bid- ask spread (PBAS). Similar to the findings of Jiang et al. (2011), this study shows that the coefficients on BKO and ANAL are insignificantly positive. Column (2) of Table 3 documents that the coefficient on ANAL is -0.57 (t-stat= -2.33). in the line with the adverse selection hypothesis, the ANAL coefficient is positive and significant at the 1% level showing that there is a negative relationship between analysts following and market liquidity. The BKO coefficient documented in column (3) is positive and significant (coefficient=-0.06, t-stat=-1.69) at the 10% level.

Furthermore, Column (3) reveals a negative relationship between ANAL and market liquidity, this result is once again broadly in the line with the adverse selection hypothesis. In terms of control variables, the results are consistent with our expectations and the previous studies. Columns (1) to (3) show that the return volatility is negatively correlated with market liquidity. In particular, this negative relationship is common in the literature, where firms with higher volatility are exposed to higher uncertainty and information asymmetry (Black 1986; French & Roll 1986). Our results are in line with previous studies (e.g., Poon et al. 2013; Rubin 2007). The coefficient of firm size is negative and significant with proportional bid-ask spread (PBAS). This negative relationship confirms that larger firms have lower information asymmetry and higher market liquidity because they are more able to diversify risk and have quick and greater access to the capital market.

Moreover, Table 3 indicates that the share price has a significant effect on market liquidity. Under the OLS estimation, the negative relationship is consistent with the trading hypothesis. For instance, Stoll (2000) reports a negative and relatively significant relationship between share price and market liquidity. One of the most common tests used to check for the multicollinearity problem is called the variance inflation factor (VIF), which is calculated as follows:

VIF=1/tolerance……..……..……..……(2)

Where:

Tolerance = 1-R2

R2 is the coefficient of determination

It has been suggested that, if the VIF exceeds 10, which means that R2 exceeds 90%, this indicates a multicollinearity problem for those variables in the model using market liquidity as the main dependent variables.

The results of VIF tests indicate that multicollinearity is not a problem in our dataset. From Table 4 it is clear that all values are less than 10. From Table 4, we can notice that the average VIF is 1.89. Consequently, this value confirms that our dataset is free from multicollinearity problems.

Table 3
Relationship between Ownership Concentration, Analyst Coverage and Market Liquidity

Table 3 reports the results of the regressions that run the dependent variables (proportional bid-ask spread (PBAS), trading volume (VO), and the turnover by volume (TRVO) on block holders (BKO) and analysts coverage (ANAL) and control variables (MV, VOL, and MV). Variable definitions are given in Appendix 1. ***,**,* indicate significance at 1%,5%,10% levels respectively.

	PBAS	**VO**	**TRVO**
ANAL	0.08 (1.13)	-0.57 (-2.33)***	-0.76 (-5.61)***
BKO	0.02 (1.55)	-0.05 (-0.64)	-0.06 (-1.69)*
MV	-0.03 (-2.51)**	0.29 (3.07)***	0.05 (0.84)
VOL	-0.02 (-0.53)	-0.23 (3.14)***	-0.09 (-1.95)*
P	-0.07 (-1.69)*	-0.06 (-0.35)	-0.58 (-6.43)***
Constant	0.08 (1.67)*	2.76 (10.67)***	0.35 (2.24)***
Industry Dummy	*Yes*	*Yes*	*yes*
Year Dummy	*Yes*	*Yes*	*Yes*
Observations	1179	1179	1179
Adjusted R^2	0.85	0.17	0.30

Table 4
Variance Inflation Factors (VIFs) Test

Table 4 presents an overview of the maximum variance inflation factors (VIFs) test for all research variables reported in Table 3. The reported VIFs are the maximum VIFs obtained from the regression analyses in STATA 11.

	PBAS	**VO**	**TRVO**
BKO	1.54	1.54	1.54
ANAL	1.04	1.04	1.04

MV	1.06	1.06	1.06
VOL	1.04	1.04;2	1.04
P	1.27	1.27	1.27
Industry Dummy	Yes	Yes	Yes
Year Dummy	Yes	Yes	Yes
Mean VIF	1.89	1.89	1.89

5.2. Further Analysis and Robustness Checks

This section provides a further test to confirm the prior results in the main analysis and to pinpoint any potential drawbacks about our model. In particular, this study divides the data into concentered, dispersed firms based on their blockholder ownership, and re-examines the relationship between analysts coverage and market liquidity. In fact, this check allows us to determine whether the nature of the relationship between market liquidity and analysts coverage is different between concentrated and dispersed firms. Concentrated (dispersed) firms are defined as firms that have a block ownership (equal to or greater) than the median of block ownership for the entire sample of 64 firms. In Table 5 Panels A and B, the study reports the pooled OLS year and industry dummies results for concentrated and dispersed firms respectively. With respect to analyst following, Table 5 Panel A reveals that the effect of analyst following on proportional bid-ask spread (PBAS) is stronger and significant for concentrated firms than dispersed firms. Moreover, analysts following have a more negative and significant effect on trade turnover by volume ratio (TRVO) and trading volume (VO). Taken together, Table 5 shows that the relationship between analysts coverage and market liquidity is stronger and more significant for concentered firms than dispersed firms. Existing literature has stated that concentrated firms have a higher degree of information asymmetry between insider and outsider investors, which leads to lower market liquidity (Chiang &Venkatesh 1988; Jacoby & Zheng 2010; Kini & Mian 1995; Williams 1986). In contrast, dispersed firms have a large number of shareholders; as a result, more investors will participate in trading. Consequently, this may dilute the relationship between analysts coverage and market liquidity (Jacoby & Zheng 2010; Jiang et al. 2011).

Table 5

Table 5 shows the results of the regressions that run the dependent variables (proportional bid-ask spread (PBAS), trading volume (VO), and the turnover by volume (TRVO) on blockholders (BKO) and analysts coverage (ANAL) and control variables indicated above.. Variable definitions are given in Appendix 1. ***,**,* indicate significance at 1%,5%,10% levels, respectively.

Model	Intercept	ANAL	VOL	MV	P	Adj.R2
Panel A Concentrated Firms						
PBAS	0.15 (1.69)*	0.05 (1.35)	-0.01 (-0.28)	-0.08 (-2.96)	-0.07 (-0.90)	0.80
TRVO	0.35 (1.66)	-0.12 (-2.17)**	0.03 (0.42)	-0.13 (-2.17)**	-0.68 (-6.22)***	0.26
VO	3.98 (15.45)***	-0.12 (-1.57)	0.11 (0.96)	0.07 (1.02)	-0.61 (-3.52)***	0.15
Panel B Dispersed firms						
PBAS	-0.02 (-0.63)	0.01 (1.29)	-0.01 (-1.03)	0.01 (0.42)	-0.09 (-2.88)***	0.93
TRVO	0.29 (2.12)**	-0.04 (-0.90)	0.06 (0.94)	-0.05 (-0.97)	-0.57 (-4.72)***	0.18

VO	3.07 (12.23)***	-0.01 (-0.01)	0.50 (4.15)***	0.38 (3.33)***	0.48 (1.60)	0.26

6. Conclusion:

The association between ownership concentration, analysts coverage and market liquidity consider one of the most area in the MENA countries such as Jordan, where the legal protection of investors is weak. The issue is particularly relevant post to the 2007-2008 financial crisis, where large shareholders and insiders have often been blamed for their greedy behavior against minority shareholders. Theoretical perspectives on the effects of ownership concentration, analysts coverage and market liquidity are far from conclusive, and there is little empirical work on how analysts coverage is related to market liquidity in ASE. Our findings on this issue reveal that companies with more financial analysts coverage have lower market liquidity. In addition, we notice that companies with higher ownership concentration have lower market liquidity. Nevertheless, the effect of analysts coverage is, however, found to be more marked in firms with high levels of ownership concentration.

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Appendixes

Appendix 1: Definition of the Variables

Variable	Description
Bid (PB)	The highest price for a stock in a particular day at which the market maker (i.e. dealer) is willing to buy
Ask (PA)	The lowest price for a stock in a particular day at which the market maker (i.e. dealer) is willing to sell
Proportional Bid-Ask Spread (PBAS)	(PA-PB)/ (PA+PB)/2
Trading Volume (VO)	The total value of shares traded for a stock on a particular day in JD adjusted for capital action (stock split)
Turnover Ratio (TR)	The number of times that shares are traded for a stock on a particular day, calculated by dividing stock trading volume (VO) by the number of shares outstanding (WC05301)
Blockholders (BKO)	The proportional of aggregate blocks of at least 3% of the firm's outstanding shares held by all institutional investors

Analysts Coverage (ANAL)	The number of analyst who follows the firms
Return Volatility (VOLI)	The standard deviation of daily returns
Share Price (P)	The official closing price expressed in pence
Market Value of Equity (MV)	Is measured as the share price on a specific date multiplied by the number of ordinary shares in an issue adjusted for capital action changes (stock split and dividend) (P * WC05301)

International Journal of Commerce and Finance, Vol. 2, Issue 1, 2016, 25-35

COST OF POOR QUALITY IN ENERGY SECTOR

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Abstract:

Companies need to produce their product and services with lower cost in order to survive in the competitive global market. That is why; firstly they need to define the visible and invisible cost of poor quality factors and then need to eliminate these Poor Quality Costs by utilizing the various improvement methodologies. In order to define the poor quality, firstly the project team members need to be assigned between the cross functional departments. Then, the current status needs to be defined step by step by utilizing the various methodologies such as Pareto Analyze etc. As a second step, Root Cause Analyze is performed, and lastly the actions and action plan are defined. All these steps are systematized with some methodologies such as PDAC, Practical Problem Solving (PPS), Six sigma DMAIC & 8D. In this study, it is aimed to decrease the Warranty Cost which is a factor of the Cost of Poor Quality in a factory in the Energy Sector. At the same time, it is aimed to decrease the customer complaints as well as to increase the customer satisfaction. The factors that cause the Warranty Cost have been defined in the Current Status Analyze. Pareto Analyze, Brainstorming, Fish Bone Analyze, Process Mapping, 5 Why Analyze etc. methodologies have been utilized in this study.

Key words: *Key Performance Index (KPI), Pareto analysis, Cost of poor quality (COPQ), Fish Bone, 5 Why*

1. Introduction

At the present century, companies strive to continuously develop and expand their actuality. Consequently, they try to define what their customers expect and how they can meet the customer expectations with a minimum cost. (Anderson,1993) To achieve this; they need to understand their customers properly; need to produce or service in a high quality on time with a low cost (Karaulova et al., 2008). A company that succeeds these requirements have loyal customer who make repeat orders (Jones and Sasser, 1995). Thus, the company guarantees to have great Return On Investment (ROI) (Karaulova and Shevtshenko, 2009).

Today companies need to be reliable and stable at their processes so that they can produce the quality with lower costs. The reliability and stability affect the performance of the company in its sector. For that reason each company needs to describe some metrics; Key Performance Index (KPI) to measure their performance. Thus, these KPI metrics measure the real status of the company at the certain time (Kaganski, 2013). For example Cost of Poor Quality / Revenue which is a KPI metric of a company. This KPI metric includes; scrap cost, rework cost, warranty cost which consumes recourses, time and money (Karaulova et al.,2012).

Therefore, in order to survive in the market, companies should increase the product and service quality as well as decrease the cost by utilizing various quality improvement methodologies. Particularly, in the today's competitive market, Cost of Poor Quality cannot be disregarded within the cost management. However, in the classical system, it was assumed that high quality was met with high cost. However, at the present day, it was understood that this approach was not true. It was accepted that the highest cost of a company is not to produce high quality product or service, it is to produce lower quality product and service (Karabınar and Geyik, 2001).

Efil stated in his book that "the cheapest way of doing a work is to do it true for the first time" (Efil, 1990).

The influence of the poor quality production can be handled in two ways; losses for the companies and also for the customers. Companies are faced with decreasing of the sales, loss of image, decreasing of the competitiveness and loss of the productivity. In point of customers ; the health and safety run a risk, the customers do not satisfy with the product, the customer dissatisfaction is increased, the trust of the customer is decreased, customer complaint and returns are increased (Sale, 2001). As a result, both companies and customers suffer with the poor quality of design, production and sales.

There are two kind of aims of the Quality Systems and Improvement Processes; to increase the customer satisfaction and to decrease the costs which are occurred because of non-conformities. Companies want to increase the customer satisfaction in order to sell more products. This means that they make more profit. The best way of decreasing the costs which are occurred because of non-conformities is to prevent before the cost occurs. If it is not possible, the companies need to define and solve the non-conformities in the sub-process of the production as soon as possible. The cost of the non-conformities increases when the defining of the non-conformities is late. This point of view should not be forgotten; the additional cost of the non-conformed product is because of the poor quality not because of the quality (Özkan, 2001).

In the recent years, while the customer expectations and production systems are continuously changed, the description of the quality costs are same in the last 50 years (Moen,1998).

In the past, companies were thinking differently regarding how their product specifications should be. Product specifications were being designed based on designer's desire or based on how company wants to provide the product to their customers. Henry Ford's quotation is an example for this way of thinking 'Customers can choose a car which color they want with black being conditions'. As can be seen, at the beginning of the 1900, the products were produced just in defined specific conditions, the customer expectation was not being considered. In the other word, companies focused on just conformity of the standards (Hitcher,1993). At the present, this way of thinking was changed as 'conformity to the requirements'. Companies started to produce product or service based on the customer requirements with this new approach. At the recent years, big companies started to respond the latent requirements of their customers. These latent requirements are the requirements that the customers have not thought over it or haven't realized it so far.

According to Bland; the cost of poor quality is equal to the variation between the actual operational cost and operational cost standard (Bland, 1998). Besides, customer dissatisfaction which is occurred due to this poor quality and also the cost which the customer has to bear should be added into the company COPQ.

According to the Sörqvist; the non value added cost should be called as COPQ and COPQ is the best way to increase the profitability and competitive capacity of a company.

In summary; poor quality firstly causes customer dissatisfaction then, loss of sale and loss of image. In actual fact, this is the main difference between the Quality Cost and Cost of Poor Quality. Even though the customer dissatisfaction cost and loss of company image cost called as latent cost are disregarded in the classical Quality Cost System, they are very important in the COPQ System. Because recent studies showed that these latent costs are very important that they can't be ignored. The aim of the COPQ is to provide required data to the management and the employees in order to define the improvement opportunities and to measure the continuous improvements in a company. COPQ system also helps a company to control itself in its own process.

2. Cost of Poor Quality

There are numerous ways to define and measure the Cost of Quality, in this study we use ASQ Cost of quality definition. There are two different variables in the cost of quality equation: Cost of Good Quality (COGQ) and Cost of Poor Quality (COPQ). Essentially, the COGQ relates to costs incurred to assure the quality in products and prevent poor quality. The COPQ is a measurement of the non–conformities (failure) costs incurred in producing the product. This can be understood in the following formula:

$$CoQ = CoGQ + CoPQ \quad (1)$$

Each of these variables has more specific dimensions. The CoPQ accounts for internal and external failure costs, while the CoGQ encompasses appraisal and prevention costs.

The CoPQ quantifies the traditional quality costs companies measure. These include scrap, rework, and returned materials. As these costs emerge from production line issues as well as external services employed by companies, such as the use of the supply-chain, it is important to identify their origin in the calculation. The CoPQ formula can be extended to show Internal Failure Costs (IFC) and External Failure Costs (EFC), giving us the following equation:

$$CoPQ = IFC + EXC, \text{ where:} \quad (2)$$

IFC = Scrap Costs + Rework Costs (3)

EFC = Returned Product Costs + Warranty Costs + Product Recall Costs (4)

Costs incurred internally and externally are caused not only by defects in products, but also by inefficiencies in production and processes. A more in-depth list of factors affecting IFC and EFC is below:

Factors Affecting IFC Factors Affecting EFC

· Weaknesses in quality resolution (CAPA/FMEA)

· Delayed work schedules

· Poor Materials Planning

· Materials shortages

· Equipment downtime

· Materials review

· Reengineering/redesigning products

· Poor service management

· Unresolved customer complaints

· Weak enterprise communication

· Environmental/sustainability nonconformance

· Adverse reputation events

3. Application

This study is carried out in a factory which trades in Energy sector and has 662k$ Cost of Poor Quality. This amount of COPQ was occurred in 2015 which is shown on the below Table 1. In this analyze, COPQ/Revenue which is the Non-Financial Key Performance Index of the company has been analyzed and targeted to decrease COPQ/Revenue from 1, 25% to 0, 68% until the end of the 2016 and to decrease the COPQ in the ratio of 45%, and additionally to decrease the Customer Complaint quantity in the ratio of 83%.

Table 1. Total COPQ, Warranty Cost, COPQ/Revenue, Targets

Total COPQ	662k$
Warranty Cost	300k$
Target Decreasing Ratio from COPQ	45%
Revenue	52.920k$
COPQ/Revenue	1,25%
Target COPQ/Revenue	0,68%

In this study, team members are gathered from Design Department, Planning & Purchasing Department, and Dispatching Department based on the Cross Functional Team requirement. A Cross Functional team should have members from all the functions needed to diagnose the root cause, develop and implement solutions. The methodologies used in this study are Process Mapping, Pareto Analyze, Brainstorming, Fish Bone, 5Why.

In order to analyze the COPQ / Revenue; the analyze steps were divided into four steps which are modeled from Deming's PDCA Cycle. Analyze steps are defined as below:

Define & Measure: Any process, sub process or financial performance metric that is measured and planned for improvement.

Analyze: This is a step where, the performance metric that needs to be improved is analyzed.

Improve : Actions that are necessary to create the change as per analysis completed in the earlier step.

Sustain: This is where process changes are effected and standardized to create a sustained performance after confirmation of achievement of the goal.

The analyze steps; Define & Measure, Analyze, Improve & Sustain are determined in Table 2 as Project Plan.

Table 2. Project Plan

Define & Measure:		
Project set up (team members), data collection: Define opportunity. Investigate to understand the current state in detail.		
	Action	Target Date
1	Analyze Current Warranty Cost	Q1/2016
	Classification of the Cost Type & Customer Complaints	
	Pareto Analyses; Define the highest costs & customer complaints	
2	Process Mapping: Review the Process flow to see the non-conformities occurred in the flow.	Q1/2016
Analyze :		
Analyzing the data: Identify and confirm root causes of the problem & Develop, pilot, and implement solutions that eliminate root causes.		
	Action	Target Date
1	Brainstorming Methodology	Q2/2016
	Fish Bone (Ishkawa) Methodology	
	5 Why Methodology for defining the Root Cause	
2	Solutions defined in order to eliminate the Root Causes.	Q2/2016
Improve:		
Developing & Implementing Long Term Solutions		
	Action	Target Date
1	Actions planned with smart targets: When & Who?	Q2/2016
Sustain:		
New work methods and processes standardized. Issue closed		
	Action	Target Date
1	Checking & standardization of the actions taken.	Q4/2016

3.1. Define & Measure:

First of all, Warranty Cost has been calculated within the Cost of Poor Quality. Afterwards, Warranty Cost has been classified based on the complaint type and thus, Customer Return Quantity and Customer Return Cost which come from the field have been obtained. Analyze has been resulted as below:

- There has been 662,47k$ Cost of Poor Quality which was occurred because of the non-conformity activities in the company during 2015. 45% of this cost is because of the Warranty complaints came from the customer return from the field as shown in the Table 1.
- The Warranty Cost classified based on complaint type has been analyzed by utilizing Pareto Analyze given In Figure 1. As can be seen from the below graphic, the most important problem is the missing delivery to the latest customers which is occurred 83% of the Customer complaints. Then technical failure comes from behind, Service support problems and damage.

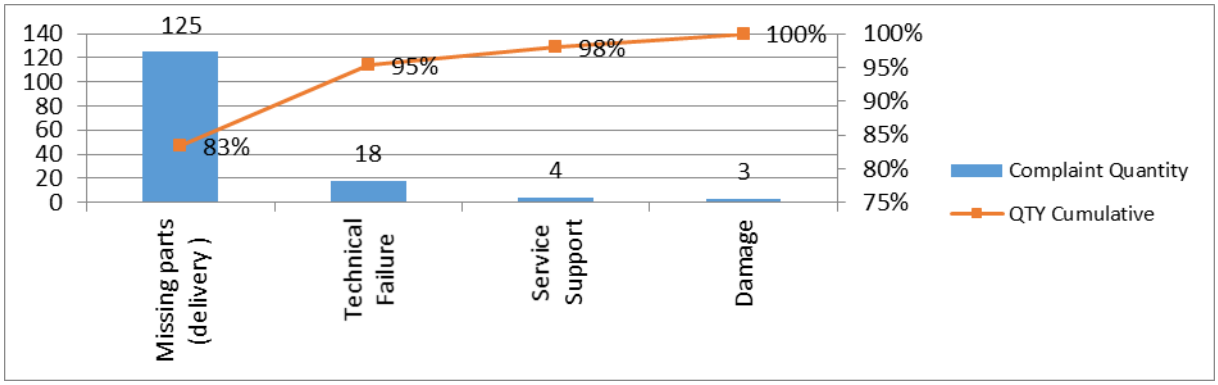

Figure 1. Pareto Analyze for the Customer Complaint Quantity

When the analysis is proceeded based on the cost, as can be seen from the Figure 2, missing part/delivery to customers has been occurred the 67% of the Warranty Cost.

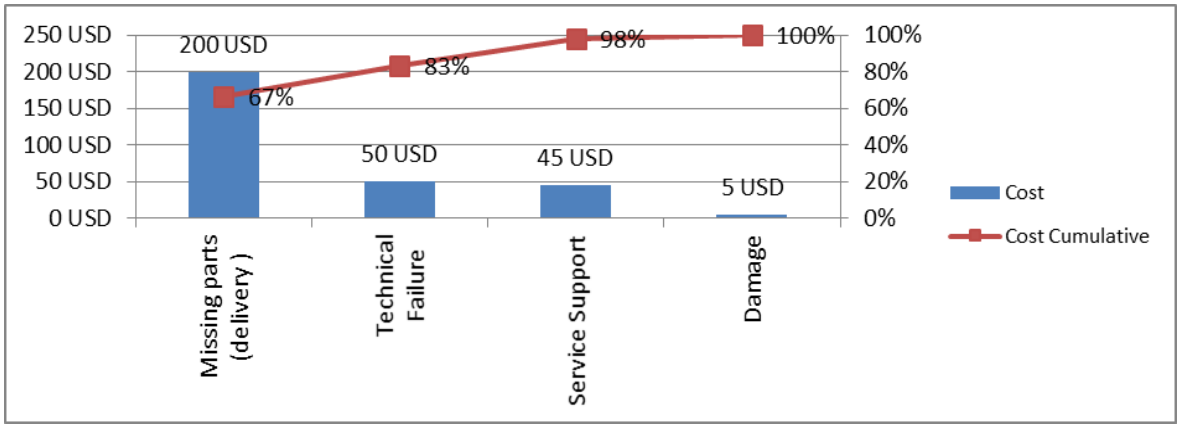

Figure 2. Pareto Analyze for the Warranty Cost Distribution

Secondly, in order to define the current status of the issue, an as-is Flowchart has been utilized to understand how the process currently flows. It will be helpful to compare this as-is Flowchart with a diagram.

In the as-is Flowchart diagram, the process steps of the Design and Dispatching Department were reviewed because these departments are directly responsible from the Missing Delivery Complaints. In Figure 3, Process flow has been analyzed step by step. All the traces which can cause the Missing Delivery were noted down on the

Process Flow in order not to overlook the details. This will help the team members to find the Root Cause. This method should not be omitted during Current Status Analyze.

Based on above explanation, all the steps summarized and charted as below:

Design Department prepares the Bill of Material (BOM). After preparing BOM, Material Resource Planning (MRP) is run. Then, Purchase Order is released to the Planning Department and Project Data Table is prepared by Design Engineer. After the preparation of the Project Data Table, Accessory Packing List is determined by the Design Engineer. Accessory Packing List cannot be transferred automatically from SAP BOM so it is prepared manually. Then, Packing List is sent to Dispatching Department just before the shipment and accordingly accessories are prepared by Dispatching Department. Finally packing and loading steps are completed.

