

Economic Issues

Crises, Finance and
Agriculture

Editors

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ECONOMIC ISSUES

Crises, Finance and Agriculture

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INTRODUCTION

All researchers in the world have focused on how to solve recent economic problems in order to improve quality of our lives as well as wealth. To improve the quality of people's lives, as an economist, we need to investigate economic issues deeply to understand how these problems occur in the current economic system. These investigations may lead to solutions to overcome many economic problems.

During this investigation, one of the most important impediments that prevents analyst to make a comprehensive analysis is the fact that economics has multi-dimensional and multi-disciplinary characteristics.

When we think of subsections of economy, the most useful classification system was developed by "Journal of Economic Literature", is widely known as Jel Classification System. (JEL Classification Codes Guide, 2017). According to this system, disciplines of economy are ranging from macro economics and monetary policy to financial economics, from agricultural and natural resource economics to labor and demographic economics.

Among them, **economic crises** are one of the most important topics among the economist. The most important issue regarding them is re-occurrence of economic crisis. After the credit crisis of 1772, the Great Depression in 1929-39; the OPEC Oil Price Shock in 1973, the Asian Crises in 1997 and Financial crises in 2007 -2008 (Bondarenko, *Encyclopedia Britannica*) are examples that shows almost every 20 years there has been economic crises in the world. These have also been accepted as the most devastating financial crisis, which brings out the second problem- it took more than decade for things to return to normal. (Bondarenko, *Encyclopedia Britannica*)

Food and production are also essentials for sustaining of life, which reveals the importance of agriculture and agricultural economics. **Agriculture economics** is huge discipline itself and is mostly seen as related to the

economics of development; however, agriculture economic should encompass issues from investment in agriculture to land, outputs, and from price control to government subsidies. (Johnson, 2017)

Finance and a well based financial system are critical for a well functioning economy. According to Bailty and Elliot, “in addition to providing substantial employment, finance serves three main purposes: Credit provision, Liquidity provision and Risk management services” (2013) and it should have the right size to fulfill all these functions but at the same time avoid the interventionist policies by the government.

In this edition, these three topics are preferred to be studied due to their importance, but not limited to these issues. This book contains multidiscipline topics in economics such as immigration of educated people, diversification of market, and economic development in macro and micro perspective, quality of life as a reflection of the fact that economics is closely related to other scientific branches such as politics, law, ethics, sociology and psychology. Each topic contains current issues in economics.

Within this framework, the “An Inquiry into Determinants of Brain Drain; Importance of Lingual Proximities” was prepared by **Ahsan Shafique**. In his study, he focused on preference pattern of immigrants in outwardly migrating and its underlying factors among which lingual proximities stand extrusive. This study found that developed countries are likely to get four or five times greater skilled workforce from countries which share a language with them at national, official or academic level. Increased openness causes economic growth which in turn heightens human capital flight further. However at higher levels of income growth this evidence is inconclusive. Moreover, countries with relatively larger area exhibit higher emigration rates of skilled workforce farther destinations and stretched distances deject skilled workers from emigrating.

The “The Regional Convergence-Divergence Effect of the Global Economic Crisis between Turkey and the European Union” was prepared by **Yusuf Bayraktutan** and **Ömer Diler**. Authors, in this study, began their analysis with referring to the Convergence hypothesis which claims that between the investigated units (nations, regions, provinces, sectors etc.), the relatively low income unit (poor) will have a higher growth performance and will converge to the high income unit (rich). Within this scope the expectation from candidate countries is to converge to the Union criteria. They investigated the convergence after the global economic crises between East Marmara Region (TR42) of Turkey (as a EU candidate country) and regions of developed countries of EU to find out whether the global economic crises is an advantage for East Marmara Region to converge with regions of developed countries of EU or not. Speaking in the scope of their analysis, they conclude that the crisis has been an advantage for both Turkey and the Eastern Marmara Region to catch up the European counterparts.

The “What Explains the Diversification Discount? An Empirical Examination” was prepared by **Mehmet Nasih Tağ**. In his study, the author investigates the conditions under which diversification creates shareholders’ value. According to the resource based view of the firm diversification creates value when it is motivated by exploiting potential economies of scope. Thus, higher relatedness in diversification, or lower firm diversity, is associated with value creation. The agency theory predicts that diversification is a symptom of incentive misalignment between the management and investors, and thus would likely destroy value to the extent that managers in diversified firms lack high-powered incentives. Thus, value creation in diversified firms would increase as the sensitivity of management pay to performance increases. The author tests these predictions on a sample of diversified firms. The results indicate that shareholders’ value in diversified firms is negatively related to firm diversity, and positively related to CEO’s compensation based on stock options.