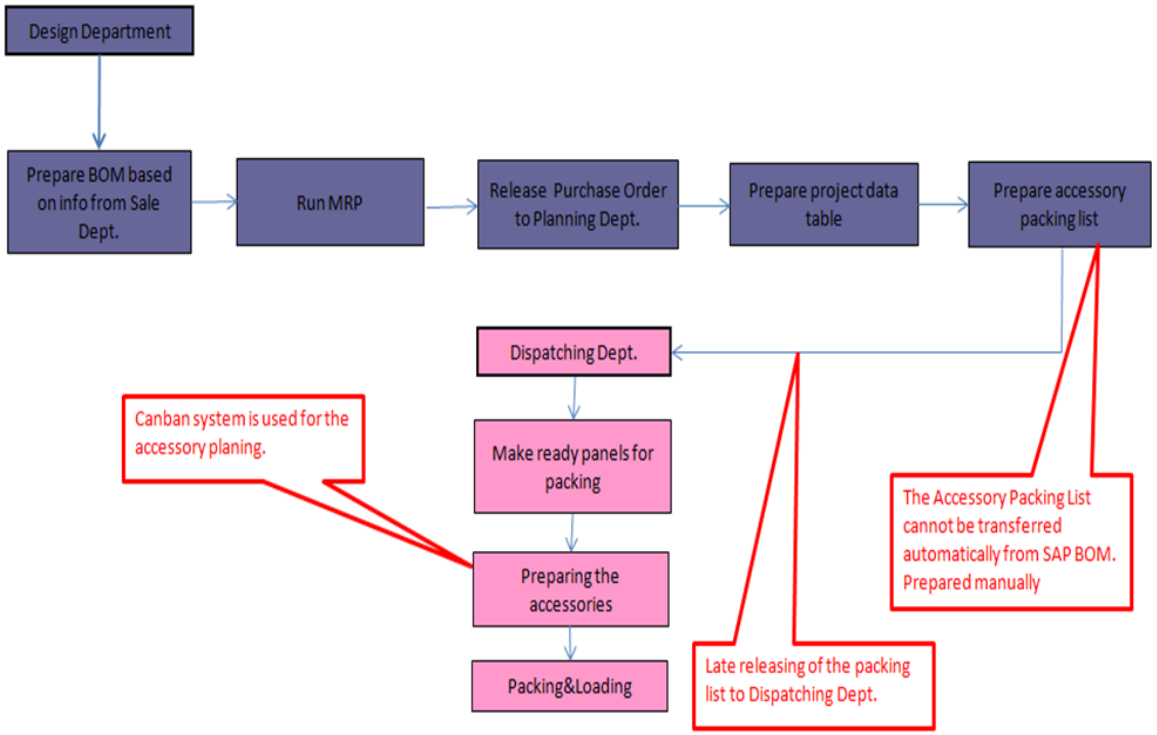

Figure 3. Process Flow Chart for Missing Delivery Issue

3.2. Analyze

At the Analyze stage of this study, Fish Bone Diagram has been utilized. Fish Bone Diagram is a tool that helps to identify, sort, and display possible causes of a specific problem or quality characteristic. It graphically illustrates the relationship between a given outcome and all the factors that influence the outcome. This type of diagram is sometimes called an "Ishikawa diagram" because it was invented by Kaoru Ishikawa, or a "fishbone diagram" because of the way it looks or Cause & Effect Diagram.

A Cause-and-Effect Diagram is a tool that is useful for identifying and organizing the known or possible causes of quality, or the lack of it. The structure provided by the diagram helps team members think in a very systematic way.

In this analyze, as defined above in Figure 4, all possible main causes of the issue have been determined by the Cross Functional Team by utilizing Brainstorming Methodology and possible causes were placed into Fish Bone Diagram. The main causes which affect the Missing Delivery Issue; Policies, Design, Procedures, People,

Production&Planning ve Plant have been determined and all the possible sub-causes have been defined and have been placed under the main causes.

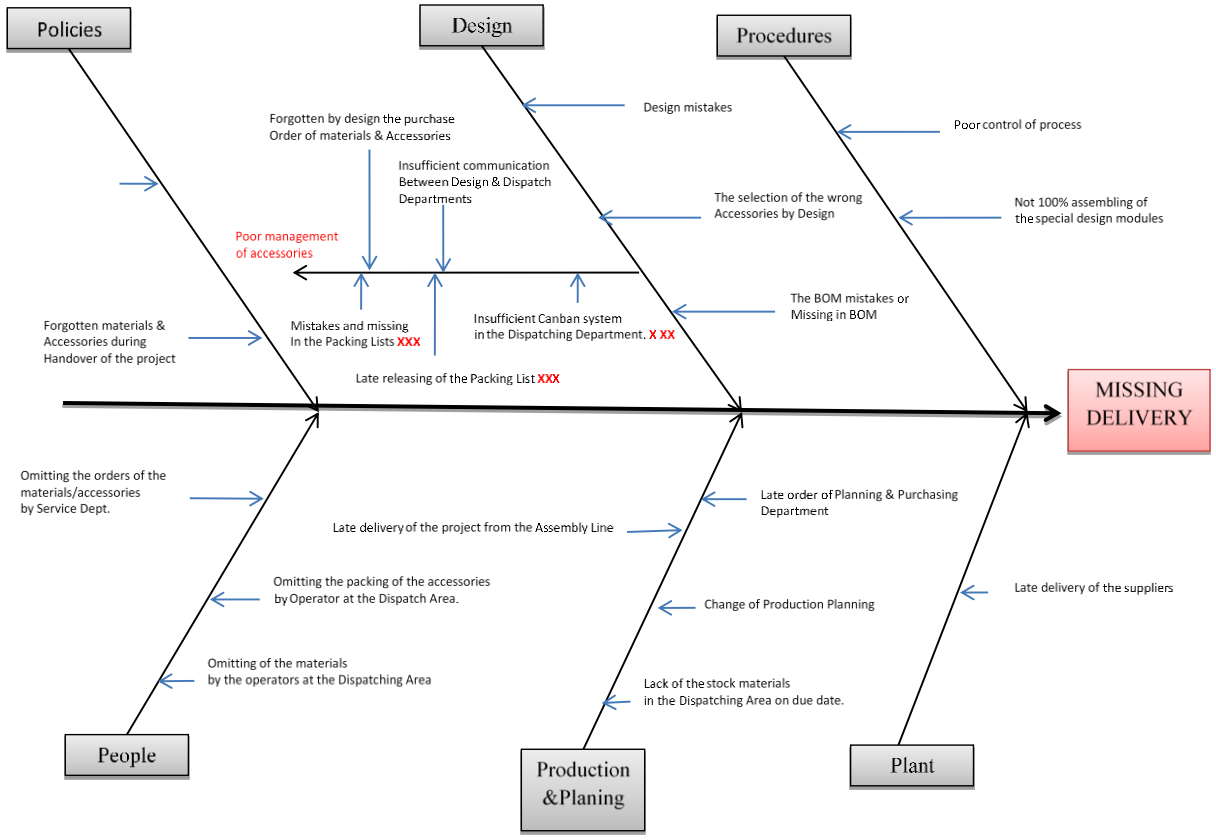

Figure 4. Cause-and-Effect Diagram

After placing the all possible sub-causes, most likely root causes of the issue should be found by the team members by utilizing the Process Flow Chart and their experiences. For the Root Causes of the issue, 5 Why Analyse has been used in this study. 5 Why Analyze is a method in order to reach the Root Cause of the issue. In this method, the team members always ask 'Why this happens? 'until they can't reply the question 'Why'. When they cannot proceed with the question why, that means they reach the Root Cause of the issue.

The team members of the study have reached Root Causes of the Missing Delivery to Customers as shown in the Table 3.

Table 3. Five Why Analyze

Investigation - 5 why analysis	1	Late releasing of the Packing List	2	Mistakes and missings in the Packing Lists	3	Insufficient Canban system at the Dispatching Dept.
	WHY?	It is not in the first priority of the work order for Design Engineer.	WHY?	The packing list is created manually by Design Engineer	WHY?	Planning Method is not suitable for Canban System.
	WHY?		WHY?	The Draft Packing List cannot be transferred automatically from SAP BOM	WHY?	
	WHY?		WHY?		WHY?	
	WHY?		WHY?		WHY?	
	WHY?		WHY?		WHY?	
Root cause		It is not in the first priority of the work order for Design Engineer.		The Draft Packing List cannot be transferred automatically from SAP BOM		Planning Method is not suitable for Canban System.

3.3. Improve

After defining of the Root Causes, the team members should define actions to eliminate the Root Causes. These actions need to be planned by smart targets such as 'What's the target, who is the responsible and when will it be completed '.

Based on the above explanation, the countermeasures have been defined for the each root causes and shown in the Table 4. The actions for first root cause are that the Packing List of the project will be determined in Design meetings and the preparation of the packing list will be reminded by mail to the related Design Engineer by the Dispatching Engineer when the project Work Order Released and project starts to be produced. The actions for second Root Cause are the accessories which can be assembled during production will be assembled at the assembly line and these accessories will be removed from accessory list and the accessories will be obtained automatically from SAP BOM, it will not be prepared manually. The actions for the third Root Cause are MRP system will be used for the accessories and Canban System will not be used.

Table 4. Root Causes and Actions

Root Cause and Actions	
Root Cause	1. It is not the first priority of the work order for Design Engineer.
Actions	1. The packing list of the project will be determined in Design Meeting. Who : Design Engineer / When : In the first coming project. 2. The preparation of the packing list will be reminded by mail to the related Design Engineer by the Dispatching Engineer when the project Work Order Released and project starts to be produced in the production. Who : Dispatching Engineer / When : In the first coming project
Root Cause	2. The draft packing list cannot be transferred automatically from SAP BOM.
Actions	1. The accessories which can be assembled during production will be assembled at the assembly line and these accessories will be removed from accessory list. For instance: bars, screws, washers, gas ducts will be assembled during the production. These parts will not be considered as accessories. Who : Production Department & Design Department / When : Q3 /2016 2. The accessories will be obtained automatically from SAP BOM, it will not be prepared manually. Who : Design Department with IT Department / When : Q3/2016
Root Cause	Production planning method (Canban System) is not suitable for the planning of the accessories.
Actions	MRP system will be used for the accessories and Canban system will not be used. Who : Design Department & Dispatching Department / When : Q3 /2016

3.4. Standardization

When all actions are taken, it should be concluded as dramatic improvement in the customer complaints and Warranty Cost. This can be observed by measuring the KPI. If the improvement is clearly related to the actions, we need to sustain the gains by standardization of these actions taken. It shall be done by changing work instructions, method provisions, check lists, sigma cards etc. This is very Critical Step and if not done immediately then the problems will keep repeating. This shall be supported by appropriate training as necessary.

As can be seen from below actions, some standardization has been applied in this study in order to keep the latest status.

- SAP system was revised & Accessories are planned in the system automatically.
- Accessory list was revised & some parts; bars, screws, washers, gas ducts are assembled in the Production Line, not in the Dispatching Area.
- MRP system is used for the planning of the accessories.

At the beginning of the following year (2017), the KPI metric ; COPQ / Revenue, Customer Complaint rate, Warranty Cost will be measured and the achievement of the study will be observed by the company management.

4. Conclusion:

In recent days, with regard to the companies, while the Quality is a strategical concept, it is one of the main factors which defines the choices with regard to the consumers. When the Quality is defined with the traditional approaches, it is handled as conformity of the standards or conformity of the purpose. However, today the Quality concept has gained a new dimension which does not fit into these definitions. Quality concept has been rescued from the narrow definition case and has been placed into the flexible and dynamic case. Based on this flexibility and multidimensionality of the Quality, numerous quality definitions have been defined related to the Quality concept and each definition has been used in different places. As a result, with the most common definition, Quality can be defined as a strategic management tool which is used for satisfaction of the customer expectation, improvement of the operational performances, decreasing the costs.

Productivity is an indispensable item for the companies. The companies which work efficiently, achieve minimization of the costs and accordingly get profitable results. The companies which apply the Six Sigma Approach, define the non-value added actions, remove the unnecessary actions from the company processes and thus, they provide profitable works with the minimization of the costs.

In this paper, Warranty cost which is the factor of the COPQ, has been analyzed by utilizing some methodologies such as; Pareto Analyze, Process Mapping, Brainstorming, Fishbone Analyze and 5 Why Analyze. Then it has been targeted decreasing of the Warranty Costs with the actions taken for the warranty root causes. In the Current Status Analyze stage, COPQ / Revenue which is the Non-Financial Key Performance Index (KPI) is determined as 1,25% . Then this KPI has been targeted to decrease until the 0,68%.

During the Current Status Analyze stage, Missing Delivery to Customer issue which is the 67% of the Warranty cost has been emphasized by utilizing the Pareto Analysis methodology. At the same time, it is aimed to decrease the customer complaint in ratio of 83% and accordingly to increase the customer satisfaction. After the Current Status Analyze, Root Cause Analyze has been performed. In the Root Cause Analyze stage, the main causes which affect the Missing Delivery Issue; Policies, Design, Procedures, People, Production & Planning and Plant have been determined and all the possible sub-causes have been defined by utilizing the Brainstorming methodology and these sub-causes have been placed under the main causes. The direct causes which were chosen by the team members within the possible causes are determined as Mistakes & Missings in the Packing List, Insufficient Canban System at the Dispatching Department, Late releasing of the Packing List. Then, the Root Causes of the Missing Delivery have been determined as Priority of the Design Engineer, Poor SAP system for the Bill of Material, Insufficient Planning by utilizing the 5 Why Analyze methodology. Based on the root causes defined some actions have been taken such as; Packing List needs to be defined in the Design meeting and when the work order of the project released and the project is started to be produced in Production Line, Design Engineers should be informed regarding the packing list of the project, Accessory Packing List has been revised and some accessory parts have been removed from the Accessory Packing List, Accessory parts needs to be taken from SAP BOM module automatically and utilizing from MRP System instead of Canban System for the planning.

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International Journal of Commerce and Finance, Vol. 2, Issue 1, 2016, 37-53

FORECASTING STOCK MARKET VOLITILITY- EVIDENCE FROM MUSCAT SECURITY MARKET USING GARCH MODELS

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Abstract:

Engle (1982) introduced the autoregressive conditionally heteroskedastic model for quantifying the conditional volatility and by Boollerslev (1986), Engle, Lilien and Robins (1987) and Glosten, Jaganathan and Runkle (1993) extended the class asymmetric model. Amongst many others, Bollerslev, Chou and Kroner (1992) or (1994) are considered to be the précis of ARCH family models. In this direction the paper forecasts the stock market volatility of four actively trading indices from Muscat security market by using daily observations of indices over the period of January 2001 to November 2015 using GARCH(1,1), EGARCH(1,1) and TGARCH (1,1) models. The study reveals the positive relationship between risk and return. The analysis exhibits that the volatility shocks are quite persistent. Further the asymmetric GARCH models find a significance evidence of asymmetry in stock returns. The study discloses that the volatility is highly persistent and there is asymmetrical relationship between return shocks and volatility adjustments and the leverage effect is found across all flour indices. Hence the investors are advised to formulate investment strategies by analyzing recent and historical news and forecast the future market movement while selecting portfolio for efficient management of financial risks to reap benefit in the stock market.

Keywords: *GARCH, EGARCH, TGARCH, Stock market volatility*

1. Introduction

The stock and index returns are subject to both internal and external shocks that sharply raise the volatility. Stock volatility is simply defined as a conditional variance, or standard deviation of stock returns that is not directly observable. The primary function of the government, companies, day traders, short sellers and institutional investors is to understand the characteristics of the movements between return and volatility. Hence, the volatility forecasting become the central part of formulating investment strategies. It is approached with two perspectives, such as the variance is constant over a period of time and the other emphasizes that the variance is getting varied over time. There are few facts indentified in high frequency time series data such as fat tail, clustering volatility, leverage effect, long memory and co movement in volatility. Fama (1963, 1965) and Mandelbrot (1963) were the pioneer studies found the existence of fat tail in the financial time series data and reported that the kurtosis was greater than standardized fourth movement of normal distribution 3. Secondly, the data indicates the shock persistence. The high frequency financial time series data is assumed to possess the clustering volatility which large movements followed by further large movements. It could be detected through the existence of significant correlation at extended lag length in correlogram and corresponding Box-Ljung statistics. Thirdly, the negative correlation between the price movement and the volatility which is called as leverage effect. It is a significant character of the time series data. It was first suggested by Black (1976). He argued that the measured effect of stock price changes on volatility was too large to be explained solely by leverage effect. Further empirical evidence on leverage effect can be found in Nelson (1991), Gallant, Rossi and Tauchen (1992, 1993), Campel and Kyle (1993) and Engle and Ng (1993). Fourthly, the volatility is highly persistent and there is evidence of near unit root behavior in the conditional variance process. This observation led to two propositions for modeling persistence, the unit root or the long memory process. The autoregressive conditional heteroscedasticity (ARCH) and stochastic volatility (SV) use the later idea for modeling persistence. Fifthly, it is observed a big movement between different variables in financial time series across different markets. It suggests the importance of multivariate models in modelling cross correlations in different markets. These observations about volatility led many researchers to focus on the cause of these stylized facts.According to Liu and Morley (2009) the standard deviation of the returns over the future period should be forecasted accurately to enhance the asset's performance. Volatility forecasting is an essential part in most finance decisions be it asset

allocation, derivative pricing or risk management. Hence the financial market volatility has become a central issue to the theory and practice of asset pricing, asset allocation, and risk management. This recognition has initiated an extensive research program into the distributional and dynamic properties of stock market volatility. Still, the unique model has not yet been proposed to estimate the time varying variance in the future return but several models are being used by researchers and practitioners.

2. The Notification Procedure Economic Competitive Mechanism of Oman

Sultanate of Oman is one of the prominent economies in the Gulf Cooperation Council (GCC) retaining 40% of world oil reserves with 3.19 million people constituting 23.30% rural and 76.70% urban population. The world's 64th largest economy had achieved $80.57 billion and $81.79 billion gross domestic production during 2013 and 2014 with average of $16.76 billion between 1960-2014. The estimated foreign current reserve is $25 billion and debt GDP ratio is well maintained at 4% level. Such a robust economy is facing budget crisis due to sustained low oil price which dropped around 40% from the peak last year, since 31st July, 2014 when the oil price declined less than $100 per barrel, and went further down to less than $50 on 6thJanuary,2015 eventually it touched record low of $38.33 on 24th August,2015. The conservative Oman economy is generating 83% revenue from hydrocarbon sector. The nation's budget massively depends around 79% on oil revenues and 21% on non-oil revenue. The overall estimated revenue for 2015 is 11.6 billion OMR (Oil revenue 9.16 billion OMR and non-oil revenue 2.4 billion OMR)which is 2.5 billion OMR lesser than the estimated public spending of 14.1 billion OMR. The cascade effect of oil price drop has an impact on the performance of industries in the different sectors in Oman. In these crucial circumstances, the Oman government is in the position to implement certain tough financial and investment decisions to manage the current financial turmoil. Firstly, cutting the, nation's largest cash out flow, current expenditure (9.6 billion OMR)to the possible extent. Secondly, financing the project and infrastructure investment (3.2 billion OMR) through privatization and issuing government bonds, thirdly, enhancing the growth and performance of non-hydrocarbon industries to contribute incremental revenue during the crisis. Apart from these Oman has strong fundamental strength including the stable macro economy, the efficient infrastructure, the economic and investment legislations, the solid growth of non-oil sectors, the financial stability as represented by the safe public finances, banking system, the monetary policy and the stable local currency make the Sultanate capable of confronting these challenges with great confidence.

3. About Oman Capital Market

The economic growth and job creation are considered to be the primary objectives of any nation which require a huge long term investments in the capital intensive assets such as revenue generating infrastructure, factories and equipment, new housing and commercial buildings, and research and development to expand the productive capacity. There exists a strong positive correlation between the growth of economy and capital market. Capital markets are the significant source of long term and short term capital where the firms mobilize funds from public for the existing and new projects thorough issuance of new securities such as shares, bonds, debentures and other money market instruments. The better allocation of low cost capital enhances the productivity and financial returns of the firms. Capital market regulations emphasize the firms to ensure an improved business and management models to achieve the financial performance and corporate governance. Oman capital market is an emerging market performing a vital role in pooling capital for the projects and investments. It is one of the well-known markets in the GCC region. At present there are 119 companies listed in Muscat Security Market (MSM) Shariah Index which are grouped under financial sector (36-Compnies), service sector (36-companies) and industrial sector (47-companies). The Omani companies and government raised 1.285 billion OMR in 2013 which is higher than the credits provided by commercial banks in Oman. The total value of the investors in Muscat security market is 14.1 billion OMR which is approximately equal to the total deposits of the commercial banks. Thus capital market is highly efficient mechanism to transmit funds from investors, savers, and the government companies needing capital. The capital market is designed for this purpose.

4. Literature Review

Qamruzzaman(2015) examined a wide variety of popular volatility models for Chittagong stock return index from 04 January 2004 to14 September 2014 and found that there has been empirical evidence of volatility clustering. The study confirmed that these five models GARCH-z, EGARCH-z, IGARCH-z, GJR-GARCH-z and EGARCH-can capture the main characteristics of Chittagong stock exchange (CSE).

Qiang Zhang (2015) explored the influence of the global financial crisis on the volatility spillover between the Mainland China and Hong Kong stock markets from January 04, 2002 to December 31, 2013. The results indicated that while there is no volatility spillover in the pre-crisis period, strong bi-directional volatility spillover exists in the crisis period.

Prashant Joshi (2014) used three different models: GARCH (1,1), EGARCH(1,1) and GJR-GARCH(1,1) to forecast daily volatility of Sensex of Bombay Stock Exchange of India from January 1, 2010 to July 4, 2014 and confirmed the persistence of volatility, mean reverting behavior and volatility clustering and the presence of leverage effect.

Neha Saini (2014) examined and compared the forecasting ability of Autoregressive Moving Average (ARMA) and Stochastic Volatility models applied in the context of Indian stock market using daily values of Sensex from Bombay Stock Exchange (BSE). The results of the study confirmed that the volatility forecasting capabilities of both the models.

Potharla Srikanth (2014) modeled the asymmetric nature of volatility by applying two popularly used asymmetric GARCH models i.e., GJR-GARH model and PGARCH model in. BSE-Sensex between 1st July, 1997 to 30th march, 2013. The results revealed that the presence of leverage effect in Indian stock market and it also confirmed the effect of periodic cycles on the conditional volatility in the market

Amitabh Joshi (2014) tried to analyze the volatility of BSE Small cap index using 3 years data from 1st July 2011 to 1st July 2013 suggested that ARCH and GARCH terms are significant.

Mohandass (2013) attempted to study the best fit volatility model using Bombay stock exchange daily sectoral indices for the period of January, 2001 to June, 2012. The findings concluded that the non-linear model is fit to model the volatility of the return series and recommended GARCH (1,1) model is the best one.

Naliniprava(2013) forecasted the stock market volatility of six emerging countries by using daily observations of indices over the period of January 1999 to May 2010 by using ARCH, GARCH, GARCH-M, EGARCH and TGARCH models. The study revealed that the positive relationship between stock return and risk only in Brazilian stock market. The analysis exhibits that the volatility shocks are quite persistent in all country's stock market. Further the asymmetric GARCH models find a significant evidence of asymmetry in stock returns in all six country's stock markets. This study confirmed the presence of leverage effect in the returns series.

Fereshteh , Hossein (2013) applied GARCH (1-1), and GARCH (2-2) to investigate the volatility using daily index from 2006 to 2010 for selected pharmaceutical group, vehicle group and oil industry respectively. The result showed volatilities feedback in pharmaceutical and oil industry. Positive effect of volatilities reign on output in pharmaceutical group, when this effect was negative in oil group. Also it was not confirmed in vehicle group.

Yung-Shi Liau 2013 studied the stock index returns from seven Asian markets to test asymmetric volatility during Asian financial crisis. The empirical results showed that both volatility components have displayed an increasing sensitivity to bad news after the crisis, especially the transitory part.

Ming Jing Yang 2012 explored the predictive power of the volatility index (VIX) in Taiwan market from December 2006 to March 2010. The results shown that the predictive power of the models is improved by 88% in explaining the future volatility of stock markets..