In the chapter, entitled “Comparing EU Countries, Turkey and Macedonia via Clustering Analysis for Quality of Life Indicators”, **Munise Tuba Aktaş** focusing on the quality of life dimension of development. According to her, improvement of the phenomenon of development to include the quality of life resulted in an increase in the focus on the topic of quality of life especially in recent years. In this context, raising the quality of life is an important challenge for developing countries. Although increasing the income level is necessary to improve the quality of life, it is not sufficient for the developmental approach today. The phenomenon of quality of life includes better education, better nutrition, better healthcare, reduction of poverty, improving employment opportunities and work conditions, equality of opportunity, clean environment, expansion of economic freedoms and wealthy socio-cultural components. In the her study, EU member countries and candidate countries, Turkey and Macedonia, were subjected to clustering analysis based on 2013 data in terms of their quality of life indicators and the objective was to identify the similar countries. At the end, she found out that in terms of the quality life indicators, Turkey was found to be close to several Southern European countries rather than Bulgaria, Romania and Macedonia are in group of countries with very high human development.

In the eight chapter, **Melike E. Bildirici and Fulya Özaksoy** prepared the “Regional Development of Turkey by Microcredit System”. In their study, they focused on opportunities, provided by microcredit system to women such as new employment opportunities and economic value-added. Since 1970s, it is implemented by small and medium enterprises of developing countries as social and economic development strategy. The first aim of their study is to examine the impacts of microcredit usage to female labor force participation and regional development of Turkey for 2004-2016 period is analyzed by Panel data analysis. The second aim is to analyze the relationship between economic growth and female labor force participation rate and prove the inversed-U shaped pattern of this relationship, like ‘Kuznets Curve’. In this regard, TR4 region (Western Marmara) of NUTS 1 (Nomenclature of Territorial Units for Statistics) in Turkey which is

designated by Turkish Statistical Institute, included Kocaeli and Bilecik provinces were considered. Empirical results of this paper demonstrate that female labor force has decisive role on the selected region's economic, social well-being and their employment structures which is essential for sustainable and regional development of Turkey. They concluded, expressing that women's increasing participation role on the economy is crucial for defusing financial and economic crisis and also, it has fundamental role on poverty alleviation. For achieving these purposes, it is necessary to promote new job opportunities by microcredit financial system is the most encouraging strategy for improving female's role on the economy. Thus, empowering conditions of women have strategic importance for a global sustainable economic development models and it is necessary to promote microcredit system to encourage female labor force participation. Increasing benefits of this system enhances development of the country.

The "Training and Development Practices in Albanian Public Administration: A Case of Study" was prepared by **Fabiola Rama and Desar Nanushi**. In this study, author aims to determine the impact of training and development on public sector organizations taking into account five institutions of Albanian public administration. The research purpose is to define the role and impact of training and development on civil servants with emphasis on specialist, supervisory and management level and whether training has improved employees' performance. To find out this, the author designed a questionnaire using closed and open-ended questions to collect primary data. After collecting the data by distributing the questionnaire to the sample institutions of Albanian public administration and processing them, the author concludes that training and development activities has not affected the performance of employees in these institutions.

The "Credit Constraints, Firm Exports And Financial Development: Evidence From Turkish Firms" was prepared by **Moussa Ouedraogo**. In this paper, he assess the impact of credits constraint on Turkish firms' exports. In doing so, data on 1344 Turkish firms has been retrieved

from World Bank enterprise survey for the period of 2013. Credits constraint is measured based on the responses given by each firm. It is a self-reported measure of credits constraints. In order to solve endogeneity issues associated with this type of measure, he controls some unobserved variables such as productivity and some characteristic of the firms. Following this precondition, a recursive bivariate probit modelling is used to capture the relation between variables. Based on the results, he finds that a credit constrained firms have the probability to export reduced by approximately 20%, others factors remained constant. The results therefore advocate for further flexibility in access to financial resources. More specifically, in the case of Turkey characterized by a huge depreciation of its currency, a reduction of credits constraint can help them face the increasing cost of imported good and facilitate penetration in the foreign market.

The “Do Agricultural Support Payments Raise Olive Oil Exports in Turkey?” was prepared by Halit Yanıkkaya and **Zeynep Aktaş Koral**. In this study, the authors empirically investigate the effects of agricultural support payments on Turkish olive oil exports for 2000 - 2014 period. It employs an aggregate export demand model by utilizing the OLS estimation method. Their study finds that although the estimated coefficients of all variables have expected signs, only domestic production and consumption of olive oil and world olive oil prices significantly affect Turkish olive oil exports. Agricultural supports payments implemented in Turkey are not effective to raise olive oil exports though. They concluded that the more domestic production and less consumption of olive oil and the higher world olive oil price, the more exports of olive oil.

In the last chapter – “Economic Efficiency of Common Property (Shamilat Land) in the Province of Khyber Pakhtunkhwa Pakistan: A Case Study of District Charsadda, **Ansa Javed Khan and Sajjad Ahmad Jan and Ghazala Yasmeen** look into the common ownership of agricultural land which has always been a source of socio, cultural, economic conflicts and other disputes. This study was conducted to explore the remedies of impediments of these divergences particularly in rural set-ups where the

issue became more accentuated as common property (land) is majorly held by elite group of the area. They made an attempt to assess the quantum of lands under common ownership and are owned by different clans in the study area. They tried to find out the relationship between the issue and consequences of Shamilat or common property with the overall effects on land productivity. Their analysis, at the end, exhibited that common ownership upon lands is major problem causing inefficiency in production of agricultural land. The overall effects of the common property of the Shamilat owners have increased conflicts among the clans and within the clans. The unequal distribution of wealth among the clans led to social disequilibrium. The unequal distribution of land has also decreased the efficiency and output of land.

Economics issues have increased rapidly in recently. Some issues are important problems which its solution really hard. This book is included papers from microeconomics, macroeconomics as well as international economics and development of economics. All chapter of this book was presented in European Congress on Economic Issues: Unregistered “Youth” Employment: Impacts, Policies, Remedies, and Local Practices. According to the feedbacks from the conference, authors improved their presentation to publish in this book. The expectancy of this book is that researchers may get new ideas, solutions and afflatus for their new studies. At the at, as editor, we would like to thank authors who sent their paper for publication in this book.

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1

An Inquiry into Determinants of Brain Drain; Importance of Lingual Proximities

Ahsan SHAFIQUE

Abstract

Intuition suggests that preference pattern of immigrants in outwardly migrating may well be studied in the underlying factors among which lingual proximities stand extrusive. Our work interestingly found that developed countries are likely to get 4-5 times greater skilled workforce from countries which share a language with them at national, official or academic level. Increased openness causes Economic growth heightens human capital flight further however at higher levels of income growth this evidence is inconclusive. Moreover, countries with relatively larger area exhibit higher emigration rates of skilled workforce nevertheless farther destinations and stretched distances deject skilled workers from emigrating.

Keywords: Brain Drain; Lingual Proximity; Brain Gain; Brain Waste

JEL Classification: F22, O15

Introduction

Recent decades have witnessed massive flow of skilled workforce from developing to the developed world in search for better standards of sustenance and living. This phenomenon is termed as 'Brain Drain' in conventional studies indicating the flight of skilled labour from source (developing) to host (developed) countries. Traditional studies regard this general trend of human capital flight detrimental to source countries since it contributes to depletion of accumulated human capital. Academic literature regarding the issue is however perplexed since other group regards outward

skilled emigration as a favourable source of remittances to source economy. Three strands of literature currently exist regarding movement of skilled human capital from developing countries, namely; ‘Brain Drain’, ‘Brain Gain’ and ‘Brain Waste’.

The first strand relates rising level of skilled workforce movement from developing (source) countries to depletion of human capital, lower productivity levels and plunging government spending on education. Economic theory suggests differences in income levels of rich and poor countries can be defined in terms of difference in education levels of their population hence ‘human capital flight’ only further adds to the misery of developing nations (Carrington and Detragiache, 1999). The proponents of this view observe governmental lassitude over investment in education as a sequel of rising outward migration of skilled workforce. Thus this brain drain process besides sweeping the existing human capital away from developing economies also dilutes future chances of human capital accumulation adding to their misery (Todaro, 1996). Moreover, the larger chunk of gain, if any, earned from cross border movement of skilled workforce is seized by the developed countries (Hamada, 1977).

On contrary, a substantial work has commented on ‘brain gain’; the advantages of high skilled emigration to source countries. Skilled emigration is seen as a primary source of huge foreign remittances flowing into developing countries annually hence providing a support to staggering economies. Moreover, this strand suggests that opponents of skilled emigration have wrongly downplayed the spillovers of human capital i.e. education, since incentives from outward emigration of skilled workforce stimulates human capital creation in source country which in turn generates an incentive for governments to increase spending on education which accelerates the process further. This is because; the possibility of higher wages abroad post-education provide individuals of source country an extra incentive to invest in current human capital (Gracia Pires, 2015). Nonetheless, due to absence of much empirical material, most of the ‘brain gain’ debate remains theoretical (Beine, Docquier & Rapoport, 2003).