Rakesh Gupta 2012 aimed to forecast the volatility of stock markets belonging to the five founder members of the Association of South-East Asian Nations, referred to as the ASEAN-5 by using Asymmetric-PARCH (APARCH) models with two different distributions (Student-t and GED). The result showed that APARCH models with t-distribution usually perform better.

Praveen (2011) investigated BSE SENSEX, BSE 100, BSE 200, BSE 500, CNX NIFTY, CNX 100, CNX 200 and CNX 500 by employing ARCH/GARCH time series models to examine the volatility in the Indian financial market during 2000-14. The study concluded that extreme volatility during the crisis period has affected the volatility in the Indian financial market for a long duration.

Srinivasan1(2010) attempted to forecast the volatility (conditional variance) of the SENSEX Index returns using daily data, covering a period from 1st January 1996 to 29th January 2010. The result showed that the symmetric GARCH model do perform better in forecasting conditional variance of the SENSEX Index return rather than the asymmetric GARCH models.

Jibendu Kumar (2010) applied different methods i.e. GARCH, EGARCH, GJR- GARCH, IGARCH & ANN for calculating the volatilities of Indian stock markets using fourteen years of data of BSE Sensex & NSE Nifty. The result showed that, there is no difference in the volatilities of Sensex, & Nifty estimated under the GARCH, EGARCH, GJR GARCH, IGARCH & ANN models.

Amit Kumar (2009) investigated to forecast the volatility of Nifty and Sensex with the help from Autoregressive Conditional Heteroskedastic models (ARCH). The study found that EGARCH method emerged as the best forecasting tool available, among others.

Dima Alberg and Haim Shalit (2008) analyzed the mean return and conditional variance of Tel Aviv Stock Exchange (TASE) indicesusing various GARCH models. The results showed that the asymmetric GARCH model with fat-tailed densities improves overall estimation for measuring conditional variance. The EGARCH model using a skewed Student-t distribution is the most successful for forecasting TASE indices.

Floros, Christos (2008) examined the use of GARCH-type models for modelling volatility and explaining financial market risk using daily data from Egypt (CMA General Index) and Israel (TASE-100 index). The study found the strong evidence that daily returns can be characterized by the above models and concluded that increased risk will not necessarily lead to a rise in the returns.

Banerjee, A. and Sarkar, S. (2006), predicted the volatility using five-minute intervals daily return to model the volatility of a very popular stock market in India, called the National Stock Exchange. This result emphasized that the Indian stock market experiences volatility clustering and hence GARCH-type models predict the market volatility better than simple volatility models, like historical average, moving average etc. It is also observed that the asymmetric GARCH models provide better fit than the symmetric GARCH model, confirming the presence of leverage effect.

Kumar.S (2006) attempted to evaluate the ability of ten different statistical and econometric volatility forecasting models to the context of Indian stock and forex markets. The findings confirmed that G.-I RCH 11. I, and EW.1 L4 methods will lead to Netter volatility forecasts in the Indian stock market and G.4RCH (5, I) will achieve the same in the forex market.

Glen.R (2005) investigated the role of trading volume and improving volatility forecasts produced by ARCH and option models and combinations of models. The findings revealed an important switching role for trading volume between a volatility forecast that reflects relatively stale information (the historical ARCH estimate) and the option-implied forward-looking estimate.

Hock Guan Ng (2004) estimated the asymmetric volatility of daily returns in Standard and Poor's 500 Composite Index and the Nikkei 225 Index in the presence of extreme observations, or significant spikes in the volatility of daily returns. The study concluded that both the GARCH(1,1) and GJR(1,1) models show superior forecasting performance to the Risk Metrics model. In choosing between the two models, however, superiority in forecasting performance depends on the data set used.

Philip (1996) studied the predictive power of GARCH model and two of its nonlinear modification to forecast weekly stock market volatility for the German stock market, Netherland, Spain, Italy and Sweden for 9 years from 1986 to 1994. The study found that the QGARCH model is the best when the estimation sample does not contain extreme observations such as the 1987 stock market crash.

Glosten, L. (1993) adopted the modified GARCH-M model, and proved that monthly conditional volatility may not be as persistent as was thought. Positive unanticipated returns appear to result in a downward revision of the conditional volatility whereas negative unanticipated returns result in an upward revision of conditional volatility.

Engle, R. and Ng, V. K. (1993), attempted to estimate news impact on volatility using daily return from Japan stock market. The result suggested that the Glosten, Jagannathan and Runkle (GJR) is the best parametric model.

Nelson (1991) analyzed the daily returns of CRSP value weighted index from 1962 to 1987 to propose a new ARCH model to overcome the three major drawbacks of GARCH model. The findings contribute a new class of ARCH models that does not suffer from the drawbacks of GARCH model allowing the same degree of simplicity and flexibility in representing conditional variance as ARIMA and related models have allowed in representing conditional mean.

Akgiray, V. (1989) presented a new evidence about the time series behavior of stock price using 6,030 daily returns from Center for Research in Security Prices (CRSP) from January 1963 to December 1986. The findings observed the second order dependence of the daily stock returns which could not be modeled with linear white noise process. Therefore study concluded that the GARCH models are superior in forecasting volatility.

Bollerslev (1986) introduced a new, more general class of processes, GARCH (Generalized Autoregressive Conditional Heteroskedastic allowing flexible lag structure. The extension of the ARCH process to the GARCH process bears much resemblance to the extension of the standard time series AR process to the general ARMA process and, permits a more parsimonious description in many situations.

Engle, R. F. (1982) introduced a new class of stochastic process called autoregressive conditional heteroscedasticity to generalize the implausible assumptions of the traditional econometric models by estimating the means and variances of inflation in the UK. The study found significant ARCH effect and substantial volatility increase during seventies.

5. Research Methodology

The study has chosen four actively performing indices from Muscat security market such as MSM-30 Index, Financial Index, Service Index and Industrial Index. The required time series daily closing prices of all four indices have been collected from January 2001 to November 2015 from www.msm.com. The return is calculated as the continuously compound return using the closing price index.

$$R_t = \ln(P_t / P_{t-1}) * 100 ------- (1)$$

Where R_t is the return in the period t, P_t is the daily closing price at a particular time t; P_{t-1} is the closing price for the preceding period and $\ln$ is the natural logarithm. The graphs 1 and 2 are showing the prices and returns trend of the sample indices for the study period.

Table: 1: Descriptive Statistics of Daily Index Return

Measures	MSM: 30 INDEX	MSM FINANCIAL INDEX	MSM INDUSTRIAL INDEX	MSM SERVICE INDEX
Mean	0.000302	0.000276	0.000482	0.000295
Median	0.000441	0.000263	0.000156	0.000256
Maximum	0.080388	0.078439	0.093876	0.08765
Minimum	-0.08699	-0.09486	-0.09172	-0.08819
Std. Dev.	0.010177	0.012228	0.011744	0.009249
Skewness	-0.90002	-0.65346	-0.59499	-1.17416

Kurtosis	19.22587	14.32754	15.77624	24.70162
Jarque-Bera	37323.78	18208.38	23057.63	66726.37
Probability	0	0	0	0

Source: Data Analysis

Descriptive statistics of the selected indices mean returns, standard deviations; skewness, kurtosis, and Jarque Berra test are reported in the above Table 1.The highest mean returns are given by industrial index of 0.05%with the standard deviation of 1.17%. The other three indices MSM-30, financial index and service index gained 0.03% return with the standard deviation of 1, 02%,1.22% and .92%. The residuals of the time series data for all indices are found non normality having rejected the null hypothesis in Jarque-Bera test. The time series data is required to possess certain characteristic to apply the ARCH family models. Therefore, the data is involved for detecting the presence of stationarity and clustering volatility, using unit root ADF and PP test and ARCH test.

Augmented Dickey – Fuller Test (ADF)

The time series data is assumed to be non-stationary. To ensure the existence of stationary relationship, the following econometric models like Augmneted Dickey Fuller (ADF) and Philps –Perron (PP) tests are employed in the study.

$$\Delta\lambda_t = \alpha_0 + \alpha_2 t + \sum_{i=l}^{k} \beta\Delta\lambda_{t-1} + \varepsilon_t \text{ ---------(2)}$$

Where, λ_t denotes the daily price of the individual stock at time "t" and "β_1" is the coefficient to be estimated, k is the number of lagged terms, t is the trend term, α_2 is the estimated coefficient for the trend, α_0 is the constant, and ε is white noise. MacKinnon's critical values are used in order to determine the significance of the test statistic.

Phillips-Perron (PP) Test

Phillips and Perron (1988) suggest an alternative (nonparametric) method of controlling of serial correlation when testing for a unit root. Phillips and Perron use nonparametric statistical methods to take care of the serial correlation in the error terms without adding lagged difference terms. Since the asymptotic distribution of the PP test is the same as the ADF test statistic. The PP method estimates the non-augmented DF test equation and modifies the t-ratio of the coefficient so that serial correlation does not affect the asymptotic distribution of test statistic. The advantage of Phillips and Perron test is that it is free from parametric errors. PP test allows the disturbances to be weakly dependent and heterogeneously distributed. The PP test is based on the following statistic.[1]

$$\prod_{\alpha} = t_{\alpha}\left(\frac{\gamma_0}{f_0}\right)^{1/2} - T\frac{(f_{0-}\gamma_0)\varepsilon_t(\alpha)}{2 f_0^{1/2}\varepsilon} \text{ ----------(3)}$$

Where α is the estimate, and t_{α} is the ratio of α and $\varepsilon_t(\alpha)$ is coefficient standard error and ε is the standard error of the test regression. In addition y_0 is a consistent estimate of the error variance. The remaining term f_0 is estimator of the residual spectrum at frequency zero.

The present study employs the Augmented Dickey Fuller test and PP test to examine whether the time series properties are stationary or not using level series with trend and intercept. The results show that the test statistics of all four indices is higher than the critical value at 5% level. Hence the null hypotheses of ADF and PP tests are rejected and concluded that the return series data are stationary at level.

[1]Tripathy, Forecasting Stock Market Volatility: Evidence From Six Emerging Markets, Journal of International Business and Economy: 69-93

Table: 2: ADF and PP Tests for Unit Root

	Augmented Dickey Fuller test		Philips- Perron Test	
INNDICES NAME	TEST STATISTICS	CRITICAL VALUE 5%	TEST STATISTICS	CRITICAL VALUE 5%
MSM 30 INDEX	-44.54387	-3.411143	-44.13303	-3.411143
FINANCIAL INDEX	-45.22041	-3.411143	-44.76095	-3.411143
INDUSTRIAL INDEX	-44.00809	-3.411143	-44.11518	-3.411143
SERVICE INDEX	-47.47459	-3.411143	-47.46145	-3.411143

Source: Data Analysis

Note: Null Hypothesis is rejected at the level of 5% significance

After ensuring the non-existence of unit root in time series data, it should be further investigated whether the data is found with clustering volatility and ARCH effect. The clustering volatility means Periods of low volatility tend to be followed by periods of low volatility for a prolonged period. Again, periods of high volatility is followed by periods of high volatility for a prolonged period. When clustering volatility and ARCH effect are found in the time series data, then the forecasting can be estimated using ARCH family models. In this regard, the trend of graph 3, 4, 5 and 6 shown in Appendix-II and the estimates of ARCH test prove with p-value of 0.0000 for all four indices that the sample time series index return data is suffering from ARCH and clustering volatility and reject the null hypothesis. The graph 1 and 2 are portraying the trend of price and return series of the sample indices. Hence it is determined to use the ARCH family models such as GARCH(1,1), EGARCH and TGARCH.

Table 3: Estimates of ARCH - Test

INDICES	**OBS*R-Squared**	**P-Value**
MSM -30 INDEX	883.3364	0.0000
FINANCIAL INDEX	677.2618	0.0000
INDUSTRIAL INDEX	825.4853	0.0000
SERVICE INDEX	1100.498	0.0000

Source: Data Analysis

GARCH Model

In order to determine the nature of conditional volatility Garch model developed by Bollerslev (1986) has been used. The model can be specified as follows:

$$R_t = C + \rho R_{t-1} + e_t \quad ----------(4a)$$

$$e_t / e_{t-1} \approx N(0, h_t) \quad ----------(4b)$$

$$h_t = \omega + \sum^{q}_{i=1} \alpha_{i=i} e^2_{t-1} + \sum^{p}_{j=1} \beta_j h_{t-j} \quad ----(4c)$$

Where, R_t in return equation is the stock market return in time period t and e_t pure white noise error term. In variance equation h_t is the conditional variance and ω, $\alpha_1, \alpha_2, \alpha_q, \beta_1, \beta_p$ are parameters to be estimated. q is the number of squared error term lags in the model and p is the number of past volatility lags included in the model. The study has used the Garch (1,1) Model that assume ω > 0, α and β≥ 0. The stationary condition for Garch (1,1) is α +β< 1. If this condition is fulfilled, it means the conditional variance is finite. A straightforward interpretation of the estimated coefficient in above equation is that the constant ω is long – term average volatility where α_1 and β_1 represent how the volatility is affected by current news and past information regarding volatility, respectively.

EGARCH Model

To ascertain the effect of unexpected shock on the mean return Exponential Garch or Egarch model has been used by the study as it is most popular among the asymmetric Garch models. The model is based on the log transformation of conditional variance, the conditional variance always remains positive. The model has been developed by Nelson (1991). The study used the following model specifications:

$$R_t = C + \rho R_{t-1} + e_t \text{ ----------(6a)}$$

$$e_t / e_{t-1} \approx N(0, h_t) \text{ ----------(6b)}$$

$$h_t = \alpha_0 + \alpha_1(|Z_{t-1}| - E|Z_{t-1}| + \delta Z_{t-1}) + \beta_1 \ln(h_{t-1}) \text{ --(6c)}$$

Here, Z_{t-1} is the standard residual. The term $(|Z_{t-1}| - E|Z_{t-1}|)$ measures the size effect of innovations in returns on volatility, while δ_{t-1} measures the sign effect. A negative value of δ is consistent with leverage effect, which explains that when the total value of a leveraged firm falls due to fall in price, the value of its equity becomes a smaller share of the total value. The total effect of a positive shock in return is equal to one standardized unit is (1+ δ), that of a negative shock of one standardizes unit is (1- δ). β_1 is the coefficient of autoregressive term in variance equation. The value of β_1 must be less than 1 for stationarity of the variance.

TGARCH Model

To confirm the results produced by the EGARCH model, TGARCH model has also been used in the study. This model is also named as GJR (Glosten, Jagannathan and Runkle ,1993). The specification of the TGARCH model used in the study is as follows

$$R_t = C + \rho R_{t-1} + e_t \text{ ----------(7a)}$$

$$e_t / e_{t-1} \approx N(0, h_t) \text{ ----------(7b)}$$

$$h_t = \alpha_0 + \alpha_1 e^2{}_{t-1} + \delta e^2{}_{t-1} D_{t-1} + \beta_1 h_{t-1} \text{ -------(7c)}$$

Where, the dummy variable D_{t-1} represents the bad news, a positive value of δ signify an asymmetric volatility response. When the innovation in return e_{t-1} is positive, the total effect in the variance is $\delta e^2{}_{t-1}$ while the return shock is negative the total effect in the variance is $(\alpha + \delta)e^2{}_{t-1}$.

6. EMPIRICAL ANALYSIS

In order to verify the relationship between return and volatility of four important indices in Muscat security market GARCH family models have been applied. The results of the GARCH (1,1) model exhibits in Table:4. It presents the coefficient values of mean and variance equations for all the four indices. In the variance equation the calculated coefficients are α_i 0.194985, β_j 0.785738 (MSM: 30 – Index) α_i 0.187396, β_j 0.776473 (MSM: Financial Index) α_i 0.143314, β_j 0.850952 (MSM: Industrial Index) and α_i 0.153056, β_j 0.834649 (MSM: Service Index) respectively. The sum of calculated coefficients α_i and β_j is less than 1 for all four indices. So, the GARCH (1,1) model is considered to be valid. In the model the value explains that α_i recent news is linearly related to the present volatility of the sample indices' return of Muscat security market. In contrast the historical volatility is measured by β_j coefficient. It is positive and higher than α_i for all four indices. It implies that the recent news and past news

have an impact on the volatility of MSM: 30 index, MSM: financial index, MSM: industrial index and MSM: service index in Muscat security market in Sultanate of Oman. Since the conventional GARCH models are unable to capture the asymmetric effect of negative or positive returns on volatility, the study employed the EGARCH and TGARCH models to investigate the presence of asymmetry and leverage effect. EGARCH and TGARCH models help to explain the volatility of spot market when some degree of asymmetric is present in the price series. If the bad news has a greater impact on volatility than good news, a leverage effect exists.

Table - 5 presents the results of TGARCH (1,1) models. The coefficient of TGARCH (1,1) model δ is 0.787629, 0.775223, 0.855391 and 0.835031. These are all greater than zero suggesting the presence of leverage effect, i.e. the volatility to positive innovations is larger than that of negative innovations. It is also observed that in the TGARCH(1,1) model, the estimate of βi 0.147525, 0.132158, 0.125029 and 0.103017 are smaller than that of δ0.787629, 0.775223, 0.855391 and 0.835031, inferring that negative shocks do not have greater impact on conditional volatility compared to positive shocks of same magnitude.

The EGARCH (1, 1) estimates are shown in Table - 6. Asymmetry γ^1 coefficient of MSM: 30 Index MSM - Financial index MSM - Industrial index and MSM - Service index are 0.953738, 0.943306, 0.969600 and 0.951811. The asymmetric effect is positive and highly significant suggesting that the volatility is depending on its past behavior. So it is evident that the Muscat stock market return is not affected with negative shocks. AIC and SIC criteria used in the above all models indicating low for the regression which is quite reasonable and fit for models.

7. Conclusion:

This paper inspects the time-varying risk and return of four indices of Muscat security market by using ARCH family models i.e GARCH (1, 1), EGARCH (1, 1)and TGARCH (1,1). The symmetric GARCH (1, 1) model estimates the sum of ARCH and GARCH coefficients close to 1 specifying that the shock to the conditional variance is highly persistent in all four indices of Muscat security market. It is realized that the greater sum of coefficients directs a large positive and negative return and a long run future volatility in the return. It guides that the volatility in Muscat security market changes for a long time. Hence GARCH (1,1) process can be used in Muscat security market to predict the future behavior of market volatility.

The asymmetric TGARCH model found the leverage effect between relationship between return shocks and volatility and emphasizing negative shocks do not have greater impact on conditional volatility compared to positive shocks of same magnitude in all four indices of Muscat security market. The EGARCH (1,1) estimation of highly significant positive coefficients proves that the existence of asymmetric effect in Muscat security market. The study discloses that the volatility is highly persistent and there is asymmetrical relationship between return shocks and volatility adjustments which may cause low earnings for business and corporate.

The Oman economy is a conservative economy maintaining robust economic fundamentals such as lower inflation, currency stability, lower fiscal deficit, lower debt GDP ratio, higher percapita income and adequate foreign current reserves. The Oman capital and stock market is an infant and emerging market compared to west and few leading Asian markets, and considered to be the key competitor in the Middle East witnessing the total trade of 2,268,748,228 OMR in 2014 comprising 79.43% Omanis, 7.34% GCC nationals, 1.82% Arabs and 11.41% foreign nationals. Around 4/5 of the investors are local nationals hardly 11.41% foreign investors participate in trading. Out of 79.43% Omanis 51.36% constitutes institutions and the remaining 28.07% is individuals. Even though, the domestic fundamentals are good the persistent volatility and asymmetrical relationship are witnessed in the returns of the Muscat security market. Hence, it is the collective responsibilities of individuals, institutions and the regulators to ensure the return on investment by proper analysis and forecasting of volatility of future returns.

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APPENDIX: I

Table :4 - Estimated Co-Efficients of GARCH (1, 1) Model

		MSM-30 INDEX		FINANCIAL INDEX		INDUSTRIALINDEX		SERVICEINDEX	
MEANEQUATION	α_0	Co-efficient	0.000455	Co-efficient	0.000542	Co-efficient	0.000247	Co-efficient	0.000487
		z-statistic	3.254435	z-statistic	2.821259	z-statistic	1.449429	z-statistic	4.007875
		P-value	0.0011	P-value	0.0048	P-value	0.1472	P-value	0.0001
	α_1	Co-efficient	0.324428	Co-efficient	0.295504	Co-efficient	0.300001	Co-efficient	0.276522
		z-statistic	19.62471	z-statistic	17.69379	z-statistic	16.84456	z-statistic	15.73803
		P-value	0.0000	P-value	0.0000	P-value	0.0000	P-value	0.0000
VARIANCEEQUATION	α_0	Co-efficient	2.49E-06	Co-efficient	5.34E06	Co-efficient	1.73E-06	Co-efficient	1.98E-06
		z-statistic	24.19645	z-statistic	19.74968	z-statistic	12.29881	z-statistic	21.98224
		P-value	0.0000	P-value	0.0000	P-value	0.0000	P-value	0.0000
	α_i	Co-efficient	0.194985	Co-efficient	0.187396	Co-efficient	0.143314	Co-efficient	0.153056
		z-statistic	24.22416	z-statistic	20.03826	z-statistic	19.67062	z-statistic	22.96157
		P-value	0.0000	P-value	0.0000	P-value	0.0000	P-value	0.0000
	β_j	Co-efficient	0.785738	Co-efficient	0.776473	Co-efficient	0.850952	Co-efficient	0.834649
		z-statistic	145.9176	z-statistic	109.5410	z-statistic	141.9717	z-statistic	164.9439
		P-value	0.0000	P-value	0.0000	P-value	0.0000	P-value	0.0000
LL		11982.86		11040.05		11450.07		12030.61	
AIC		-7.127555		-6.566526		-6.810513		-7.155969	
SIC		-7.124299		-6.557421		-6.801409		-7.146865	

Source: Data Analysis

Table: 5 - Estimated Co-Efficients of TGARCH (1, 1) Model

		MSM-30 INDEX		**FINANCIAL INDEX**		**INDUSTRIAL INDEX**		**SERVICE INDEX**	
MEAN EQUATION	α	Co-efficient	0.000322	Co-efficient	0.000350	Co-efficient	0,000211	Co-efficient	0.000353
		z-statistic	2.193508	z-statistic	1.750461	z-statistic	0,201316	z-statistic	2.638436
		P-value	0.0283	P-value	0.0800	P-value	0.2296	P-value	0.0083
	β	Co-efficient	0.326508	Co-efficient	0.298219	Co-efficient	0.302074	Co-efficient	0.286913
		z-statistic	19.92916	z-statistic	18.15557	z-statistic	16.91014	z-statistic	16.70014
		P-value	0.0000	P-value	0.0000	P-value	0.0000	P-value	0.0000
VARIANCE EQUATION	α_0	Co-efficient	2.50E-06	Co-efficient	5.53E-06	Co-efficient	1.66E-06	Co-efficient	2.00E-06
		z-statistic	23.14987	z-statistic	19.10349	z-statistic	11.90734	z-statistic	20.96880
		P-value	0.0000	P-value	0.0000	P-value	0.0000	P-value	0.0000
	β_i	Co-efficient	0.147525	Co-efficient	0.132158	Co-efficient	0.125029	Co-efficient	0.103017
		z-statistic	13.96073	z-statistic	11.64246	z-statistic	14.01882	z-statistic	13.99687
		P-value	0.0000	P-value	0.0000	P-value	0.0000	P-value	0.0000
	λ_j	Co-efficient	0.089226	Co-efficient	0.108083	Co-efficient	0.029423	Co-efficient	0.99729
		z-statistic	5.924898	z-statistic	6.426743	z-statistic	2.671807	z-statistic	8.498102
		P-value	0.0000	P-value	0.0000	P-value	0.0000	P-value	0.0000
	δ	Co-efficient	0.787629	Co-efficient	0.775223	Co-efficient	0.855391	Co-efficient	0.835031
		z-statistic	135.9695	z-statistic	101.9776	z-statistic	142.5644	z-statistic	161.5494
		P-value	0.0000	P-value	0.0000	P-value	0.0000	P-value	0.0000
LL		11991.06		11051.00		11451.50		12043.47	
AIC		-7.131842		-6.572449		-6.810770		-7.163031	
SIC		-7.120917		-6.568541		-6.799845		-7.152105	