Yet there exists another group of researchers with relatively newer idea of ‘Brain Waste’; the risk for skilled emigrants of falling into unemployment or ending up doing jobs for which they are over educated because of low

transferability of human capital across borders. The problem may lead to reduction of education incentives and possibility of brain gain. Some studies have drawn empirics reasserting the presumption that a skilled migrant risks higher chances of ending up unemployed in recipient country compared to unskilled (Chiswick and Miller, 2007). This further makes the possibility of gains from skilled migration dubious.

The disagreement therefore is as prevalent as in any other branch of normative studies. Nevertheless, lack of adequate empirical evidence for a widespread BBD (Beneficial Brain Drain) reasserts the need to look into causes of Brain Drain. Another rationale roots from newer economic geography models which suggest brain drain pressure to be a natural stage of global development even if initially economies start from identical phase (Commander, Kangasniemi and Winters, 2003). This strong deduction makes it indispensable to inquire into the causes of human capital flight from developing economies. Many existing studies have worked with a similar objective to investigate determinants of Brain Drain nonetheless there is increasing need to deeply study its causes by first grouping economies according to their structural homogeneities since an exodus of European scientists and emigration of Indian software engineers hardly would originate from a similar motivation (Di Pietro, 2014). Furthermore, in contrast to earlier works, in recent years, research gurus have taken into account wider range of variables besides mere wage or income differentials across countries which may potentially have contributed to surge in cross border skill transfers. Interestingly these studies have drawn correlations between brain drain and variables like source country's size (Alesina and Wacziarg, 1998) and, its peace and stability situation (Kaufmann et al., 2003).

The work under consideration is a similar endeavor. Though there exist similar works which seek to investigate the reasons for human capital flight, this work endeavors at proving itself novel in its kind; by looking at a wider panel and considering the peculiarity of lingual proximities a factor of skilled workforce migration. Thus we have tried to look into causes of emigration from developing world with special reflection on lingual proximities. Motivation comes from theoretical works appropriating pivotal role to language in shaping international migration, nevertheless, empirical niches remain vacuous especially in context of (developing) source

economies (Adsera, A. and Pytlikova, M., 2015). The concept lies in the intuition that while choosing to migrate outwardly, skilled emigrants lay ample importance to lingual proximities in formulating their decision. The lingual proximity in this context encompasses not only the situation where the source country and recipient country share an identical language. It additionally takes into account the situations where majority chunk of university graduates in resource country generally possess sound expertise of recipient country's predominant language because of English being medium of instruction in higher education institutions. Our study has thus acquired pooled data from a group of 20 developing countries with special consideration to their lingual proximities with recipient countries and seeks to address the following doublet:

- i. What are major causes of brain drain from developing economies?
- ii. Are linguistic proximities a major motivation for skilled workers in choosing their foreign work destinations?

Our results imply a strong correlation between brain drain and lingual proximities thus suggesting that it is primarily lingual propinquity of source and host countries that explains the human capital flight rather than discordance in growth of their income variables. The work here on is divided into three sections. Section two brings the literature on topic and brain drain statistics of developing world into limelight, section three comprises the empirical methodology and section four concludes the study in light of our empirical findings.

Literature

Enormous literature till date has struggled to address the questions of brain drain, its repercussions for source economies, possibilities of beneficial brain drain and determinants causing this human capital flight. Conventional literature categorically reprehended movement of skilled workforce from developing and underdeveloped countries to advanced economies for the reasons of human capital flight lowering productivity levels in a country and lowering the potential of future economic growth by acting as a threat to future human capital accumulation rooting from loss of governmental incentive to invest in education (Todaro, 1996). Therefore to

traditional writers, the exodus of skilled labour is a scourge to source economies that inflicts economies through different channels (Bhagwat, 1974, Bahgwati, 1989). Other vocalists of the opinion include Bhagwati, 1976b who rightly pointed that even if it is “surplus overflow” of skilled labour (e.g. doctors) that primarily contributes to human capital flight still it hampers the process of ‘internal diffusion’ that alternatively would force them eventually to the much needed countryside districts; if an unemployed doctor in Jakarta doesn’t have the opportunity to move to California, he would alternatively move to a much needed country side of hinterland instead of driving a cab in Jakarta i.e. non-emigration doesn’t undermine productivity levels but instead speed up the internal diffusion process of LDCs (Bhagwati, 1976a).