Source: Data Analysis

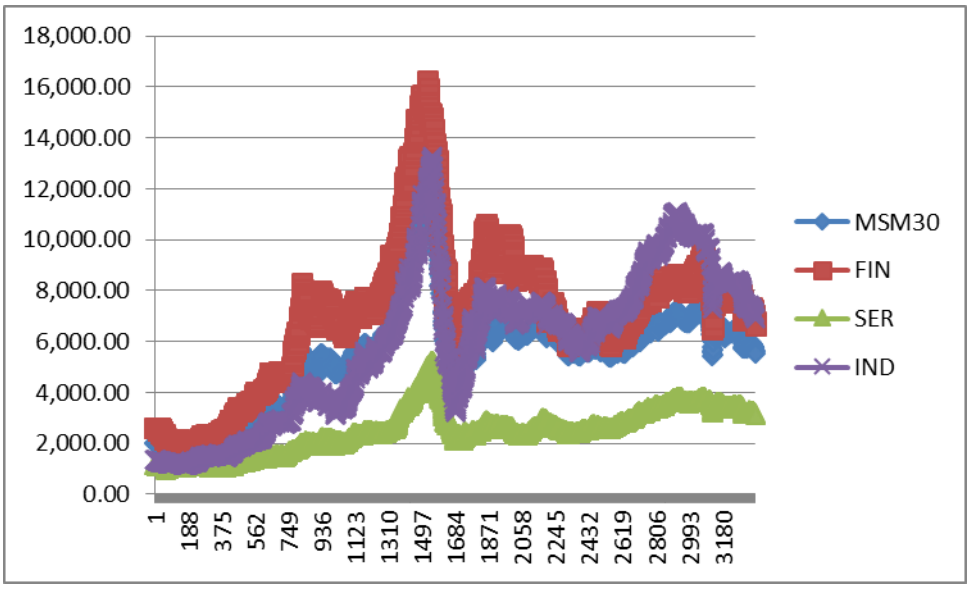
T**able: 6** - Estimated Co-Efficients of EGARCH (1, 1) Model

		MSM-30 INDEX		**FINANCIAL INDEX**		**INDUSTRIAL INDEX**		**SERVICE INDEX**	
MEAN EQUATION	β_0	Co-efficient	0.000234	Co-efficient	0.000358	Co-efficient	0.000273	Co-efficient	0.000548
		z-statistic	1.776846	z-statistic	2.192557	z-statistic	1.780028	z-statistic	5.060714
		P-value	0.0756	P-value	0.0283	P-value	0.0751	P-value	0.0000
	β_1	Co-efficient	0.315975	Co-efficient	0.288956	Co-efficient	0.301520	Co-efficient	0.268750
		z-statistic	20.87265	z-statistic	19.76700	z-statistic	18.77488	z-statistic	16.65413
		P-value	0.0000	P-value	0.0000	P-value	0.0000	P-value	0.0000
VARIANCE EQUATION	α_0	Co-efficient	-0.681824	Co-efficient	-0.754580	Co-efficient	-0.476774	Co-efficient	-0.647243
		z-statistic	-29.22041	z-statistic	-23.24402	z-statistic	-19.62751	z-statistic	-20.36057
		P-value	0.0000	P-value	0.0000	P-value	0.0000	P-value	0.0000
	α_1	Co-efficient	0.318085	Co-efficient	0.311928	Co-efficient	0.267787	Co-efficient	0.247902
		z-statistic	30.37198	z-statistic	25.93284	z-statistic	29.70122	z-statistic	25.64916
		P-value	0.0000	P-value	0.0000	P-value	0.0000	P-value	0.0000
	δ_1	Co-efficient	-0.048740	Co-efficient	-0.053805	Co-efficient	-0.027568	Co-efficient	-0.064615
		z-statistic	-6.530271	z-statistic	-6.505015	z-statistic	-4.384225	z-statistic	-10.91542
		P-value	0.0000	P-value	0.0000	P-value	0.0000	P-value	0.0000
	γ^1	Co-efficient	0.953738	Co-efficient	0.943306	Co-efficient	0.969600	Co-efficient	0.951811
		z-statistic	476.5742	z-statistic	309.0908	z-statistic	436.6578	z-statistic	352.4175
		P-value	0.0000	P-value	0.0000	P-value	0.0000	P-value	0.0000
LL		11984.95		11042.22		11444.49		12043.47	
AIC		-7.128204		-6.567223		-6.806602		-7.163028	
SIC		-7.117279		-6.556297		-6.795677		-7.152103	

Source: Data Analysis

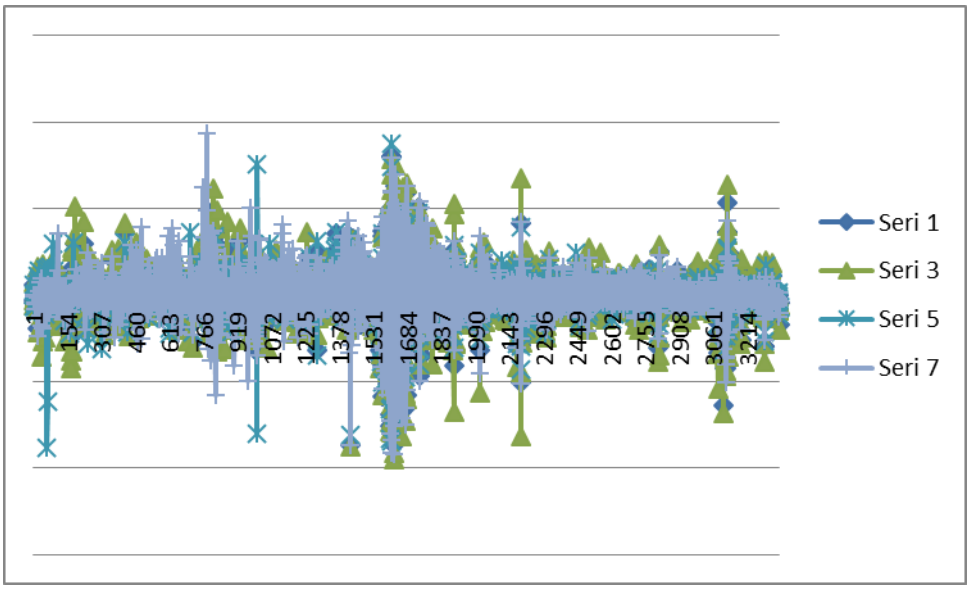
APPENDIX-II

Graph-1: Daily closing prices for MSM-30 Index, MSM-Financial Index, MSM-Service Index and MSM-Industrial Index from 1st of January 2001 to 30th of November 2015

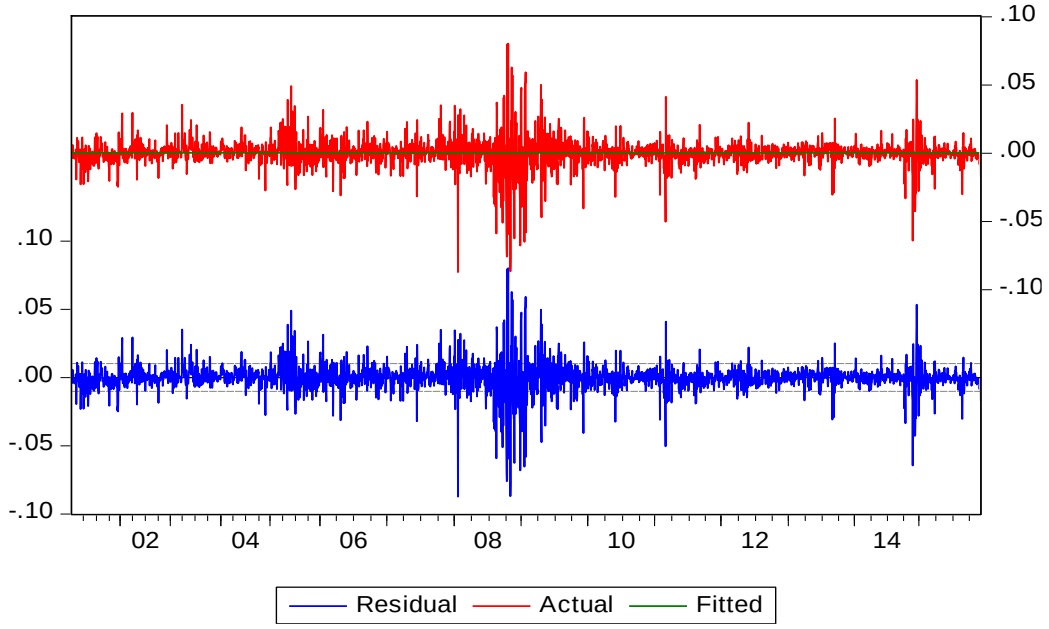


Notation: The stock's closing price is in MSM (Muscat Security Market).

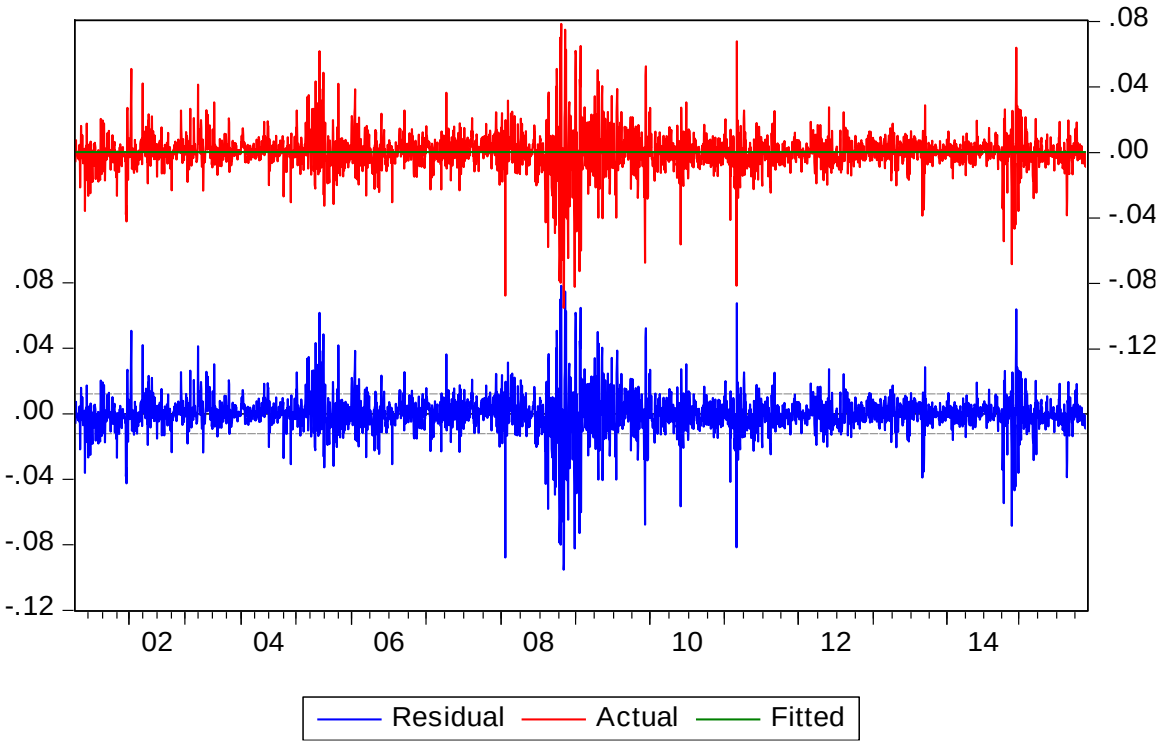
Graph-2 Continuously compounded rate of return for MSM-30 Index, MSM-Financial Index, MSM-Service Index and MSM-Industrial Index from 2ndof January 2001 to 30th of November 2015



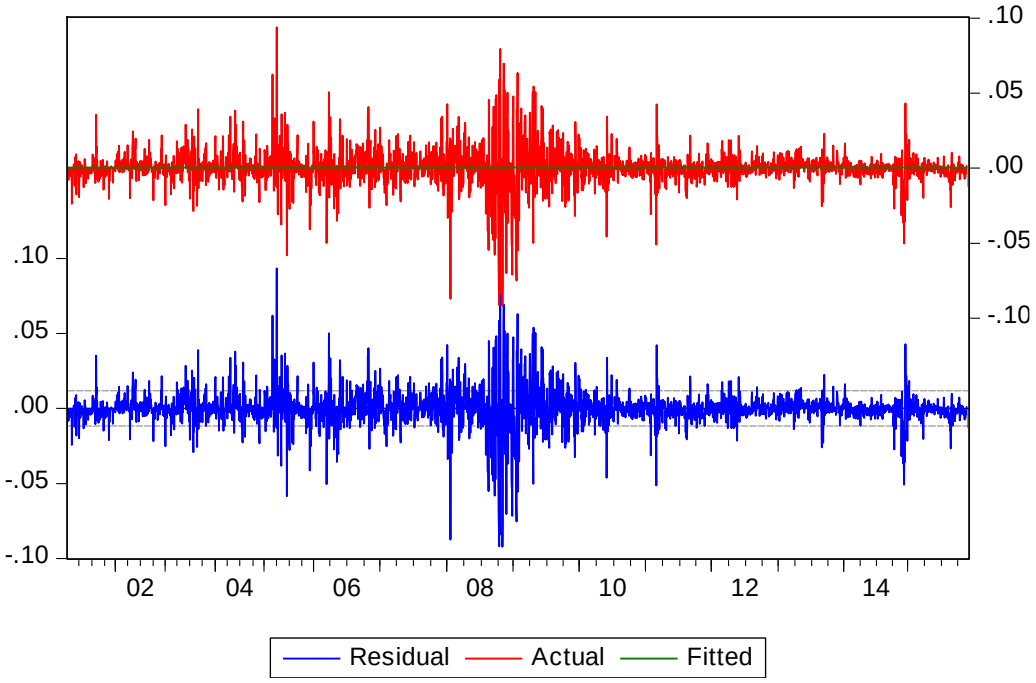
Graph: 3 - MSM:30 Index Return – Clustering Volatility



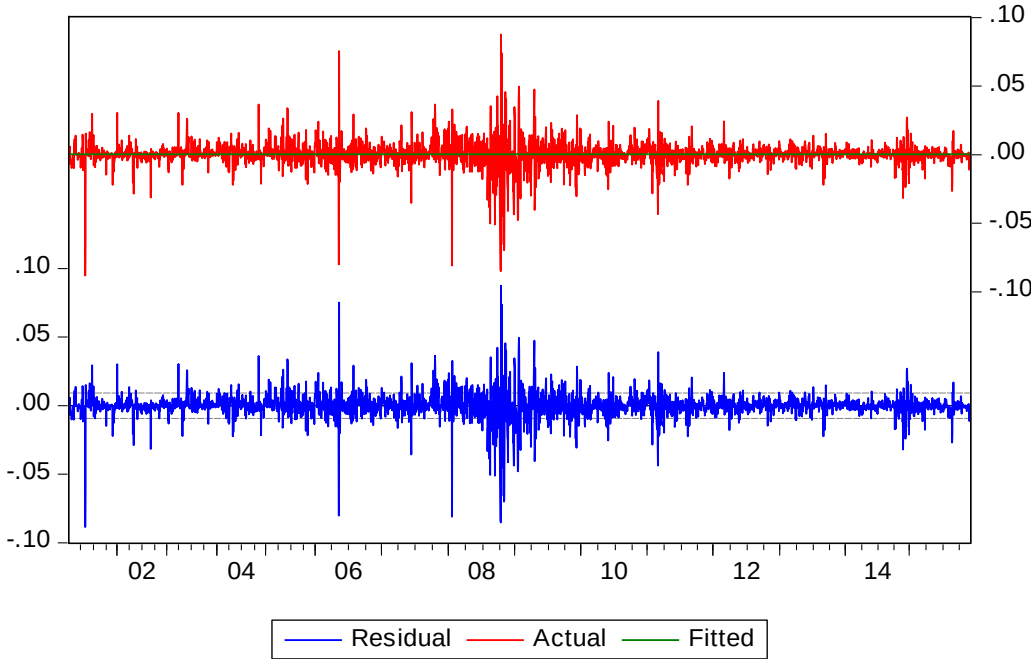
Graph: 4 - MSM:FinancialIndex Return – Clustering Volatility



Graph:5 - MSM Industrial Index Return – Clustering Volatility



Graph:6 - MSM Service Index Return – Clustering Volatility



International Journal of Commerce and Finance, Vol. 2, Issue 1, 2016, 55-65

CLARIFYING THE MANAGEMENT ROLE IN DEALING WITH EMPLOYEES PERSONAL ISSUES IN THE LEBANESE ORGANIZATIONS

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Abstract:

The majority of workers have many occasional difficulties that sometimes become a problem affecting the worker's performance. When this will repeatedly fail to meet expectations, a serious problem may become the main reason which contributes to the job decline. Therefore, a pattern of reduced performance indicates the need for a supervisory action from managers. Poor performance could be reflected under three main categories, such as employee availability, employee productivity, and employee conduct. The reasons and causes of this poor performance could be a personal issue related to the employee. Many types of personal problems are affecting the job performance in organizations, such as marital strife, financial difficulties and child care complication. More serious difficulties and the abuse of these problems-if not resolved-may cause unending issues at work.

This problem is highly important especially that it can affect the job performance and the company income. Moreover, it can simply result in the failure of the employee to meet the performance standards, which kills productivity.

The purpose of this qualitative exploratory phenomenological study is to clarify the management role in dealing with employees personal issues in the Lebanese organizations as perceived by the lived experience of managers. The research instrument which will be used is a face-to-face structured interview with six managers of the major functions in different Lebanese organizations. The sample type will be by convenience.

Keywords: *Conflict , Job Performance , Performance, productivity, personal issues*

1. Introduction

Many managers believe that employees' personal issues are irrelevant to job performance. They consider that employees should leave behind all their personal problems when they walk through the office door. Therefore, managers, with this belief, consider employees like robots. They ignore their personal problems by treating them all the same way and just focus on the work (Harwell, 2011).

Managers seeking to improve the quality of their employees should pay attention to their employees' personal problems and stimulate the internal continuous communication. Employee motivation is considered critical to maintain productivity. Managers should understand the role of communication in employees motivation and the relationship with co-workers. Therefore, maintaining strong relationships in the workplace helps employees achieve a high level of production and will support staff motivation (Werbler, 2009). Communication between managers and employees is essential in developing and improving the employees' job skills and to motivate them to succeed. Communication in the workplace can improve the overall organizational culture. A solid organizational communication can eliminate barriers and is able to resolve problems (Berger, 2008).

An employee with personal problems affecting his behavior may not respond to management orders and techniques that might otherwise be effective. Therefore, the manager may feel frustrated, angry, guilty, inadequate, and even fearful for the employee personal welfare. So, it is essential for the manager to acknowledge these things and then consider how much these cases may affect the objective assessment and the monitoring of this critical problem.

Problem Statement

According to (Harwell ,2011), as organizations continue to diversify, the risk for workplace problems will be intensified. Small business managers typically face an important problem related to employees' issues. Individual employee problems can be related to many factors such as personal conflicts, supervisor issues, personal distress, or company structure oriented. Management should study the cause of the problem and the factors that keep fueling the fire.

According to (Azouri ,2012), Lebanese employees are facing increase demand in the workplace in addition to having many problems in their personal lives, the fact which is putting greater pressures by forcing them to tell how they should cope and try to maintain a balance. When pain and stress enter into the employees personal lives, it can spill over the workplace. The result can be a disagreeable attitude which reduces productivity and creates a lack of

cooperation and a lack of focus. When an employee has a major personal problem, it would not be possible for him to focus on work. Moreover, the majority of the Lebanese organizations are facing many problems related to low employees morale. The high morale is associated with high productivity (Azouri, 2012). This low morale among the Lebanese employees is affecting the organizations for not achieving their desired result.

At the end and in order to clarify the management role in dealing with employees personal issues in the Lebanese organizations, the following research question has been formulated:

How can the management role in dealing with employees personal issues be understood as perceived by managers of companies in Lebanon?

Purpose

The purpose of this qualitative exploratory phenomenological study is to clarify the management role in dealing with employees personal issues in the Lebanese organizations as perceived by the lived experience of managers in different Lebanese organizations. The research instruments that will be used in this research is a face-to-face structured interview with the managers responsible of the major functions in companies in Lebanon. The population will include the managers of the major functions in different Lebanese organizations in Lebanon. The sample size will be six managers or more from these companies depending on to the data saturation principle, and the sample type will be by convenience.

Research Questions

Every employee is considered as an individual with his own personal strengths and issues. Managers cannot expect to take advantage of an employee's strengths without taking into consideration some personal issues. In order to clarify the management role in dealing with employees' personal problems in the Lebanese organizations and to study what improvement can be done while dealing with employees' personal issues, the following research question will be formulated:

How can the management role in dealing with employees personal issues be understood as perceived by managers of companies in Lebanon?

Significance of the Study

Studying the management role in dealing with employees personal problems in the Lebanese organizations is very important as it will shed the light for managers to focus on the importance and the necessity to take into consideration the employees' personal issues and not just to focus on work. Moreover, it helps managers to rethink how they should help employees with their personal problems in order to improve the company performance. This study will also clarify some tips on how to help employees to deal with their personal problems in such as it is sometimes enough to listen to the employee, to be sympathetic and to say to him some words of encouragement. Moreover, this study would assist managers on how to deal with employees' personal issues in order to deal with their personal quality of work. Therefore, good managers know how personal problems can make productive employees useless and they also know that many have potential that will never be realized because of increasing personal issues (Deal, 2008).

Definitions

A Conflict - A conflict is a disagreement or friction through which the parties who are involved perceive a threat to their need or interest (Toomey, 1998).

Job Performance - Job performance refers to whether an employee performs his job well. It is considered an extremely important criterion related to the success and organizational outcomes (Campbell, 1990).

Performance Standards - Performance standards provide employees with specific performance expectations necessary for each major duty. It explains how the job should be done plus the results that are expected for satisfactory job performance (Barye, 2011).

2. Literature Review

Work Motivation

Motivation is important for employees in the workplace. If a person is not driven to do the job, then, the work will not be successfully accomplished. It is necessary to feel happy about going to work in the morning. Yet, every individual does not experience this feeling. Employees are motivated to work by many ways; it can be everything from cash money to a flexible schedule, or to a good employees-managers relationships. Therefore, the employees personal life situation and external circumstance are the main decisive factors. This shows that motivation is extremely personal; even if two individuals are exposed to one same situation they will react in different ways and be motivated by using totally different factors (Gudmundson, 2009).

Motivational Theories

Many theories were formulated in order to explain motivation. In this research, I will summarize the three classical need theories; Maslow's Hierachy of needs, Hezberg's Two–Factor Theory and Lawrence's Four-Factor Theory. These theories are still very popular even though they are quite old in the field of work motivation. These theories are linked to one another in some way and can be applied and used in real life situations. According to (Molander,1996), need theories explained that it is possible to identify human needs, and according to these needs it is possible to find out what motivates employees and, moreover, how their needs can be fulfilled.

a- Abraham Harold Maslow

b- Frederik Herzberg

c- Paul Lawrence

Tips to Motivate Employees

Employees are considered as the building blocks of an organization. The success of any enterprise depends on the collective efforts of all the employees. Therefore, when they are motivated, they will collaborate ensuring the organizational growth.

- Managers should do a self-evaluation of themselves. It is highly important for a manager to understand, encourage and control his own behavior before motivating, encouraging and controlling his staff behavior.
- Managers should be well familiar with their staff in order to invite staff commitment and loyalty. Therefore, a cordial superior-subordinate relationship is a main point in job satisfaction.
- Managers should give their employees some financial and other benefits such as vacation, insurance and holidays.
- Managers should provide feedback to the staff constantly. Staff should know how they are performing by giving them a regular and constructive feedback. Feedback should be based on facts and on personal observations not assumptions.
- Managers should ensure effective time management by having control over time to ensure that tasks are doing in the right ways. Staff should have closed times like few hours with no interruption in order to focus on performing their task. Also, they should have open hours in order to freely interact, express and communicate.

How Managers Should Deal with Employees Personal Issues

Many managers, all around the world, believed that employees' personal problems are irrelevant to the job improvement and at the end managers may ignore this fact. They considered that employees should forget all their personal life while they are working and focus only on the job at hand. But, in fact, people are not like robots and they cannot leave behind their personal problems when they walk through the office door. Therefore, managers cannot ignore the effects of personal life on a person's work (Harwell, 2011).

Managers could not consider that employee's personal life is part of their business, but performance is considered under their responsibilities. Managers' job is to get the best work of their employees by keeping them motivated in order to contribute for the long term. Managers should treat employees as individuals by helping and supporting them through some of their personal issues that influence their ability to their work in the best way.

According to (Harwell, 2011), there are eight ways to deal with employees personal issues:

1- Listen: Managers should be sympathetic with their employees, listen to them and offer them kind encouragement words. It is extremely crucial to pay close attention to the difference that exists between listening to an employee and solving his personal problems. The employee should solve his personal problems without the intervention of managers. Managers should only listen and should not be a part of getting in charge of the solution.

2- Refer employees to appropriate resources: Managers should steer employees toward professional counselors. For example, managers can take advantage of their personal experience with a similar problem and describe it to them with the solution they got. Managers should not forget that this case is about employees not them and they should keep focusing on their employees. Moreover, they should gently push employees to find their own personal solution not to force their own solution on the employee or try to give them advice.

3- Accommodate short-term needs: Managers are required to be flexible as much as they can in making temporary accommodations to help the employee who is facing personal troubles. But managers should inform the employee clearly that these changes are in reality temporary.

4- Be flexible in working hours or working location: Managers can give the employee a short time off, vacation or sick time.

How Managers Should Counsel Employees with Personal Issues

At any moment, employees may face many personal problems that delay their job performance. Sometimes, these problems are not serious and employees can sooner go back to the normal productivity. But in other situations, deeper employees' personal problems can cause ineffective long time performance and productivity. According to the HR Specialist and to the U.S. Labor Department (2013) six steps should be used by managers to maintain an effective interaction:

1- Managers should stay alert to signs in order to determine if this is a personal problem, a bad attitude or a skill deficit.

2- Mangers should document the performance problem as it can help alert the troubled employee to the harm his problem is impacting on the organization. Moreover, these notes may help the manager to defend himself in case of certain or probable complaint.

3- Managers are required to invite employees for an informal interview in order to discuss the poor performance and the policy violation, if any. (Moore, 2008).

4- Managers should focus on the work related facts as the main issue is the work performance. As managers, they should avoid focusing on employees' personal problems, and kindly remind employees that they are responsible of the work regardless of what they are doing at home. Managers should respect their employees and do not embarrass them with emotional comments such as "you seem drunk" or "why you are depressed".

3. Research Method and Findings

The triangulation method was also explained in detail which will help to analyze the data collected. The assumptions, limitations and delimitations were also listed. Finally, the ethical assurance principle was ensured such as protecting the respondent from any harm. Right to privacy and the informed consent were also discussed in details.

In order to clarify the management role in dealing with employees' personal issues in the Lebanese organizations as perceived by the lived experience of managers, face-to- face structured interviews were made with managers of the major functions in different organizations in Lebanon. The sample size was six managers from these companies depending on to the data saturation principle, and the sample type was by convenience.

First, brief information about the companies' names, the position and educational background of the interviewees will be given, and then the results of the interview questions will be separately presented for each company. The interview questions were open-ended, all in all seventeen questions. The major purpose of this study was to explore the importance of management role in dealing with the personal problems of employees. Therefore, only relevant information to the areas needed to be covered will be discussed.

Question one was asked to collect background information about the participants. Many of the respondents have higher educational background within the field of management, human resources, finance, marketing and sales. All of them started to work at Lebanese organizations directly after graduation and have worked there since then. It is also noticeable that a couple of the managers have had various tasks during their employment, which has to do with the size of the organizations where there is opportunity for work in several employment posts.

Question two helps to find what motivates managers of different functions in the Lebanese organizations. Here, it is helpful to get most of the answers to support the study.

Question three was asked to see how much managers rely on employees' motivation in their organization. They all reinforced the need of motivation as it is essential to increase productivity, lead to a greater revenue and create more challenges and ambitions in the workplace. It helps employees to be more creative.

Question four described how the organization employee structure is built up. All respondents gave similar answers as people are working as a teamwork following a clear structure to maintain order and resolve problems. A clear framework is established within which all the group members are organized.

In question five, when discussing the importance for an organization to have motivated staff, the interviewees agreed that the majority of the staff needs to be motivated in order to drive the organization forward. Some respondents believed that motivation is important in the daily work.

In question six, the participants gave their suggestions on how to increase motivation among employees such as giving one common target to be attained by group, assigning practical assumptions to be worked by a group of employees and to start a project from the beginning to the end. These motivation ways have impacted positively on the organization revenue. Moreover, maintaining a good internal relationship is also essential.

In question seven, all respondents agreed that relationship between supervisors and employees must be a team whole relationship. A healthy relationship should be based on a teamwork and be more informal than formal as well as honest.

In question eight, they added that they always maintain a perfect, strong, and very close manager-employee relationship.

In question nine, they all listed common types of personal problems affecting their employees' short term job performance such as personality conflicts, marital issues, couple personal problems and child care complication. Some added personal trauma or organization structure and team problems. All agreed on financial difficulties and family problems.

In question ten, all respondents described in the same way how they manage employees' personal problems. They refer to the Employee Assistance Department to discuss their case.

In question eleven, they all reinforced the idea to encourage the troubled employee to refer to the Employee Assistance Program and to benefit from its available support. It is essential to listening to him and giving valuable advices.

Question twelve elaborated what supervisors should know upon facing employees with personal problems affecting their behavior. They all agreed that managers should be aware and prepared to any change in behavior because the employee is passing through a difficult time. The employee may refuse to abide by management rules and decisions. Managers may feel guilty and frustrated about his employee case. They should be prepared on how to monitor the situation as it is sometimes difficult to expect the employee reaction.

In question thirteen, managers explained when confrontation is necessary with the troubled employee. All respondents agreed that the managers' job is to confront the undesirable employees' job behaviors. Moreover, they should not postpone the confrontation as it should be done immediately when the problem is discovered.

Question fourteen explained how managers are conducting the corrective interview with their troubled employees affecting their performance. All respondents are following the main steps while planning the corrective interview as follows:

- Comparing job performance in terms of standards and expectations in identifying the problem
- Checking the employee file
- Fixing a meeting with the employee

In question fifteen, managers explained how they perform the corrective interview. They will start by creating an open relaxing atmosphere, reminding the employee about the objective of the meeting which is to improve the job performance. Also, they all provide supporting documents revealing the effects of the problem on performance. They all confirmed to have a 100% listening and at the end they will put a plan to be followed in the near future.

In question sixteen, managers explained in the same way how they do carry out the follow-up of the corrective interview with the troubled employee by controlling the performance and comparing it all the time with the problem on hand. They all agreed on the importance of controlling the execution of the main points fixed on the interview. They should keep reminding the employee about the performance. If he didn't succeed he will be transferred to the Employee Assistance Program.

In the question seventeen, all respondents suggested to maintain an effective communication process and good relationships with their employees. They should support their employees when they have personal problems affecting their performance.

Comparing the Interview Results with the Literature Review:

On the basis of the previous interviews, I have come to the conclusion of the following model including all points that have been seen in the theoretical framework. The model has been compiled on the basis of my understanding and the empirical findings of previous researcher Wiley (1997), beside other researchers mentioned in the literature review which was intended to identify key factors which influence motivation at work. The results in Figure 1 present the most important matters for employee's motivation, communication and personal issues:

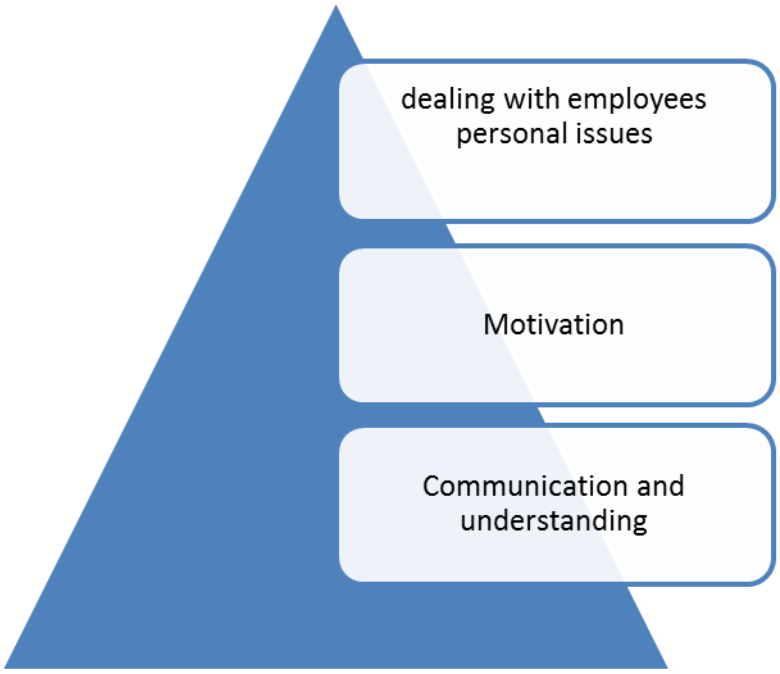

Figure 1: Most important matters for employee: motivation, communication and personal issues

The Table 4.1 presents the most important steps to be followed by managers to deal with employees personal issues based on the results of the interviews and matched the ones of other researchers discussed in chapter two.

By doing the triangulation between the findings and the literature review concerning the Motivational Factors, table 1 illustrates a summary of the common results:

Table 1: Summary of Motivational Factors

Interviewees Results	Other previous researchers results (literature Review)
Good Working conditions	Good Working environment (Herzberg, 1959)
Respect, Recognition	Appreciation (Wiley, 1997)
Healthy relationship with supervisor and colleagues	Strong relationships in the work place (Werbler, 2009)
Having a flexible work schedule	Gudmundson (2009)
Individual growth and career development	Individual Growth and Development (Deal, 2008)
Opportunity to do creative and challenging work	The drive to learn and to defend (Berggren, Gustavsson & Johnsson, 2009)
Financial benefits	High salary (Wiley, 1997) (Moore, 2013)

This research gives the following conclusion: Motivational factors are dependent on which situation the individual is in. If an employee has a high salary, he/she will focus mostly on the job itself. In the opposite situation, an employee with low salary will consider things more important, such as working condition climate or having a good relationship with colleagues.

An interpretation of findings supports the propositions in the literature. The first proposition suggests that employees' motivation depends on personal circumstances. Results in this research imply that the proposition is correct; employees are motivated differently depending on many factors such as family situation and others.

A comparison between the results of findings and the literature review concerning how managers should deal with employees personal issues is illustrated in the table 2.

Table 2: the literature review concerning how managers should deal with employees personal issues is illustrated

Interviews Results	Other Researchers (Literature Review) (Harwell, 2011)
100% listening, motivation	Listen, encouragement
Advise him to the employee assistance program	Push employees to professional counselors
Give him short term benefits	Short term needs
Change the work schedule	Flexible working hours
Change or give him less harder work	Assign different work
Keep reminding him that these modifications are for short term	Make it clear that these accommodation are short term
Managers should support their employees not forcing them to solve the problem	Provide support
Motivate them on career development and keep reminding him to focus on job performance	Career advancement and focus on job

Finally, table 3 summarizes the findings obtained and compared with the literature review concerning the role and the process to be followed by managers in monitoring the troubled employees:

Table 3 summarizes the findings obtained and compared with the literature review

Findings Analysis	Literature Review
Informing the employee about a private meeting	Planning the corrective interview
Performing the meeting	Performing the corrective interview
Controlling the execution of points suggested in the previous interview	Following up the corrective interview

4. Implications, Recommendations, and Conclusions

Employees personal issues cannot be ignored by managers, especially that they can affect the job performance and managers should be aware as how to deal with these issues. This research was done and results were concluded according to the information collected from managers of major functions in the Lebanese organizations who accepted to participate in the interview. I greatly hope that the results of this research may serve readers, managers and decision makers so that they can care more about dealing with employees personal issues in order to avoid the decline in job performance.

Data was collected mainly through the interviews and results were presented in tables which were high enough to be supportable to the findings after being analyzed.

The main research question was: How can the role of management in dealing with employees personal issues are understood as perceived by managers of companies in Lebanon?

The sample included six managers of major functions in different Lebanese organizations and since a qualitative methodology with a convenience sampling type was applied, the purpose was not to generalize the results. However, since the research reached the data saturation, it is possible to generalize the findings.

Also, in consideration to the interviews, the presence of the researchers might have affected the choice of respondents as being one of convenience.

Recommendations &Future studies

During the last six months of working on this research, I have gathered a lot of information and knowledge about what motivates employees in the Lebanese organizations and the effect of internal communication on employees' motivation. The main focus was to show how managers should deal with employees personal issues. I suggest conducting a further quantitative study on the same topic to test the linkage between the management of employees' personal issues and job performance in the Lebanese organizations.

Conclusions

The purpose of this qualitative exploratory phenomenological study was to explore the management role in dealing with employees personal issues in the Lebanese organizations as perceived by the lived experience of managers in different Lebanese organizations. In order to do so, the motivational factors in organizations were identified and analyzed and the following conclusion is drawn in that motivation is highly personal and differs from individual to individual. Work motivation is not consistent over time. The factor which motivates an individual today will most likely not be the same one a year before or after. This depends on the situation of the employee as a special motivation can be offered in case the employee is facing personal problems affecting his job performance. A common denominator between all the interviewees is that what motivates employees depends on personal circumstances, where the family and personal conditions play a significant role.

The results in the Lebanese organizations showed that the propositions discussed in the literature review appeared to be correct and identical.

Therefore, it is essential for managers in the Lebanese organizations to consider that employees' personal lives may affect the job performance which is under their responsibilities and to understand what motivates employees. Through this understanding, organizations have the ability to adopt motivational techniques and good internal communication process which can lead to competitive advantage and ensure the success of the enterprise. Managers are required to exert more effort to communicate with troubled employees and should counsel them.

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Appendix A: Interview

Interview Questions:

Company:---------- Date:----------

Employment status:----------

Age: ----------

Gender: Female ---------- Male----------

1- Can you tell me a little about your background – education and work experience?

Employees' motivation and communication questions:

2- What motivates you in your work?

3- Do you believe employee motivation is important for the organization? In what way?

4- How is the company's employee structure built up?

5- Do you believe employee motivation is important for your organization? In what way?

6- How can the organization increase the motivation among employees? Suggestions for improvement?

7- How can you describe the healthy relationship of employees with supervisors and colleagues as an important factor in work motivation?

8- How does the relationship between you as a manager and your employees look like?

Employee's personal issues questions:

9- What types of personal problems can affect your employee's short term job performance?

10- How do you manage employee's personal problems, especially when the worker's performance repeatedly fails to meet expectations?

11- Do you encourage troubled employees and how?

12- What supervisors should know when facing an employee with personal problems affecting his behavior?

13- When do you think confrontation is necessary?

14- How do you conduct the corrective interview with the employee with personal problems affecting his performance?

15- How do you perform the corrective interview?

16- How do you follow-up the corrective interview with the troubled employees?

17- Is there anything more you would like to add concerning this subject?

International Journal of Commerce and Finance, Vol. 2, Issue 1, 2016, 67-80

AN EXPLORATORY ANALYSIS OF ONLINE SHOPPING BEHAVIOR IN TURKEY

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Abstract:

Alongside the technologic developments, transformation in user behavior and business models has been observed. New areas and models are emerged in a lot of grounds like the communication of people or daily activities. So a new face put for shopping behavior by the e-commerce, which is one of the novelties. This study tries to research online shopping behavior in Turkey. With a quantitative research, device usage, the reasons behind to shop or not to shop online, online shopping category and e-commerce site preferences, payment methods, international e-commerce and online marketplace usage is investigated. As implications of the research, "saving time" is found to be the foremost reason for shopping online in Turkey and "travel and bookings" category is found as the most shopped category among the results of the survey.

Keywords: *E-commerce, E-commerce In Turkey, Online Shopping, Online Consumer Behavior*

1. Introduction:

As computers spread all over the world, people started to get benefits of this technology in more areas than business and office purposes. Computers were only used by universities and large-scale companies since they were not easily affordable and appropriate for small spaces (Grosse, n.d.). After the technologic developments and cheaper prices on personal computers, most of the homes started to get access to computers.

Today, Internet is used many areas like music, television, communication, social media, health, security, education and more. Especially mobile device owners need Internet like they need electricity. This need may be a little further for some of the people like they can't move on in the life without their mobile device or Internet. Anxiety of being unable to use mobile device or Internet to get contact is called Nomophobia and it is a reproduce wording of "No Mobile Phone Phobia" (King et al., 2014, p. 28). It is not surprising that people developed new kind of fears like Nomophobia which are related to addiction to their mobile phones and internet.

In the world of today, since the people are addicted to their digital devices and Internet, they developed a new user behavior as well. New user behavior affected most of the markets and sectors. As people tend to do their transactions online; shopping, which is one of the biggest economic values, is carried to digital devices. So e-commerce (electronic commerce) was born.

This paper first examines e-commerce in definition and history. Afterwards, Turkey is detailed in terms of economic impact of e-commerce and online shopping behavior, lastly findings are discussed and concluded.

2. Literature Review

2.1 E-commerce Definition

Before defining e-commerce, it would be helpful to understand what commerce is. According to Oxford Dictionaries (n.d.) commerce is defined as follows, "The activity of buying and selling, especially on a large scale." So commerce is a simple transaction where a seller and a buyer take place.

Zwass (1996) defines e-commerce as "the sharing of business information, maintaining business relationships, and conducting business transactions by means of telecommunications networks" (p. 3). Based on this definition, any commercial transaction made on a telecommunication network other than internet would be a subject of e-commerce. Despite the fact that e-commerce may not be on internet only, the term is redefined by the dominance of internet and digital era that we are in. Chesher, Kaura & Linton (2003) stated, "In particular, the news media seized upon the term e-commerce and largely redefined it as the marketing and selling of products/services to consumers over the internet" (p. 40). So e-commerce is an internet term and it can be summarized as, e-commerce is buying and selling products or services on internet.

2.2. Evolution of E-commerce

Technologic developments led e-commerce into an infinite evolution. In this journey, e-commerce was born from more basic technologies, recently it is transformed by new devices and internet, and in the future it is expected that e-commerce may reach to a technologic level beyond the imaginations.

2.2.1. History

E-commerce origins root back to late 1970s when there was no easily affordable computers or Internet connection at home. Information Technology Engineer Michael Aldrich and his colleague Peter Champion led the birth of online shopping in 1979 by their invention allowing to connect a computer to a television (Coleman & Ganong, 2014, p. 974). According to Taylor (2013), M. Aldrich is the inventor of online shopping which is called as "teleshopping" at that time (p. 20).

After Aldrich's invention, in 1980's a new technology, which is regarded as one of the most successful onlie services before internet, was born. A private network named Minitel was launched by France Telecom in 1982, allowing users to look up phone numbers, arrange travel bookings, make financial transactions and shop online (Cornelius et al., 2002, p. 204).

With these ancestoral models of e-commerce, it has tranformed to a new level in 1990's with a revolutionary technologic development.

2.2.2. Today

Until World Wide Web is introduced by Tim Berners-Lee in 1989 and his first web site is launched in 1991, technology was not very fast and practical and e-commerce couldn't be useful (Jones, 2014). E-commerce was skyrocketed with the invention of World Wide Web and web sites due to their useful structure. There is no doubt e-commerce got a rapid grow by the customers started to search world wide web for products and services (World Trade Organization, 2013, p. 3).

In mid 1990's, e-commerce pioneers like Amazon and eBay are founded. They had important roles at the evolution of e-commerce.

With all of the connected devices such as smartphones, tablets and laptops; e-commerce is so powerful today. Easy accessibility, better prices and convenience caused a migration of shoppers from physical channels to digital channels.

2.2.3. Future of E-commerce

Although e-commerce is on the rise and very powerful in recent years, one of the major weaknesses of online shopping is unavailability to examine products physically. In the near future, technologic developments may create new capabilities for consumers to go beyond this weakness. Consumers can examine a product on a computer or experience a simulation with Virtual Reality (VR) applications, which contain web based and interactive three-dimensional models (Figueroa & Häubl, 2002, p. 744).

Other aspect of VR is the one which is experienced through special headsets. VR headsets are expected to transform the way of e-commerce. According to Kent (2015), physical stores have connection to internet and consumers got used to shop via their mobile devices, so mix of a physical and digital worlds may lead a new shopping experience: Virtual reality shopping (p. 20).

In 2020, digital technology will be unfolded by the companies including fetching and analyzing of consumer data, high end social media usage and engaging consumers with employees whether in-field, in-store or on a travel (Dugal et al., n.d., p. 15)

3. E-Commerce in Turkey

According to The Republic of Turkey Prime Ministry Investment Support and Promotion Agency of Turkey (n.d.), half of the population is observed as under the age of 30.7 among 77.7 million people. Although the population of Turkey is getting older, when it is compared to the European countries, the youngest population has been recorded in Turkey with the ratio of 16.6 percent, even as Italy and Spain have the lowest young population ratio by 9.9 percent (Anadolu Agency, 2014). Gordon and Hodgson (2012) stated, "The e-commerce sector is booming in Turkey, as a result of a large youth population familiar with new technology and solid economic growth, with real internet retailing value expanding by 61.1% over 2006-2011." In Turkey, e-commerce market size has been growing so fast and it is seen like Turkish e-commerce market will have a more important position not only in the country but globally (Piramit E-commerce, n.d.).

3.1. Evolution of E-commerce In Turkey

As Cedetaş (n.d.) reported, the first e-commerce application in Turkey was the electronic store of Remzi Bookstore launched in 1997, which was prepared in the second half of 1996 by Prizmanet. In the food sector, Migros Türk founded Sanal Market in 1997, which is the largest supermarket chain in Turkey (Dean et al., 2013, p. 26). In 1998, one of the first Turkish e-commerce sites hepsiburada.com was founded (Eticaret Gundem, n.d.). With just a team of 3 personnels, 6 categories and 2.700 advertisings on site, sahibinden.com was launched in 2000 and there has been a great interest on it (Patronturk, 2012). Gittigidiyor.com was founded as a company with 3 partners and launched on 5th of February, 2001 (Gittigidiyor, n.d.). In the beginning, online shopping has been observed in low rates due to low speed dial-up internet connection, but after the launch of Asymmetric digital subscriber line (ADSL) connection by Turkish Telecom in 2002 growth rate has been higher (İyiler, 2009, p.57). The most outstanding foreign capital inflows have been the acquisition of Biletix by Ticketmaster in 2006, the partnership of Ebay and Gittigidiyor in 2007 and the foreign capital partnership of Yemeksepeti.com in 2008 (Afra, 2010). In the leadership of Grupanya, in 2009 a new e-commerce business area has been opened which allows users to purchase the products or services of 3rd party companies with discount (Türkiye Cumhuriyeti Kalkınma Bakanlığı [Ministry of Development of Turkish Republic], 2013, p. 127). Turkish e-commerce market has been a focus of attention and fast growth. Afra (2013) stated, "There are four main driving forces behind this growth: Credit Card Penetration, Logistic infrastructure, high mobile internet usage and a viral / social young population.".

3.2. E-commerce Statistics From Turkey

According to Turkish Statistical Institute (2015), computer and internet usage ratios have been 54.8 and 55.9 percent in order among the people who are aged between 16 and 74 in April 2015. Household with internet access proportion has been 69.5 percent. 96.8 percent of households have either mobile phone or smartphone. Among the

internet users, proportion of individuals who made a purchase of a good or service online has been 33.1 percent (Turkish Statistical Institute, 2015).

In its' report "Türkiye'de E-ticaret 2014 Pazar Büyüklüğü" [2014 Market Size of E-Commerce in Turkey], Turkish Informatics Industry Association (2015) illustrates the market size of e-commerce in Turkey as 18.9 billion TL with 945 sites. 384 only online sites generate 6.5 billion TL, 326 travel and vacation sites generate 6.8 billion TL, 272 multi channel retail sites generate 3.5 billion and 6 online legal betting sites generate 2.1 billion TL (p. 8).

Büyükyıldırım (2015) claims, just in 3 years period internet users will be over 53 million, e-commerce customers will be over 16 million and e-commerce volume will increase more than 50 percent.