The converse is also true; a considerable literature has highlighted potential benefits of emigration to source countries. This pro- emigration group regards human capital flight a source of motivation for increased investment in human capital hence boosting human capital accumulation in source countries (Mountford, 1997; Stark et al., 1997; Vidal, 1998). Furthermore, proponents argue that by increase in human capital investment steering from brain drain, a byproduct of relatively bigger skilled workforce is accumulated all of which doesn’t eventually emigrate thus creating positive spillovers for the source economy (Beine et al., 2001).

However others suggest this thin achievement of ‘beneficial brain drain’ to be only possible when ex ante “brain effect” brain effect i.e. higher investment in human capital in source countries supersedes an ex post “brain drain” effect i.e. direct impact of flight of human capital however lack of sound empirics weakens the argument (Beine, Docquier and Rapoport, 2001; Commander, Kangasniemi and Winters, 2003).

Traditional literature has widely investigated factors which generate the movement of skilled workforce from developing countries (home) to developed world. These studies suggest that migrants are swayed by prospects of higher earnings abroad because of different skill premiums at home and abroad (Chiswick 2005; Grogger and Hanson, 2011; Belot and Hatton, 2012). Some older works investigated determinants besides income variables which may impact human capital flight and made interesting revelations. Aliesina and Wacziarg, 1998 found an increasing trend of

emigration from relatively smaller countries hence suggesting an inverse relationship between country size and human capital flight. Impact of peace and stability situation in home country was analyzed as a factor for emigrant's decision and a strong relationship suggested that law and order situation of source country highly influences skilled workforce's decision to migrate (Ariu et al., 2016). Yet others found that migration policies of recipient countries and migrants' own networks play a strong role in this migration (Beine et al., 2011; Bertoli and Fernández-Huertas Moraga, 2013). Normaz, 2013 investigated the role of different variables including wage differentials, population and geographical distance in shaping brain drain however none of these studies made mention of lingual proximities. Some newer works however investigated the role of language in causing international migration but hardly made mention of skilled migration therefore intuitively including unskilled, skilled and forced migration (Adsera and Pytlíkova, 2015). Therefore, despite the focus being changed to newer ideas about determinants of brain drain, there is thin evidence of any notable investigation into lingual peculiarities in such literature especially with a focus on emigration of skilled workforce (Johnson, 1967; Portes, 1976; Docquier et al. 2007).

Major contributors

Despite the world's recent crisis which primarily rooted from collapse of Collateralized Debt Obligations in United States the global skilled migration has hardly faced any breaks in its persistently increasing trend besides intermittent decreases caused by policy securitization following terrorism in host countries (Nazli, 2014). The OECD statistics indicate that skilled immigrant population in OECD countries exceeds 27 million; a mammoth increase of 70% in just past one decade. According to 2013 estimates total figure for emigrants internationally exceeded 232 million, half of which were concentrated in just 10 countries (OECD, 2013). The majority of these immigrants are literate with two thirds having tertiary education and almost one third carrying higher education degrees. Estimates show that over two percent of total African diploma holders have already relocated to one of OECD countries. Replicating the patterns of other developed regions, the immigrant population of OECD is dominated by skilled workforce from India, China and Philippines.

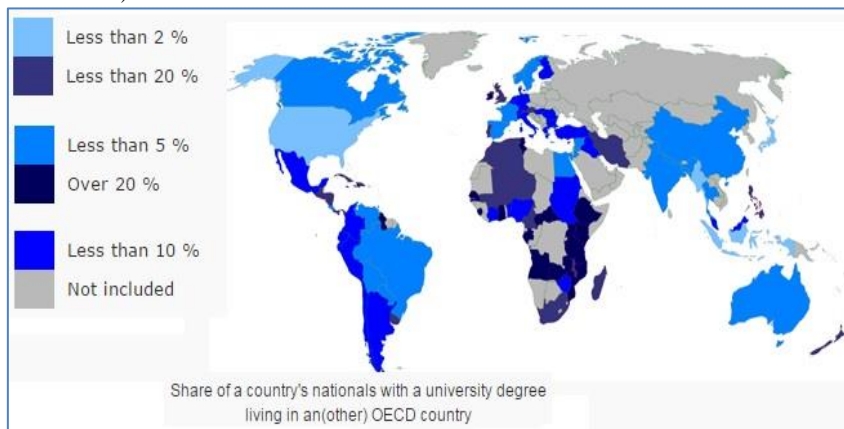


Figure 1: Share of a country's nationals with a university degree living in an (other) OECD country