4. Research Methodology

4.1. Aim of the Research

The primary aim of this research is to advance the understanding of online shopping behavior in Turkey. This research examines device usage, the reasons behind to shop or not to shop online, online shopping category and e-commerce site preferences, payment methods, international e-commerce and online marketplace usage. While the principle objective of this research is to find out online shopping behavior in Turkey, demographics are also examined.

4.2. Research Sample

The sample is chosen randomly from the potential online shoppers who use at least one of computer, smartphone or tablet. In order to find out general online shopping behavior, an online survey is conducted. The survey is assured to be accessible via computer, smartphone or tablet. The survey is sent via email to the selected individuals; also social media networks Twitter and Facebook are used to reach a wider audience. In addition to the social media networks and email, the survey is also broadcasted on mobile messaging application Whatsapp to the selected contacts. The sample contains 234 individuals. Answering the survey takes around 2 or 3 minutes.

4.3. Research Findings

Gender

Percentage of women participants is 60.3 with 141 individuals and percentage of men participants is 39.7 with 93 individuals. Gender breakdown is shown on Figure 4.1 below.

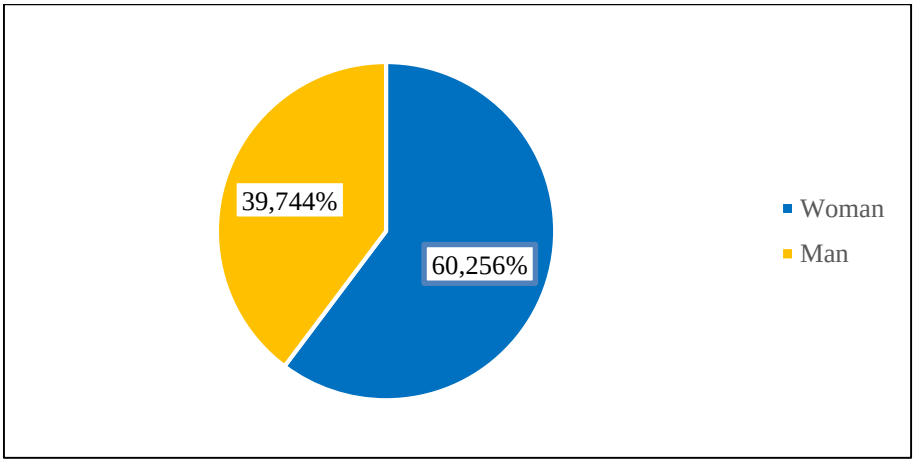

Figure 4.1: Gender of the participants

Age

Age of the participants differentiate between 22 and 41. The average age of the participants is 29.4. The standard deviation is calculated 4.2082 and in 90 percent confidence level z=1.645. The survey is 90 percent confident that the true mean of the population is between 22.53 and 36.37.

Education

153 individuals which is 65.4 percent of the participants are graduated from a university. 30.8 percent with 72 individuals master degree follows the university graduates. While doctorate graduates are just 2.6 percent with 6 individuals, high school graduates are 1.3 percent with 3 individuals. Education breakdown is shown on Figure 4.2.

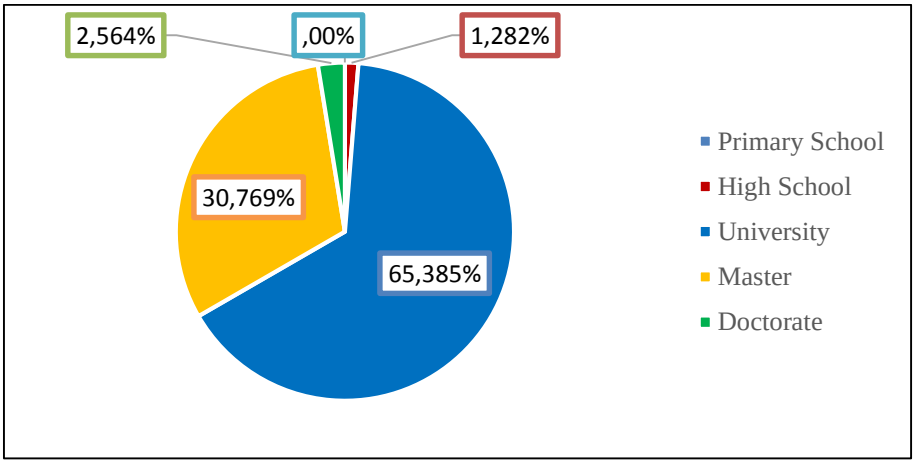

Figure 4.2: Education breakdown of the participants

Occupation

24 participants which is 10.3 percent of total, stated that they are unemployed. 15 participants which is 6.4 percent of total, stated that they working in a part-time job, and the rest, 195 participants which is 83.3 percent of total stated that they work in a full-time job. Occupation breakdown is shown on Figure 4.3 below.

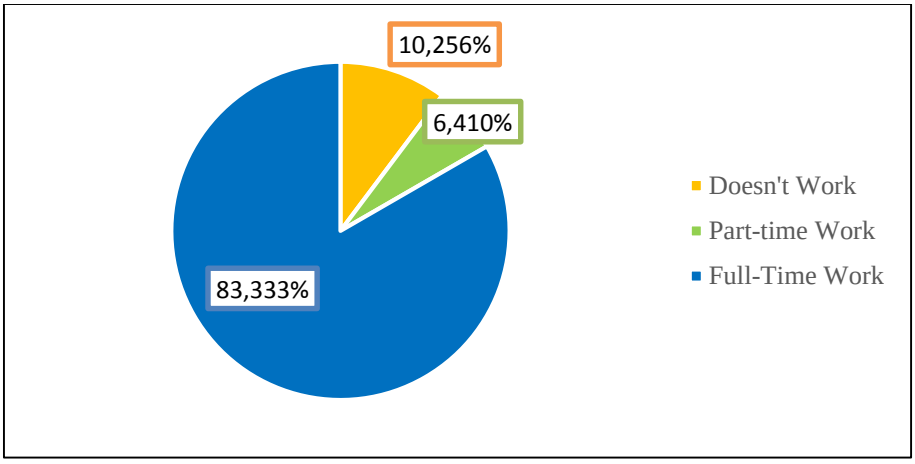

Figure 4.3: Occupation breakdown of the participants

Device Ownership

Multiple selection was allowed in device ownership question. Even if they don't own a computer or tablet, all of the participants stated that they own a smartphone. 3 participants which is 1,3 percent of total, stated that they have smartphone only. While 51 participants which is 21.8 percent of total stated that they own a computer and a smartphone together, 180 participants which is 76.9 percent of total stated that they own a computer, a smartphone and a tablet all together. Average number of device owned by each participant is 2.8.

Time Spent on Devices

The range of hours spent on computer is between 0 and 15 while it is between 1 and 18 for smartphone, between 0 and 3 for tablet. In average, 7.2 hours is spent on the computers per day even as 5.8 hours is spent on a smartphone and 1.0 hour is spent on a tablet.

Online Shopping Situation

228 individuals by 97.4 percent of the participants stated that they have shopped online while only 6 individuals by 2.6 percent stated that they have never made online shopping.

The Reasons Not To Shop Online

Multiple selections was allowed in this question. Among the participants who never shopped online, need of inspecting products physically is outstanding from the other reasons by 50 percent. Security concerns follow it by 33 percent and product availability by 17 percent come after. The reasons not to shop online are shown on Figure 4.4 below.

Figure 4.4: The reasons not to shop online

Preferred Devices To Shop Online

Multiple selection was allowed in this question. Online shoppers among the participants prefer computer and smartphone mostly by 32 percent. Computer, smartphone and tablet all together are preferred by 29.4 percent while only computer is preferred by 21.5 percent. Only tablet by 6.6 percent, only smartphone by 5.3 percent, computer and tablet together by 3.9 percent and lastly smartphone and tablet together by 1.3 percent follow in preference for the device to shop online.

The Reasons To Shop Online

Multiple selection was allowed in this question. "Saving time" is outstanding from the other reasons by 72 percent. Delivery directly to home or office follows by 71 percent, easier shopping experience by 62 percent, product/price comparison by 61 percent, better prices by 54 percent, getting product information easily by 39 percent, online exclusive products by 26 percent and free delivery by 20 percent come after. The reasons to shop online are shown on Figure 4.5 below.

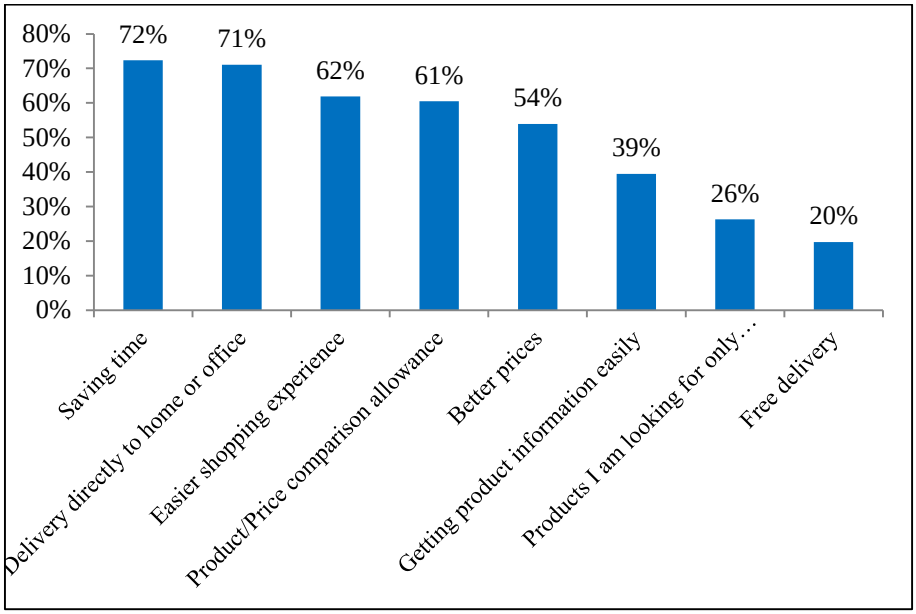

Figure 4.5: The reasons to shop online

Most Preferred Online Shopping Categories

Multiple selections was allowed in this question. Travel and bookings category, which is like purchasing plane tickets or booking hotel rooms, have been stated as preferred online shopping category by online shopper participants in 100 percent. Fashion by 79 percent comes after, financial services and congrats-souvenir categories both by 70 percent follow. Grocery shopping has been stated as preferred online shopping category by 43 percent while technology gets the least preferred category by 39 percent. The most preferred online shopping categories are shown on Figure 4.6 below.

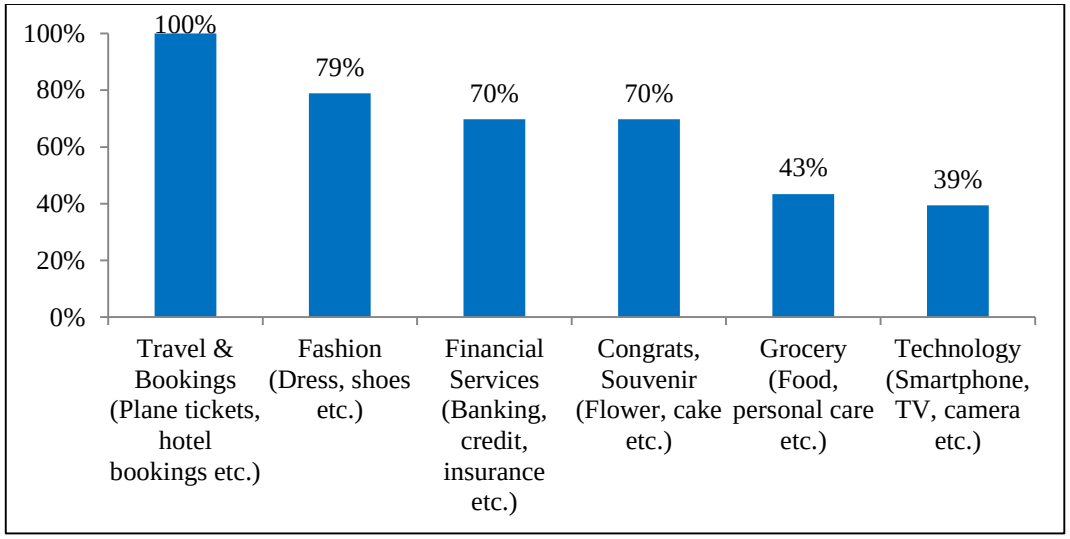

Figure 4.6: The most preferred online shopping categories

Most Popular Local E-Commerce Sites

Multiple selections was allowed in this question. Hepsiburada.com has been stated as preferred local e-commerce site by 55 percent among the participants who shop online. While markafoni.com has been preferred by 49 percent, trendyol.com by 44 percent, gittigidiyor.com by 38 percent and sahibinden.com by 37 percent follow. N11.com by 26 percent, mobile application Getir by 22 percent, teknosa.com by 14 percent, kliksa.com by 8 percent and shopigo.com by 8 percent come after. The most popular local e-commerce sites are shown on Figure 4.7 below.

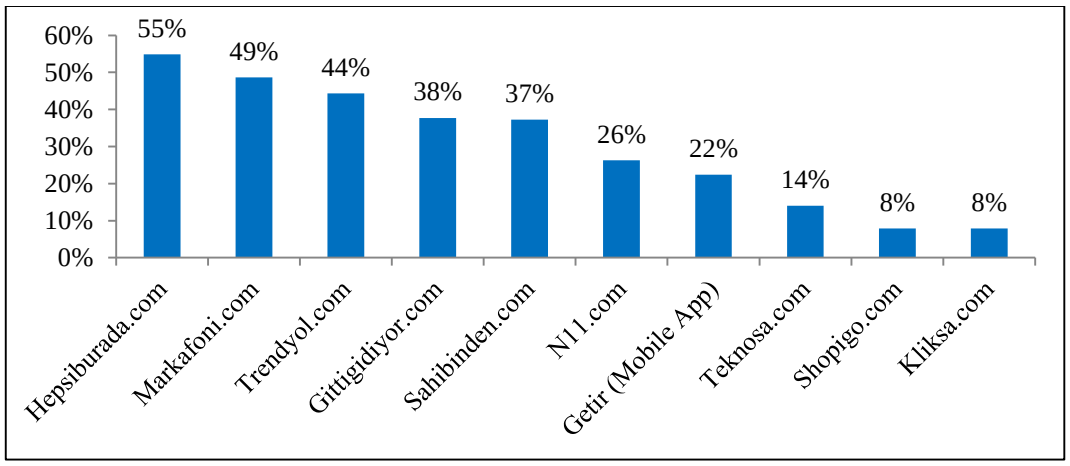

Figure 4.7: The most popular local e-commerce sites

International E-Commerce Usage

161 individuals, which is 70.6 percent of all participants who shopped online, have stated that they shop on international e-commerce sites while 67 individuals which is 29.4 percent of all participants who shopped online have stated that they do not.

Reasons To Shop On International E-Commerce Sites

Multiple selection was allowed in this question. Product unavailability in Turkey has been stated by 85 percent of the participants who shop on international e-commerce sites. Better prices by 47 percent follows, easier user experience

and free delivery option come after by 7 percent for both. Reasons to shop on international e-commerce sites are shown on Figure 4.8 below.

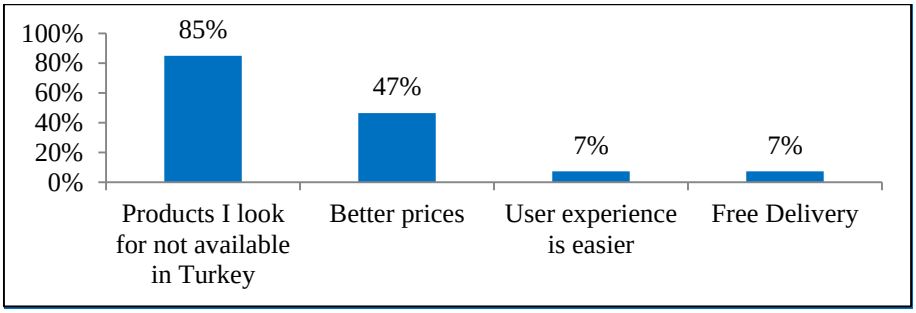

Figure 4.8: Reasons to shop on international e-commerce sites

Most Popular International E-Commerce Sites In Turkey

Multiple selections was allowed in this question. Amazon.com has become the most stated site among the participants who shop on international e-commerce sites by 81 percent. Ebay.com by 59 percent and Asos.com by 36 percent come after. Alibaba.com and Aliexpress.com have been stated by 25 percent and 24 percent in order. The most popular international e-commerce sites in Turkey are shown on Figure 4.9 below.

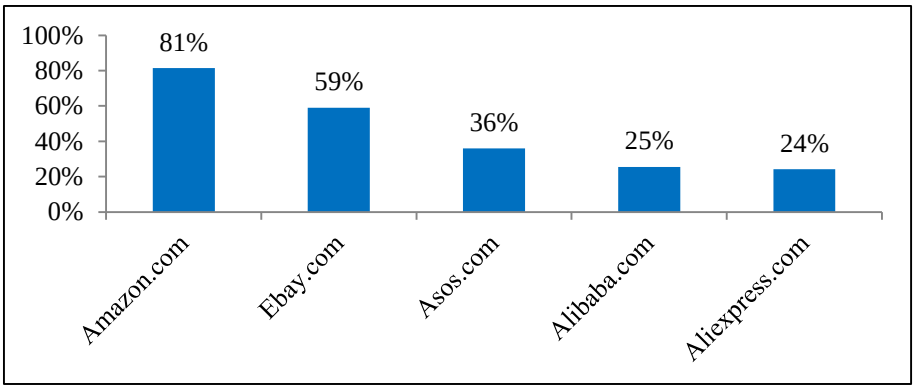

Figure 4.9: Most popular international e-commerce sites in Turkey

Payment Methods While Shopping Online

Multiple selections was allowed in this question. Credit card method has been stated by 97 percent of the participants who shop online. Digital payment tools like Paypal etc. have been stated by 33 percent, debit card by 16 percent, cash at the door by 9 percent, money transfer by 5 percent and mobile payment by 3 percent follow. Payment methods while shopping online are shown on Figure 4.10 below.

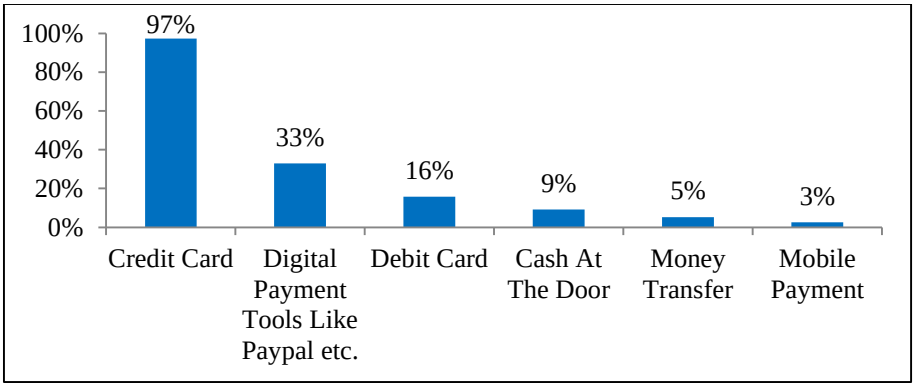

Figure 4.10: Payment methods while shopping online

Selling A Product On C2C Sites

105 individuals by 46.1 percent of all participants who shopped online have stated that they have sold a product on C2C e-commerce sites while 123 individuals by 53.9 percent have not.

Purchasing A Product On C2C Sites

161 individuals by 70.6 percent of all participants who shopped online have stated that they have purchased a product on C2C e-commerce sites while 67 individuals by 29.4 percent have not.

5. Conclusion

In order to have a better understanding of online shopping behavior in Turkey, conducted survey results have been analyzed. From 234 participants, 141 of them are women by 60.3 percent and 93 of them are men by 39.7 percent. While age range of participants is between 22 and 41, average age is 29.4. Most of the participants are graduated from a university by 65.4 percent, master degree by 30.8 and doctorate degree by 2.6 are observed as education level. Majority of the participants have stated that they work full-time by 83.3 while 10.3 percent have stated that they do not work.

All of the participants have at least a device from computer, smartphone or tablet. Smartphone is owned by all of the participants. While the largest range is in time spent on smartphone, which is between 1 and 18 hours, the average time spent on devices per day are, 7.2 hours on computer, 5.8 on smartphone and 1.0 hour on tablet. Most of the time is spent on computer or smartphone on daily basis. Since the smartphones are owned by all of the participants and time spent on smartphones is high, mobile site and mobile application production or development may be considered by the e-commerce companies.

97.4 percent of the participants have stated that they shop online. The participants who do not shop online, state the main reason not to shop online as their need to inspect product physically by 50 percent, security concerns by 33 percent and product unavailability on internet by 17 percent come after.

One of every 3 participants have stated that they prefer computer and smartphone to shop online. 29.4 percent of the participants has stated that they use computer, smartphone and tablet for online shopping purposes.

The most specific reason to shop online has observed as "saving time" by 72 percent of participants who make online shopping. Instead of going to a physical store and make shopping there, people prefer to shop online and save time for other purposes. "Delivery directly to home or office" is the second most specific reason to shop online by 71 percent so it can be considered as people do not will to carry packages or bags along them but recieve them at home or office. In the light of these two major results, time saving and delivery concepts can be the focus in e-commerce marketing campaigns. While 62 percent thinks e-commerce provides an "easier shopping experience", 61 percent states "product/price comparison alllowance" is one of the reasons to shop online. As 39 percent states

"getting product information easily" is one of the reasons to shop online, it can be considered as accessible information and comparisons are drivers of e-commerce. Of course "better prices" are stated by more than half of the participants. Online exclusive products and free delivery options followed these reasons by below 30 percent.

"Travel and bookings" category has been observed as the most shopped category among all online category options by 100 percent. Secondly, "fashion" category comes by 79 percent. So it can be said that travel and fashion industries enjoy the e-commerce mostly. The third place is shared between "financial services" and "congrats-souvenir" categories by 70 percent. "Grocery" category has been observed by 43 percent, so it can be argued there is an opportunity for potential growth. "Technology" category has been observed as the last preferred category by 39 percent, so it can be argued that people tend to inspect or try expensive products physically before they make the purchase decision.

Hepsiburada.com has been stated as the most popular local e-commerce site by 55 percent. Secondly Markafoni.com by 49 percent and at the third place trendyol.com by 44 percent follow. Top 3 local e-commerce sites can be considered as under dominance of mass and fashion markets. C2C platforms Gittigidiyor.com and Sahibinden.com have been observed in similar percentages, by 38 and 37 percent in order. N11.com by 26 percent followed by Getir by 22 percent, Teknosa.com by 14 percent, kliksa.com and shopigo.com both by 8 percent. It can be discussed that less popular e-commerce sites may invest in marketing to increase awareness.

International e-commerce sites are used by 70.6 percent of the participants who shop online. The main reason behind it has been observed as "products I look for not available in Turkey" by 85 percent. It can be argued that if unavailable products are distributed in Turkey, distributors can find theirselves a market. "Better prices" by 47 percent follows, so it can be considered as prices for some products are higher than international markets or there is a misperception among the consumers. "User experience is easier" and "free delivery" both by 7 percent come after.

The e-commerce giant Amazon.com takes the leadership as the most popular international e-commerce site by 81 percent. Ebay.com has the second place by 59 percent and Asos.com has the third place by 36 percent. Alibaba.com and Aliexpress.com have very similar percentages by 25 and 24 percent in order. It can be argued that people find the products that are not available in Turkey on Amazon.com easily since it has a wide portfolio of various products.

The most preferred payment method has been observed as "credit card" by 97 percent. "Digital payment tools like Paypal etc." has the second place by 33 percent. "Debit card" method has been stated by 16 percent, so some of the consumers prefer to make the payment directly from their accounts. "Cash at the door" by 9 percent, "money transfer" by 5 percent and "mobile payment" by 3 percent come after. If any of e-commerce sites which don't accept credit cards but other payment methods, it can be claimed that their revenues would decrease dramatically.

46.1 percent of the participants have stated that they have sold a product on C2C platforms, while 70.6 percent have stated that they have purchased a product from C2C platforms. It can be considered that users tend to make a purchase more than selling a product.