The figure above depicts contribution of different world regions in escalating emigration and makes important revelations. As indicated in the key on the left, the grey regions are not included in the survey however for remaining regions the colours show their respective contributions to high skilled emigration i.e. percentage of degree holders of a country's nationals living in another country. The figure depicts some African, Latin American and Asian (Eastern and South Eastern) regions to be principal propellants of surge in developing world's brain drain. It further reaffirms the fact that bulk of this skilled human labour originates from developing countries like China, Turkey, India, Philippines, Kenya and Colombia. In 2013 more than 90% of Guyana's highly skilled workforce was residing abroad in one of OECD countries. Jamaica, Tonga and Zimbabwe followed with 46%, 44% and 43% of their total skilled workforce residing outside the source countries respectively. Though proportions seem moderate for countries like China, India and Turkey where less than 5% of university graduates choose to flee their countries however keeping in view the huge university enrollment of world's two biggest populations (China and India), the numeric stands far beyond just being significant. In 2014 alone 7.26 million students were estimated to graduate from Chinese universities whilst the figures for India were a close replication too. The intrinsic inability of these developing economies in sufficiently remunerating human capital thus causes huge out spurs of skilled labour (Yojana Sharma, 2014).

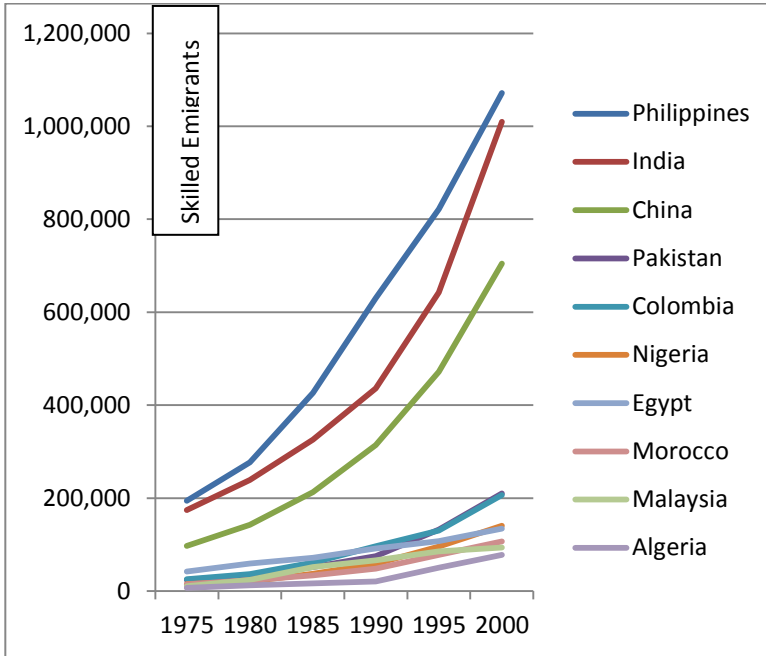
Table 1: Skilled Migration from Developing countries 1975-2000

Country	1975	1980	1985	1990	1995	2000
Philippines	194,214	276,826	426,324	630,057	821,275	1,071,906
India	174,112	238,752	325,680	436,138	642,763	1,009,653
China	96,882	142,398	212,476	313,816	471,524	704,589
Pakistan	24,154	33,956	51,365	75,348	132,408	210,345
Colombia	25,755	36,691	61,021	96,209	130,457	206,582
Nigeria	15,206	20,777	37,016	58,502	95,890	140,372
Egypt	41,817	59,192	71,626	91,387	107,576	134,592
Morocco	14,133	23,530	33,545	48,483	78,118	106,458
Malaysia	10,375	23,820	51,350	65,855	85,713	93,709
Algeria	6,698	12,591	16,392	20,905	50,098	77,605

Source: International Migration and Development; World Bank, 2006.

The following table and graph contains average 5 yearly skilled emigration figures for a group of developed countries for the period 1975-2000. The table doesn't essentially represent the top ten contributors to world's brain drain, however represents major source economies of different regions (Latin America, Africa and Asia) which contribute to global emigration of skilled workforce. Due to structural break owing to securitization of immigration, the timeline covers periods lying between 1975 and 2000 nevertheless the trends are suggestive thus implying a general increase in emigrants originating from developing countries.

Fig 2: Major Contributors to World's High Skilled Migration



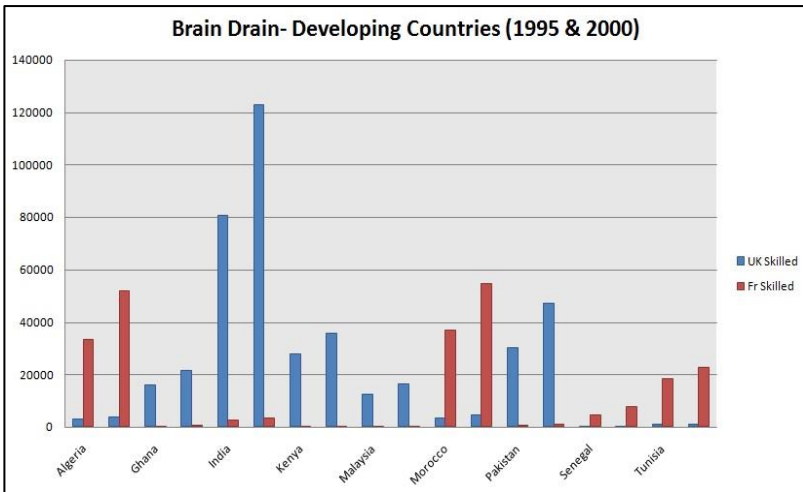
Source: International Migration and Development; World Bank, 2006.

As the curves suggest, countries like Philippines, India and China contribute the highest to this global trend of brain drain. Furthermore, though absolute figures about human capital flight from this data limit the capacity to make inferences, the respective gradients of each country's trend however offer considerable explanation. This is true especially in case of Philippines, India, China and Colombia where sharp gradients reflect not only an increase in human capital flight but its occurrence at consecutively higher rates over time.

Some cases

Conventional literature is generally silent over role of ‘lingual proximities’ in shaping international migration. The concept lies in the fact that skilled emigrants while choosing to emigrate take into account the lingual proximity between home and destination countries so much so that ability to learn it boost emigrant’s success in foreign country (Dustmann and van Soest, 2002). This is because the fluency in language of a host country enhances the transferability of human capital and may play a key role in migrants’ emigration decision (Adsera and Pytlikova, 2015). Therefore, intuitively a strong link between lingual proximities and brain drain does exist.

Figure 3: Brain Drain from Developing Countries 1995 & 2000



Source: International Migration WB

These proximities do not arise just from sharing same language across two regions. They may also arise when language of a recipient country is popular second language of a source economy. Furthermore in

context of skilled migration these proximities may root from the fact that recipient’s language is a compulsory language to be learned at school or sole medium of instruction for higher education institutions in source countries. English is a compulsory language and sole medium of instruction in Pakistan. It is a predominant language of higher education in Malaysia and is official language for Ghana. On contrary Senegal adopts French as the official language. Interestingly, official language both for Algeria and Morocco is Arabic however French is widely used in higher education alongside Arabic.

The bar chart (labeled fig. 3) further illuminates the relationship between lingual proximities and brain drain by showing the skilled migration trends for 9 developing countries during years 1995 and 2000. The blue bars reflect skilled emigration figures to UK while red bars indicate migration trend to France for each of 9 developing countries. Additionally, the figures below replicate this relationship. When compared between UK and France as potential destinations of high skilled emigrants from Algeria, the following picture emerged (Fig. 4). It reasserts the contention that sharing a similar language increases chances of human capital flight between two countries. A similar comparison was drawn between a few other developing countries including Ghana, Senegal, Morocco, Pakistan and Malaysia, and the results obtained were identical as shown below:

Fig 4: Algeria, Skilled Emigration to UK and France (Source: WB)

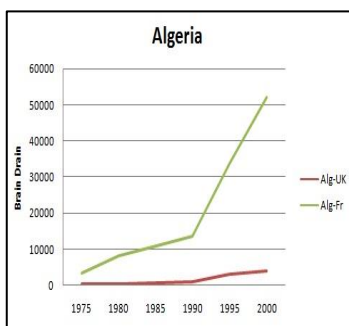


Fig 5: Ghana, Skilled Emigration to UK and France (Source: WB)

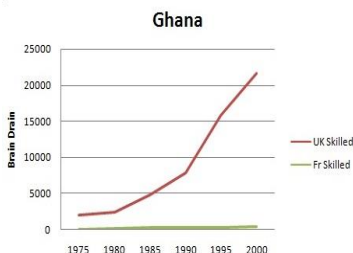


Fig 6: Senegal, Skilled Emigration to UK and France
(Source: WB)