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International Journal of Commerce and Finance, Vol. 2, Issue 1, 2016, 81-89

THE ROLE OF SOCIAL MEDIA ADVERTISING IN CONSUMER BUYING BEHAVIOR

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Abstract:

P Consumer buying behavior is known also as consumer decision making is the process by which individuals search for, select, purchase, use, and dispose of goods and services to satisfy require needs. This study has been designed to answer main question about the role of social media advertising on consumer buying behavior in very active field which is fashion retail industry, then determine the differences if existed in this relation regarding to the name of the brands and consumer demographics factors.

By electronic questionnaires conducted for consumers live in Istanbul-Turkey, findings showed weak relation between social media advertising and consumer need recognition, no relation at all with search for information, strong relation with evaluate the alternatives, and moderate relation for both buying decision and post-purchase behavior, as those steps represent the five steps need recognition model in consumer buying behavior.

Moreover, findings showed no changes in this relation regarding to consumer's age, and education level. However, there were changes between Females and males in the relation with consumer need recognition, and search for information. In addition, another changes regarding to income between social media advertising and evaluate the alternatives especially for consumers earn more than 5.000TL among other income groups.

Keywords: *Social Media, Social Media Advertising, Consumer Buying Behavior, Five Steps Need Recognition, Fashion Retail Industry*

1. Introduction

The emergence of Web 2.0 is one of the biggest development in the history of commerce came along with Social Media as an evolution based on the Web 2.0, this technical revolution had huge affecting in the traditional marketing approach, brought new era among marketers, an era were social media changed totally the relationships between marketers and stakeholders,

Social Media is shifting the power from marketers to consumers, because regarding to the democracy allowed in social media all users as consumers can now be in contact with each other exchanging the information about products and services, which push marketers changing their old methods to match the new needs of consumers, and contact with them in individual as possible as they can, especially in their buying behavior by using social media as marketing channel in both free as word-of-mouth and paid as social media advertising. Furthermore, advertising is simply one way that consumers learn about new products, learn about things consumers may want or need, because the more consumers know about products more choices they can make, as no one prefer to make poor choices when it comes to purchase, what social media provide is smart many choices more than poor or just many choices (Evans, 2008).

This study tries to highlight the impact of social media advertising as paid social media marketing tool in consumer buying behavior regarding to the five steps need recognition model for companies working in fashion retail industry in Istanbul city, which step has the strongest relation with social media advertising and which has no relation at all regarding to the changes in the consumer's demographic factors.

2. Literature Review

2.1 Fashion Retail Industry and Social Media

The latter part of 20th century had witnessed many development In direct marketing which become very important promotion tool used by retailers, at the same time another development in technology helped retailers to reach consumers with different ways, this developments paved the way for online retailing, the advent of the internet and the dot-com led to a host of pure play online retailers and an era of fast-moving technological innovation that touched virtually every aspect of the retail value chain, from product development and sales to operations, resulting to that a host of new channels emerged, most of them at the hand of the end consumers like social networking and viral marketing (KPMG, 2009, P7-9).

Fashion retail industry has deep roots and one of the most important types of retail industry, like most other quickly started using the internet to gain improvements in the efficiency and effectiveness of operations and marketing. Nevertheless, consumers are increasingly using internet to make extensive amount of research on products and fashion trends before purchasing through and media, also making more and more online purchase (Tuhnainen, Rossi, 2012).

There are some notable studies on impact of social media in fashion retailing. Dorado (2011) examines the use of social media by fashion retail companies, and how they use it to effectively reach their target audiences, and how their audiences are responding, then examines why people choose to create relationship with a particular fashion brand via social media. Another study by Preece (2012) deals with social media as public relation strategy. Moher (2013) studied social media as a marketing strategy and how it affects the market shrinkage in fashion and luxury markets. It can be concluded by all three studies mentioned that consumers like to be in contact with fashion brands in social media platforms, which push fashion retail companies to give a huge interest to social media as marketing channel.

2.2 Consumer Buying Behavior and Social Media

According to Khan (2006) all of us are consumers, we consume daily regarding to our needs, preferences, and buying power, which open the door for too many questions about what to buy? How we buy? Where and when we buy?

In addition, when we say consumer we refer to two types of consuming unites, first one is the organizational consumers like business organizations, government agencies, or non-profit organizations, second one the final consumers like individuals, families, or households (Al-jeraisy, 2008, P43). For sure within this project we are going to focus on the second type which represents the final consumers as the field we applied in is the fashion retail industry.

2.2.1 Five Steps Model to Consumer Buying Behavior

Consumers are the focus of all retail decisions, many questions had been asked about how consumers decide upon what product to buy, the brand, and the store to buy them from. Therefore, it is important to appreciate how consumers making their buying decisions. There are many models try to explain the process of consumer buying behavior, but in this project we will focus on the famous five steps of need recognition starting from the first feeling of need to take the buying decision through searching for information and evaluate the other alternatives, then finally after purchase behavior.

1. Need Recognition:

The buying process starts when people recognized that they have unsatisfied need, while unsatisfied need actually arises when consumer satisfaction differ from his or her present level of satisfaction (Levy, Weitz, 2004, p.111). Moreover, need arousal can be triggered by external environment or internally from the buyer itself, needs themselves arise from either physiological (biogenic) or psychological (psychogenic) states, and once a need has been aroused the buyer seek out way to satisfy it (Sullivon, Adcock, 2002, p.52). Cox & Brittan (2004) says that consumers as human have certain fundamental needs can be satisfied in quite simple ways but when it needs some complex requirements it is become a problem, the natural response to this problem is to seek a solution which lead to search of information (p.79), in other words it is reasonable to suggest that consumers are looking to satisfy needs when they buy products or services (Semenik, 2002, P152).

2. Information Search:

Once the consumer has recognized a need, it is often not obvious what the best way to satisfy that need would be (Semenik, 2002, P153), therefore, this stage is concerned with gathering information and processing it to allow consumer to move towards a purchase decision, and this search can involve information retrieval from the buyer memory (internal) as well as external search if internal information is insufficient (Sullivon, Adcock, 2002, p.52). Semenik (2002) explained in more details what internal and external information search are, regarding to him Internal Information Search drawing in personal past experience and prior knowledge and maybe all that is required to make the decision, thus it is important for promotion function in this stage to focus on beliefs and attitude of consumers, but when it is not enough the External Information Search will be important to help consumers collecting information they need which most of the time will be by searching about others experiences like friends and relatives, nowadays social media become the major tool for this kind of research to read and see what other people writing and saying about other brands. Moreover, marketing efforts at this stage should increase the amount of information available to consumers about products they are searching for (Al-jeraisy, 2008, p. 90-91).

3. Evaluation of Alternatives:

This stage is an extension of the previous one, once the required information is available, the buyer will begin to evaluate each purchase option with the aim of gradually reducing the list of possible purchases to one. Actually this process will developed a strong purchase intention within the mind of buyer which lead to expected purchase unless some problems arise in the period between intention development and final purchase (Sullivon, Adcock, 2002, p.53). In addition, Semenik (2002) explain that evaluative the alternatives could be structured by the consumer's consideration set which mean subset of brands from a particular product category, and evaluative criteria which include many other factors such as price, warranty, or colour (P154).

4. The Buying Decision:

It is not a single decision but a bundle of decisions, any one of which can result in a change of mind and an alternative route being followed (Cox, Brittan, 2004, p.80). Moreover, if we want to get specific in retailing Levy & Weitz (2004) says that consumers may not buy the product which is the highest in the list of evaluation, for sure it gives the great benefit but it may not be available in the store or it risks outweigh the potential benefits (p.122).

5. Post-Purchase Evaluation:

Once the purchase has been made, evaluations continues so consumer can feel that he made the right decision which meet the expectations as we called it Post-purchase satisfaction, or Post-purchase dissatisfaction if the evaluations does not meet the expectations (Sullivon, Adcock, 2002, p.53). Again promotion can play very good role in this case to make sure that consumers will be satisfied by creating appropriate expectations for a brand's performance before a purchase and by helping the consumer who has already bought the advertised brand to feel good about doing so (Semenik, 2002, P155).

Figure 1: Five steps need recognition model

It is very important for this project, after getting through consumer behavior and buying decision, to determine how social media can affect consumer behavior in general and consumer buying behavior in specific to be a start point for determine the role of social media advertising on them regarding to other studies related to this subject.

2.3 Social Media Advertising

Social media can be defined as "a group of internet-based applications that build on the ideological and technological foundations of web 2.0, and that allow the creation and exchange of user-generated content". (Kaplan & Haenlein, 2010, P60). Moreover, Social Media Advertising can be definde as "An online Ad that incorporates user interactions that the consumer has agree to display and be shared. The resulting Ad displays these interactions along with the user's persons (picture and/or name) within the Ad content" (IAB, 2009, P4).

Advertising is very important tool in promotion mix for all kind of organizations usually it refers to one-way communication in any mass media. The American Marketing Association define it as " the placement of announcement and persuasive messages in time or space purchased in any of the mass media by business firms, non-profit organizations, government agencies, and individuals who seek to inform and/or persuade members of particular target market or audience about their products, services, organizations, or ideas". However, with the development of the internet and online world especially social media environment, a lot of changes happened in advertising, in its capabilities and functions which require a new paradigm (L.Tuten, 2008, P2).

Regarding to L.Tuten (2008, P3-5) there are many differences between traditional advertising and social media advertising. First difference is the form of media, while traditional advertising tied with the "mass media" include television, radio, print, or outdoor, advertising by social media might mean both one-to-one advertising through permission-based, and targeted messages, or it could be mass coverage using a display ad, when defining advertising for online media, the size of the audience should not be used as a defining factor of advertising.

Second, traditional advertising must be paid communications, it is the fact in each definition of advertising since this concept appears, on the other hand social media advertising could be totally free and unpaid or it can be indirectly paid as the case in some aspects of social network advertising like paid ads on Facebook.

Third, traditional advertising has been viewed always as on-way communication from the marketers to the target audience through some traditional media, but with the world of web 2.0 it is become truly enable for two-way or

even multi-way communication between firms and consumers, and this is the case in social media advertising and online advertising in general.

Forth, traditional advertising relied on a model of interrupting consumers lives, but consumers accepted this interrupting sometimes because it represent a free tool to know about brands via television or radio ads.

3. The Research Methodology

Regarding to Nielsen (2013) since social media as concept appear most of marketers used the benefit of its free tools, but after 2009 there were increasing in using of another method which represent the paid social media marketing and by 2012 about 75% of marketers indicated that they use this paid method with about 10% of their overall online budget, 64% of them was assuring that this amount of budget will increase in the future. Moreover, with question to identify which form of paid social media marketers regularly use, the overwhelming majority use Facebook ads (90%), followed by LinkedIn ads (20%) and twitter ads (17%) (Stelzner, 2014).

Nevertheless, fashion retail industry is not out of this, it is for sure part of competition war, were most companies and retailers working in this field using social media sites with both free and paid methods to promote their products, regarding to Demirtas (2012) one out of two active internet users in Turkey do shopping through the internet mostly with fashion categories like clothes and shoes. Thus, in this study researcher will try to analyze how one of social media marketing tool which is paid social media advertising influence the buying behavior of end users regarding to the different brands they will find and consumers demographic factors in Istanbul city were fashion is very important trend. With regard to this, the research problem of this study can be formulated as the following question:

Is there a role of social media advertising on consumer buying behavior in fashion retail industry in Istanbul?

It is known that consumer get throw process when he decide to buy anything weather the buying happened online or offline, and there are many model to explain this process but the most important one is the need recognition five steps (need recognition, search for alternative, evaluate the alternatives, take the decision, evaluate the decision). Therefore, it is very important not just to determine the impact of social media advertising on consumer buying decision but also to specified which step was the most affected one. Regarding to that we can form the first hypothesis as:

H1: there are meaningful relation between social media advertising and consumer buying behavior in fashion retail industry.

Moreover, It is known that consumers differentiated regarding to their demographics factors like Age, Gender, income, education level…etc. which mean that the impact of social media advertising on consumer buying behavior could be different as well regarding to main changes on consumers characteristics, and the secnd hypothesis will be:

H2: there are differences in the way that social media advertising will affect consumer buying behavior regarding to the consumers demographic factors in fashion retail industry.

The overall process and idea of data collection follows a particular strategy that helps minimize cost and increase the efficiency by providing valid information. It is ensured that reliable data is provided within the present study. Regarding to that some further questions which related to the survey researcher put it and then answered them like: Who were the respondent people? These were the people from social media sites: Facebook, LinkedIn, Instagram and Twitter and also from the online survey website named "survey monkey". How the questionnaire got distributed? It got distributed via email and by leaving it on the online survey website, and social media platforms. How the filled out forms got received by the researcher? These were received via email, online survey website, and 'Drive' application of docs-google.

During an academic research, it is always very essential to remain within the circle of ethics and within the formalities. The researcher has been careful in this regard and no particular brand has been under criticism. The questionnaires have been distributed to the consumers with the relaxation that identity of none will be disclosed and will be treated as confidential. Moreover, it is not the name of the person that has to be addressed but it is rather the mind-set of the consumers with respect to the buying decisions that they make so as to get a better perspective of marketing within Istanbul-Turkey.

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4. Results and Discussion

Table1: Regression scores for the five steps need recognition theory

Buying behavior Step	Sig.	Correlation (r)
Need Recognition	0.000[b]	0.246[a]
Search for Information	0.596[b]	0.031[a]
Evaluate Alternatives	0.017[b]	0.737[a]
Take the Decision	0.036[b]	0.526[a]
Post-Purchase behavior	0.019[b]	0.331[a]

There From table one we can see that the probability of (F) statistics is in order (0.000, 0.017, 0.036, and 0.019), less that the significant level (0.05) which mean that we have enough evidence to reject the null hypothesis for the steps (Need recognition, Evaluate the alternatives, Take the decision, and Post-purchase behaviour). Thus, there are relation between the social media advertising and those four steps. However, from the R scores we can see that this relation differ regarding to the steps as it can be weak in the first step with (0.246) and strong with the third step with (0.737), and more moderate regarding to the fourth and fifth steps with (0.526) and (0.331) in order.

On the other hand, we can see that the probability of (F) statistics is (0.596) more than the level of significant (0.05) for the second step (search for information). Therefore, there is no enough evidence to reject the null hypothesis which mean that there is no relation between social media advertising and search for information. We can indicate from this results that consumers do not rely on social media advertising to find information about the products they want to buy in Istanbul city as they prefer to use social media advertising mostly evaluate the alternatives.

Moreover, from the table 2, we can see that there are no differences in the consumer buying behaviour regarding to the Gender, Age, and Education level as the probability of (F) statistics is in order (0.647, 0.540, 0.082) more than the significant level (0.05), as we do not have enough evidence to reject the null hypothesis, which mean is that the buying behaviour of consumers did not change regarding to their gender, age, and education level. On the other hand, the probability of (F) statistics is (0.029) less than the significant level (0.05) in the Income factor, which mean that we have enough evidence to reject the null hypothesis and accept the alternative one, and that mean there are differences regarding to the Income on the consumer buying behaviour. To be more specific the Post-Hoc LSD analysis have been done to determine the differences exist between which categories in specific.

Table 2: Demographics factor One-Way ANOVA test results:

Demographics Factor	Sig.
Gender	0.647
Age	0.540
Education level	0.082
Income	0.029

From Table 3 we can see that the P value for category number four in income which is 'above 5000 TL' always less than the level of significant (0.05), and the mean differences is always significant at the (0.05) level for this category, we can see that clearly in the last section of the same table. Indeed, the mean difference between 'above 5000 TL' and '500 TL- 900 TL' (-0.90) at (0.007) significant which reflect the biggest difference between income categories when consumer evaluate the alternatives. However, this differences existing with second category '1000 TL- 300 TL' with mean differences around (-0.68) at (0.02) significant, and third category '3100 TL- 5000 TL' with mean differences around (-85) at (0.005) significant.

Table 3: Multiple Comparisons to income categories regarding to consumer buying behavior

Dependent Variable: Consumer Buying Behavior

LSD

(I) Salary	(J) Salary	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
500 TL - 900 TL	1000 TL - 3000 TL	.21609	.22042	.328	-.2187	.6509
	3100 TL - 5000 TL	.04844	.23035	.834	-.4059	.5028
	Above 5000 TL	.90000*	.32922	.007	.2507	1.5493
1000 TL - 3000 TL	500 TL - 900 TL	-.21609	.22042	.328	-.6509	.2187
	3100 TL - 5000 TL	-.16765	.17144	.329	-.5058	.1705
	Above 5000 TL	.68391*	.29106	.020	.1098	1.2580
3100 TL - 5000 TL	500 TL - 900 TL	-.04844	.23035	.834	-.5028	.4059
	1000 TL - 3000 TL	.16765	.17144	.329	-.1705	.5058
	Above 5000 TL	.85156*	.29865	.005	.2625	1.4406
Above 5000 TL	500 TL - 900 TL	-.90000*	.32922	.007	-1.5493	-.2507
	1000 TL - 3000 TL	-.68391*	.29106	.020	-1.2580	-.1098
	3100 TL - 5000 TL	-.85156*	.29865	.005	-1.4406	-.2625

*. The mean difference is significant at the 0.05 level.

5. Conclusion:

The motivate of the research was triggered by personal interest in how paid social media advertising effect consumer buying behaviour regarding to the five steps need recognition model of buying decision, in new report for social media examiner website indicate that around 94% of marketers used paid social media advertising in Facebook for both B2B and B2C, less than this percentage but still important in other social media platforms. Therefore, the research was carried out to measure if a relationship is existing between this paid method and each step of the need recognition buying decision model and how much this relation is strong, applied in very important field in Istanbul-Turkey which is fashion retail industry.

The research finding has showed relation in range between moderate and strong regarding to the whole model. However, third step 'evaluate the alternatives' has the strongest relation with social media advertising comparing with other steps, contrariwise the second step 'information search' have no relation at all with social media advertising. Thus, researchers totally believe that social media advertising have an impacts on consumer buying behaviour, and recommend marketing managers whose working in fashion retail industry for both brand direct marketing or as retailers to design their social media advertising as a comparative advertising and avoid providing information about the product itself as consumers don't rely on social media advertising as a source for information searching, at the same time it is important to study the differences in the demographic factors if there are regarding to the results in this study when they design the advertising. In addition, it is very important to taking into account the limits of this

study, and be careful to generalize the results in two areas first one which is the place as this research conducted in Istanbul one of the biggest cities in Turkey but results could not be the same for other cities inside Turkey or in other countries, second one is the field which is fashion products as a part of shopping goods from apparels and shoes and again this results could change regarding to other product category like convenience goods or some types of specially goods.

Moreover, researcher recommend future studies for each step alone from the need recognition model specially for the second and third steps as they reflect that there is no relation and the strongest relation in order, and recommend future studies for differences in social media platforms regarding to using paid social media advertising and its impact on consumer buying behaviour, considering the limited time and scope of this research, it would be undoubtedly useful and interesting to have a case fashion company and apply social media advertising for this company in different platforms as scenarios offer a comparison between those platforms. Finally researcher recommends future studies apply on different product categories and what differences between them could be.

To sum up, in this thesis researcher tried to provide a guide could be important to be used in fashion retail industry to make sure design advertising supporting the company itself and consumers buying behaviour in a way that guaranty benefits for both sides, for sure results cannot represent all individuals across Istanbul as a whole, but researcher tried to be so close to what is the trends in general regarding to the sample he applied the research on.

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International Journal of Commerce and Finance, Vol. 2, Issue 1, 2016, 91-101

WHY GO PUBLIC?
An EMPIRICAL ANALYSIS of IPO's COMPETITIVE EFFECT on TURKISH FIRMS

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Abstract:

The motivation of this study is to approach the IPO issue from a different perspective. Most of the studies in the existing literature deal with three broad issues which are operating performance, stock performance, and the reasons to go public. However, there aren't many studies which tackle the IPO issue from a pure competitive perspective which enables limited but clear results. This study contributes to the literature, not by answering a broad and old question but by providing new and partial evidence which seem to contradict the whole at first glance. Most of the 60 BIST (Borsa Istanbul) listed large industrial firms in this study have improved their relative ranks after their IPOs, when compared to their own large competitors most of which are not listed in BIST. These ranks are available in Turkey's TOP 1.000 Industrial Enterprises annual lists and they are officially assigned by ICI (Istanbul Chamber of Industry) according to firms' sales revenue figures. Thus, they provide us with the single and clear window to observe. Keeping in mind that this window is limited, this study comes up with some non-negligible findings and then elaborates on their significance for the IPO literature, raising more questions than answers for the sake of a more solid theory.

Keywords: *Initial public offerings (IPO), Borsa Istanbul (BIST), Competitive Effect, Finance and Product Market Competition, Large Industrial Firms*

1. Introduction

There is a vast amount of studies on IPO subject which can be divided into at least three broad categories. Naturally, first of them is the basic question that why do firms go public. More specifically, why the motivation to do an IPO does ever exist and why it is stronger in some situations or times. There are a few theories in the literature, including entrepreneurs' chance to sell their companies/shares to a higher price (Zingales, 1995), control regain opportunity for entrepreneurs in favorable conditions (Black and Gilson, 1998), raising funds for further growth (Pagano et al., 1998), allowing more dispersion of ownership (Chemmanur and Fulghieri, 1999), inspiring more faith in the firm (Maksimovic and Pichler, 2001), first-mover advantage (Schultz and Zaman, 2001), IPO timing models based on asymmetric information (Lucas and McDonald, 1990), and window of opportunity due to investor sentiment (Baker and Wurgler, 2000). These are just some examples for the first category. The second category, short/long term stock performance after IPO, has very much to do with the concept of 'underpricing'. The main theories trying to explain it can be grouped as the ones which focus; asymmetric information between issuers and investors, legal liabilities of the issuers, share allocation concerns, and valuation methods. A very good review of these issues is available in Ritter and Welch (2002). However, neither stock performance nor the reasons and timings of IPOs is interesting for us for the time being, because the core subject of this study falls to the third and the last broad category which is operating performance before and after an IPO. Our interest in this latter category was aroused by a naive question that we

want to answer and also by the availability of a very good dataset to help us come up with that answer. That basic question is 'whether going public is a really bad signal, in general, for the future of the firm itself or not'. The important thing here is that we focus our attention on the firm itself and not on issuers, investors, or other third parties such as government bodies. Sure, we are aware that even this narrowed version of the issue has many dimensions to consider, but if we were forced to make a sweeping generalization, the quick and dirty result, from the literature, would be poor overall operating performance after IPOs. This is something that the authors of this study and some other researchers find hard to believe and to say out loud. Main reason for this ignorance is that one can, within seconds, think of many possible theoretical/practical reasons for things to go well for IPO firms. Secondary reasons are supplied by our own market experience and the results from a few related studies from the literature. Thus, we hypothesized that firms, at least relatively large firms if not all, would become more competitive after their IPOs. In this situation of a possible conflict, we needed to provide new, clear, and reliable evidence either for or against the seemingly prevailing claim. Istanbul Chamber of Industry's (ICI) publicly available yearly dataset came in to rescue, providing us with the actual ranks of industrial firms over the years.

The next part of this paper is a brief summary of the related literature on the effects of going public on operating performances and competitiveness of firms. Part three, first by describing the data, presents the methodology and results. The last part concludes by highlighting the main findings and possible future directions.

2. Literature Review

There are many studies on operating performance after IPO. However, only a few of them approach the issue from a competition perspective or use Turkish data. There is no study focusing on the competitiveness of Turkish large firms which have gone public in any year since 1993. Below is a brief review of the general IPO performance literature.

Jain and Kini (1994), by analyzing 682 IPOs performed during 1976-1988, find a significant decline in performance (market-to-book ratio, price/earnings ratio, and earnings per share) subsequent to the initial public offering. They also claim that there is a significant positive relation between post-IPO operating performance and equity retention by the original entrepreneurs. On the other hand, Cai and Wei (1997), relying on their regression results for 180 Japanese firms, state that managerial ownership structure is not a significant determinant of performance. Thus, for the new issue puzzle, they do favor 'window of opportunity' explanation against 'ownership'. Spiess and Pettway (1997) approach the problem from a different perspective and they claim that the only thing matters is the way the firms define an IPO. More specifically, the firms which have low corporate governance scores and see IPO as a single financing event not as a process to be planned, are more likely to be the underperformers. These papers are just some examples of studies which do not directly deal with sales growth or market share. Like the ones above, there are many studies which support underperformance hypothesis but differ in the reason(s) outlined. However, there are also some studies which do not find convincing evidence of underperformance. Brav and Gompers (1997) is one good example for this. They argue that not IPO but size matters because crises, such as the one in mid-1980s, do affect smaller firms more. When controlled for size, they do not find a significant difference between the performances of IPO firms and other firms.

There is another group of papers which find some mixed evidence on underperformance in some financial ratios but improvement in sales growth performance. Thus, this is the most interesting group for the authors of this study. One of the earliest members of this group is Kim et al. (2004). They analyze, mainly, three different operating performance measures of 133 firms quoted at Thailand stock exchange during 1987-1993. Their key measures are; sales growth, profitability of assets, and turnover of assets. For the period beginning with IPO date (t) and ending at three years later (t+3), they do find declines in all measures but sales growth. However, instead of focusing on this questionable contradiction, they focus on explaining the causes of lower profits. Main cause they find is the level of managerial ownership. When the level is intermediate, the relationship with change in profitability is negative whereas the level is high or low enough, that relationship becomes positive. Thus, naturally, they discuss these findings under the light of 'entrenchment' and 'alignment-of-interest' hypotheses. Although the variable at the center of discussion is 'profitability' here and not 'competitiveness' or more specifically 'ranks based on sales', this study is still a good example since it differentiates between sales growth and other operating measures in terms of IPO.

There are two very similar studies analyzing the IPOs at BIST some of which are the observations of our study as well. First of these two studies is Kurtaran and Er (2008) in which the sample consists of all firms which have gone

public at BIST between 1992 and 2000. The same sample of 205 firms is used in Bulut et al. (2009) but this latter study is written in Turkish. All of the three articles mentioned in this paragraph have something in common. The authors want to analyze the effects of managerial and ownership structure changes, not the IPO concept as a whole. Thus, they consider IPO event just as an opportunity since every IPO changes the structure to a degree. As another common point, they find that sales growth behavior is not like other operating measures' after IPO. This finding was promising at the beginning. However, it surely is not a direct proof of improved competitive power since none of these studies take the rivals, including also the firms which have not gone public, into account. In fact, the lack of this proof is one of the big motivations for our study. A more recent paper, Spiegel and Tookes (2015), is another study which aims to see 'competition' in the big IPO picture. Their main question is 'how one firm's decision to switch from being private to public impacts its rivals'. To answer this, they develop a continuous time model in which heterogeneous firms producing heterogeneous goods compete for consumers. Their general results imply that IPOs forecast future industry changes but do not cause them. This may seem to be in conflict with our findings. However, there are important differences in methodologies of these two studies. Firstly, their paper is more theoretical than empirical. Secondly, they focus on rivals' average profitability and market value, not the new IPO firm's rank based on sales. Finally and the most importantly, their sample includes mostly small firms with already small market shares whereas our sample consists of relatively large firms. On the other hand, Hsu et al. (2010) investigate the returns and operating performance of publicly traded competitors around the time of 134 large IPOs in their industries. They find that industry competitors experience negative stock price reactions around IPOs and a significant deterioration in their operating performance after these IPOs. They also claim that these large IPOs are responsible for this underperformance, since they see that publicly traded competitors respond positively to the withdrawal of an IPO in their industry. This finding is in line with our main finding. They say competitors become worse and we say newly public firms become better, relatively. However, there is one thing that might be important; they do not include non-public firms in the competitors group. Thus, the private rivals are missing in this picture. Chemmanur and He (2011) provide us with the missing part, since they develop a model to compare newly public firm against a non-public competitor in a set of different external conditions such as existence/inexistence of productivity shocks and IPO waves. Then they test this model empirically as well. This study has a lot to say on IPO waves but what is more interesting for us is one of their general findings; "Going public, though costly, not only allows a firm to raise external capital cheaply, but also enables it to grab market share from its private competitors". Tests of our data provide partial support for the general claim that new IPO firms grab market share from both private and public rivals. Support is partial, because our dataset includes only relatively large firms, whether they are new IPOs or private/public rivals.

To summarize this section, there is a very long literature on IPOs but the literature seems to have only recently turned its attention to the issue of competition effects of IPOs. Our study falls under this young category. Although our main question, methods, and datasets are somewhat different from these recent studies', as explained throughout the study, our main finding is not that different.

3. Data, Methodology, and Findings

We used the publicly available dataset of ICI which include, as the key variable, sales revenue figures of top 1,000 industrial firms in Turkey. ICI has been providing this yearly data since 1993 so that it was possible to create rank histories for all firms in those datasets, whether or not they are selected to be in the final sample of this study. Final sample consists of 60 IPO firms and the selection process is as follows: (1) Any of 111 industrial firms which performed an IPO at BIST (Formerly Istanbul Stock Exchange) after year 1993 is a candidate. (2) Each of these 111 firms has a "t" value representing its own IPO year. (3) The ones which have valid data for all of their own "t-1", "t", "t+1" periods are included in the final sample of 60 firms. During this process, 51 firms were eliminated because we do not have data about their performance in pre and/or post IPO periods. Absence of this data has two reasons. First, some firms do not let ICI to publish their names in some years, so we know their ranks but we do not know to which firms those ranks belong. For example, 55 of the top 1,000 firms in 2014 fall into this category. Including them was an option but we would need some assumptions in that case and we rejected to base our analyses on some questionable assumptions. Second and more important reason for the missing data is simply that some firms could not find a place for themselves in top 1,000 lists for some related periods. The reader may rightfully think that

eliminating these firms from the final sample may result in a survivorship bias and thus may provide an artificial and unjust support to the findings of this study. In fact, the opposite seems to be true, since there are only 4 firms which were in top 1,000 before their IPOs but were not in top 1,000 during or right after the IPO. On the other hand, there are 32 different examples for the reverse case, which makes one think that firms get better ranks after IPO event. As a consequence, by omitting all these firms and refusing to rely on any assumptions, we are actually purposefully reducing the probability of rejecting equal or less post-IPO performance when compared to pre-IPO performance.

Once the final sample is decided, the key variable of this study is calculated for the years around IPO by the following formula:

$$Comp_{i,t+c} = MeanRank_{si,t+c} - Rank_{i,t+c} \qquad (1)$$

where (i) represents the firm, (t) represents the IPO year of that firm, (c) is an integer between -3 and +3, and (si) represents the sector of that firm which includes itself and its competitors. 'Rank' variable is already available in ICI dataset. The dataset also provides sector codes for all firms assigned by ICI according to 'International Standard Industrial Classification of All Economic Activities, Rev.2' (ISIC Rev2).

'MeanRank' variable gives the sector average rank for the related year. From the top 1,000 list, all firms in the related sector, whether they are quoted at BIST or not, are included in the following formula.

$$MeanRank_{si,t+c} = \frac{\sum Rank_{j,t+c}}{n_{t+c}} \qquad (2)$$

where (j) stands for all firms in the related sector and (n) is the total number of these firms. As in formula (1), (t+c) represents the years around the IPO of firm (i). There may be at least three important issues to discuss here. Firstly, non-quoted firms' inclusion is necessary because we are interested in all rivals and 'not going public' may well be a wise decision at some circumstances. Secondly, 'median' could be utilized instead of 'mean' but the overall results do not change in our case. Finally, sector average/median may suddenly change from year to year, at least theoretically, since we have data for at most 1,000 firms for each year. To make things more clear, let's consider the following example. Suppose that there are only three firms in a sector in (t) moment. First firm's rank is 1, second firm's is 500, and the last firm's is 999 in the top 1,000 list. Let the second firm be an IPO firm and be in our final sample. In this case, the sector average rank is 500 and our IPO firm's performance is neither better nor worse when compared to its sector. One year later (t+1), suppose that both first and our IPO firm protected their positions at 1 and 500 respectively. However, the third firm is no longer at top 1,000 list since its rank is now more than 1,000 and we have no chance to know exactly what the new figure is. Now, the sector average is 250.5, much better than our IPO firm's rank. Applying formula 1, we should deduce that the IPO firm performed poorly and lost some of its competitiveness just after its going public. In fact, there is no such thing and our IPO firm is at least as competitive as it was one year ago. Thus, one can claim that our key variable calculation/interpretation process is clearly biased by design. Nevertheless, the important thing is that it is biased towards only one direction and this is intentional. What this design actually performs for us is to decrease the probability of failing to reject a false improvement signal for IPO firms. Fortunately, the opposite is not true since, in the actual dataset, there is no firm which was better than its sector average at a year and then was suddenly out of the list in the following year.

The idea experiment above is about only two or three firms within a sector, just to clarify something. In our real dataset, number of firms within any sector at any year is generally much more than three. Table 1 below may give a hint about this issue. As expected, the distribution is not uniform, some sectors are overrepresented, but since the motivation of this study is not comparing the sectors, this does not pose a significant problem for the time being and this issue is revisited at the findings part. However, another feature, the total number of different firms in the final dataset, is somewhat striking. 2,067 is a low figure when you compare it with a potential maximum value of 20,000 (think about a completely different firm list in each year since 1993). This means that turnover is low for top 1,000 lists, making our calculated figures more reliable for testing our hypotheses.

In fact, the total number of firms which appeared at least once in one of the top 1,000 lists is 2,371. The difference, a group of 304 firms, is missing because their sectors do not have any representatives in the final sample of 60 IPO

firms for this period. Trying to explain why these sectors seem to refrain from going public is beyond the scope of this study and it might be an interesting future work, especially for the policy makers.

Table 1. Sectoral Frequency Distribution of All Firms in ICI Top 1,000 lists

Sector Code	Number of Firms	%
321	396	19.2
311	295	14.3
322	200	9.7
384	167	8.1
352	137	6.6
383	135	6.5
371	125	6
369	116	5.6
382	93	4.5
381	75	3.6
356	74	3.6
341	53	2.6
351	37	1.8
342	36	1.7
400	30	1.5
313	27	1.3
324	20	1
332	19	0.9
361	18	0.9
390	14	0.7
Total	***2067***	***100***

Returning back to our original path, we are now ready to discuss the most important variable which is 'Comp'. 'Comp' is a very good proxy of a firm's competitive power, since it shows the relative rank against rivals. Calculating it for five different moments, from (t-1) to (t+3), for each IPO firm, enables the direct comparison of pre and post IPO periods. Results for a broader version, from (t-3) to (t+3), are also available but in that case number of firms without missing data falls from 60 to 26. Nevertheless, as Figure 1&2 illustrates, results and interpretations below are quite similar for these two cases. To compare pre and post periods, nonparametric tests were preferred because Shapiro-Wilk test results rejected normality for 'Comp t+3' ($p = .002$). Besides this fact, the same quantitative variable is measured at different times from the same sample in this study, thus Friedman test is appropriate to check whether the distributions are the same or not. Figure 2 below shows the distributions of 'Comp' variable in each of the five important periods. Friedman test statistic (30.413, $p=.000$) clearly points out a significant change in distribution through the years. Furthermore, the change seems to be in only one direction.

Figure 1. Changes in Distributions of COMP, for 26 firms from t-3 to t+3

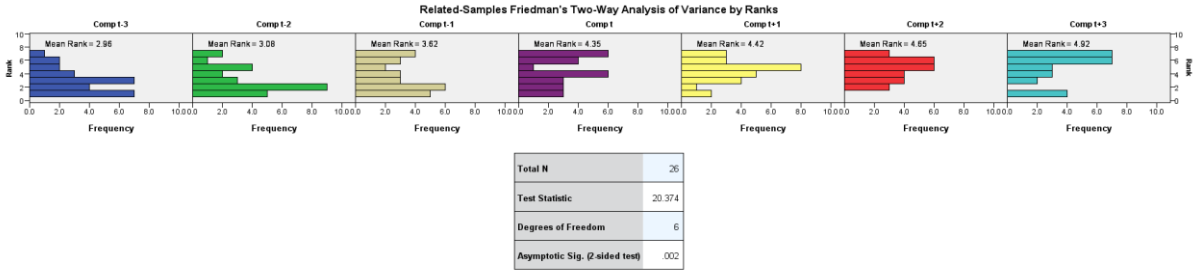
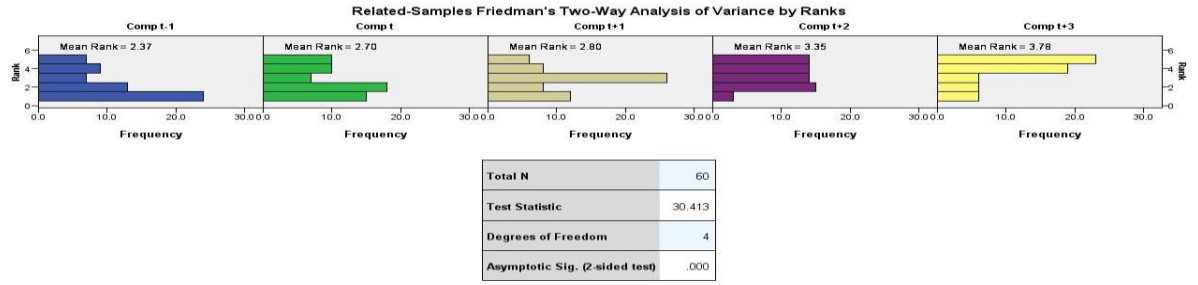


Figure 2. Changes in Distributions of COMP, for 60 firms from t-1 to t+3



Looking at these figures, especially Figure 1, readers may think that IPO firms do better than their competitors also before their IPO years. Besides, they may think that this is in line with Pagano et al. (1998) claims about growth and IPO decision and/or timing. That paper, analyzing IPOs in Italy, implies that firms are more likely to go public after large investments and abnormal growth and they might be seeing an IPO event just as a tool to raise the needed funds for additional growth. However, this is not a valid explanation in our case, for two reasons. Firstly, please remember the discussion on 36 IPO firms purposefully discarded from this study. 32 of them were not in the top 1000 list before their own IPOs, but they are successful enough to be in top 1000 list only after their IPOs. So, including these 36 firms would certainly lower the mean rank figures observed in pre-IPO periods. Secondly, IPO is not a single point event, but it is a process. The important thing is deciding to do IPO and getting ready for it and finally timing it. This process and its possible positive effects might have begun even before t-3. In other words, 'making the decision to do an IPO at a future time' might be preceding the growth as well. As Pagano et al. (1998) suggests and as the firms know, the probability of successfully going public increases according to firm size. Thus, IPO may be one of the major aims for a firm's life, not just an ordinary tool to raise fund. However, whether we see it as an important goal/aim or as a simple tool, our main finding is not affected. In the special case of large industrial Turkish firms, the competition-based results of complete IPO process seem to be favorable for IPO firms and not very good news for their (private or not) competitors.

Friedman post-hoc analysis results are presented in Table 2, for a better understanding of the aforementioned general difference in distributions. Pre-IPO ($Comp_{t-1}$) and post-IPO ($Comp_{t+3}$) values seem to be mostly responsible for that difference.

Table 2. Pairwise Comparisons of COMP, for 60 firms from t-1 to t+3

Pair	Test Statistic	Std. Error	Std. Test Statistic	Significance	Adj. Significance
$Comp_{t-1}$ - $Comp_{t}$	-0.333	0.289	-1.155	0.248	1.000
$Comp_{t-1}$ - $Comp_{t+1}$	-0.433	0.289	-1.501	0.133	1.000
$Comp_{t-1}$ - $Comp_{t+2}$	-0.983	0.289	-3.406	0.001	0.007**

$Comp_{t-1}$ - $Comp_{t+3}$	-1.417	0.289	-4.907	0.000	0.000**
$Comp_{t}$ - $Comp_{t+1}$	-0.100	0.289	-0.346	0.729	1.000
$Comp_{t}$ - $Comp_{t+2}$	-0.650	0.289	-2.252	0.024	0.243
$Comp_{t}$ - $Comp_{t+3}$	-1.083	0.289	-3.753	0.000	0.002**
$Comp_{t+1}$ - $Comp_{t+2}$	-0.550	0.289	-1.905	0.057	0.567
$Comp_{t+1}$ - $Comp_{t+3}$	-0.983	0.289	-3.406	0.001	0.007**
$Comp_{t+2}$ - $Comp_{t+3}$	-0.433	0.289	-1.501	0.133	1.000

**: Significant at 99% confidence level

In general, IPO firms seem to have improved their positions (ranks based on sales) within their sectors after their IPOs. However, we need to calculate the median of the differences to test this hypothesis. Hence, Wilcoxon signed rank test for related samples is proper here and Table 3 provides the detailed results for each meaningful term-pair.

Table 3. Wilcoxon Signed Rank Test Results for COMP, for 60 firms from t-1 to t+3

year1	**year2**	**no of positive differences**	**no of negative differences**	**Wilcoxon test score**	**p**
t-1	t	39	21	3.188	0.010*
t-1	t+1	33	27	2.282	0.022*
t-1	t+2	40	20	3.754	0.000**
t-1	t+3	46	14	4.262	0.000**
t	t+1	35	25	0.942	0.346
t	t+2	39	21	2.356	0.018*
t	t+3	43	17	3.379	0.001**
t+1	t+2	36	24	1.855	0.064
t+1	t+3	44	16	3.364	0.001**
t+2	t+3	34	26	1.980	0.048*

*: Significant at 95% confidence level

**: Significant at 99% confidence level

As seen above, the difference of 'year2' and 'year1' figures is significantly higher than zero in most of the cases. Exceptional pairs are (t) and (t+1), (t+1) and (t+2). For those periods, the difference is still positive but not significant. On the other hand, the most obvious improvement is observed at pair (t-1) and (t+3), which are the beginning and the end of this study's time period. 46 out of 60 firms seem to be in better positions against their rivals three years after their IPOs when compared to their pre-IPO ranks within their sectors. Although the number of firms, which have improved their relative positions, changes in both ways from year to year, there are at least 20 firms which showed continuous improvement till the end, beginning with their IPOs. There are 7 examples for

exactly the opposite case, but 4 of those firms are actually in better positions when compared to their pre-IPO years. 33 firms have experienced both up and downs in their post-IPO years, yet most of them enjoyed higher ranks than their pre-IPO ranks at least once. Given these facts, only 3 firms' market positions seem to have become totally worse after their IPOs. To present a general and more clear picture of these findings, we derive another variable which we call general success score (GSS). It is, as stated in formula 3, average post-IPO scores minus just before IPO scores.

$$GSS_i = \frac{\sum Comp_{i,t+p}}{3} - Comp_{i,t-1} \qquad (3)$$

where (i) represents the firm, (t) represents the IPO year of that firm, (p) is an integer between +1 and +3. Tables 4, 5, and 6, together, present detailed info on the GSS's distribution.

Table 4. Descriptive Statistics for GSS

		Statistic	Std. Error
Mean		95.43	20.73
%95 Confidence Interval for Mean	***Lower Bound***	53.95	
	Upper Bound	136.91	
%5 Trimmed Mean		98.13	
Median		116.99	
Variance		25779.45	
Std. Deviation		160.56	
Minimum		-272.64	
Maximum		447.38	
Range		720.02	
Interquartile Range		241.60	
Skewness		-0.36	0.31
Kurtosis		-0.38	0.61
N		60	

Table 5. One-Sample Wilcoxon Signed Rank Test Results for GSS

Pair[a]	**Total N**	**Test Statistic**	**Std. Error**	**Std. Test Statistic**	**Asymptotic Significance**

Observed vs Hypothetical	60	1459.000	135.840	4.005	0.000**

a: Observed median= 116.99 and Hypothetical median= 0
**: Significant at 99% confidence level

Table 6. One-Sample t-test Results for GSS

		Statistic
Total N		60
Mean Difference		95.43
%95 Confidence Interval of the Difference	***Lower Bound***	53.95
	Upper Bound	136.91

Table 6 (Cont'd)

	Statistic
t	4.60
df	59
Significance	0.000**

**: Significant at 99% confidence level

As seen above, mean and median are both significantly higher than zero (p=.000) and thus the distribution is left skewed. This is the macro-level assessment. If we look at it at micro level, 44 firms out of 60 have got a positive score. In other words, more than 73% of IPO firms seem to have enjoyed some benefits of going public and as a result increased their market shares against the closest rivals. These figures may be somewhat surprising to some readers, especially when our aforementioned strict 'final sample selection process', which obviously favors the null hypothesis of equal performance, is considered. With a more flexible missing data handling procedure, the percentage figure above would easily be more than 79% (76/96). All findings up to now lead us to a one single direction which is simply 'going public is a good option if an industrial firm cares about improving its near future market share levels'. However, before jumping into that conclusion, we should elaborate on the issue a bit more.

Whether IPO decision is the most important reason for the up and downs or not, as expected, does not have a straightforward answer. A crystal clear answer requires a thorough elimination or importance ranking process of all other possible reasons. To make things even worse, this should also be done case by case for each firm, since firm-specific attributes may always alter the process. However, fortunately, the way we derive our key variable 'Comp' inherently prevents our results from being significantly biased by time-specific and sector-specific attributes/shocks at least. If 'Comp' were an absolute measure not a relative one and/or if t moments had represented the same calendar years for all firms, we should have utilized some extra control variables to eliminate the possible biases as much as we could. But, again, we still need to assume that the effects of these external shocks are perfectly or at least almost uniform across the firms within the same sectors. Firm-specific attributes mostly come into play at this stage. In a few circumstances, they may increase the chance of a violation of the uniformity assumption above but proving, if possible at all, that they are not a significant part of the equation requires extensive case studies with a much richer dataset. However, such an effort is needless for the time being, since this study's aim is neither a factor decomposition of relative success/failure nor identifying the ideal time and conditions for a firm to go public. The aim is providing some missing evidence from an emerging market, which should never be overlooked by any comprehensive approach to IPO field.

The summary of what we have learnt from the related IPO literature and the findings of this study is that an IPO, especially a relatively large one, is bad news for the rivals. Their performance ratios, profitability being at the top of them, and their market shares as well are very likely to be adversely affected. On the other hand, this is not totally true for that newly public firm since its market share is very likely to improve. There have been a few recent direct/indirect promising attempts to explain some parts of this situation. Hsu et al. (2010) discuss the issue through

loosening of financial constraints, financial intermediary certification, and the presence of knowledge capital. Chemmanur and He (2011) deal with IPO waves and relate performance directly to timing. Going public; off the wave, during a wave, earlier in a wave, or later in a wave, does matter according to them. Each of these possibilities affects performance in a different way. Timing seems to be important also from a different perspective. Ruan and Qian (2014) results suggest that industry rivals' earnings news, during the book-building period of a first-time issuer firm, exert a competitive effect on that issuer. On the other hand, Spiegel and Tookes (2014) stress the profitability issue within the industry. They find that post IPO industry profits per unit of market share decline and customers become easier to steal. However, they see an IPO as a canary in the coal mine. In other words, IPOs do not cause danger but do just inform that something bad will happen. These attempts described in this paragraph are just some examples worth to explore further. These and alike should be tested, jointly whenever possible, in different settings. This would lead us through a sort of unified competition based theory which is required to fill a very important gap in broad IPO literature.

4. Conclusion

IPO literature is voluminous, however there are not many studies approaching the issue from a pure competition perspective. Furthermore, most of these already few studies deal with only rivals or the general changes in the competitive environments within sectors after IPOs. Thus, there is an important gap here. By directly focusing on the relative competitive powers of big IPO firms in an emerging country for twenty years, this study tries to fill this gap.

Main finding of the study is that going public seems to be a good option if an industrial firm cares much about improving its relative market share ranks. Thus, it also provides support to the idea that an IPO is generally bad news for the rivals. As discussed in the methodology part, any comprehensive IPO study should take this evidence seriously. However, before accepting it as a given and general fact, we all should see some similar results for other stock markets and different time periods. Trying a similar methodology in some different settings would be fruitful and the authors of this study sincerely believe that those new evidence would support this study's findings. After then, a natural continuation might be trying to form a sort of unified competition based theory, from the promising but not yet conclusive attempts aforementioned and may be a few new ones as well. Connecting it successfully to the broad IPO literature would finalize the issue. Without this solid connection, something will always be missing in this field.

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