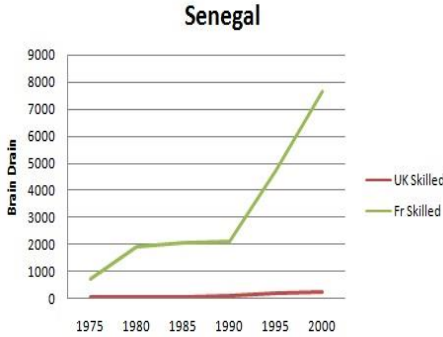


Fig 7: Morocco, Skilled Emigration to UK and France
(Source: WB)

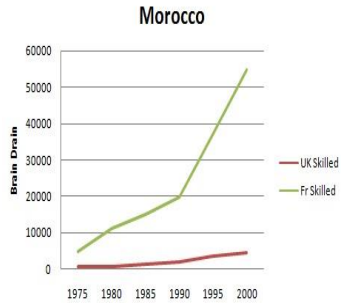


Fig 8: Pakistan, Skilled Emigration to UK and France
(Source: WB)

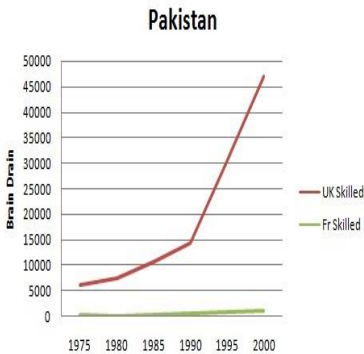
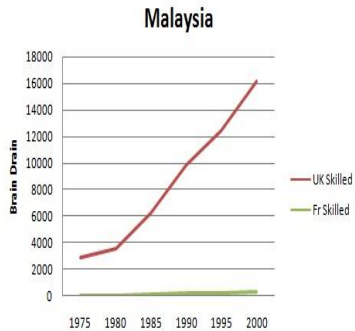
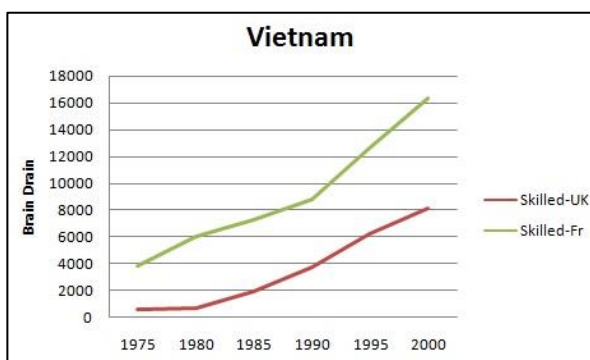


Fig 9: Malaysia, Skilled Emigration to UK and France
(Source: WB)



An interesting case however is that of Vietnam. With a history of many foes, Vietnam's educational has always tussled with removing enemies' language from the curriculum. Though a large population of Vietnam is well versed at French rooted in its historic colonial link with France, the focus started changing towards English in 1960s and 1970s. The number of people learning French doubled from 1958-1968 (from 34,774 to 76,628) however the increase in English learners during same period was multifold (from 18412 to 112,657). Though this shift was temporary and violence of US war fuelled a virulent anti-Americanism; ones who had learnt English found it expedient to forget it with the communist victory (Tollefson, 2001). Yet, this temporal shift was reflected in their high skilled labour's emigration which showed relatively narrow gaps between emigration to UK and France when compared with French speaking countries like Senegal, Morocco and Algeria.



Empirical methodology

Our study employs a mix of analytical data and empirical analysis to address the questions aforementioned. Panel data for 20 developing countries is used while countries are selected from different continents. The panel comprises countries which are highest contributors to foreign human capital for UK and France respectively. Regression analysis is run separately for UK and France. This is because UK and France are primary destinations both in Europe and among OECD countries for skilled

immigrants from developing economies. Additionally the popularity of English and French as an official language or language of instruction in a series of developing (source) countries provides an opportunity to investigate the extent to which lingual proximities propel exodus of human capital (Ammon, 2001).

The effect of GDP per capita, GDP per capita squared, distance between recipient and source countries, land area of source countries and lingual proximities on high skilled emigration rate from 20 developing countries is investigated using the data for period 1975-2000 obtained from World Bank (WB, 2006). Besides problems of data availability, structural break in emigration during first decade of 21st century marked with attacks on twin towers in US which was followed by intense securitization of immigration justifies our selection of period pre 2001. This is because recent works have found a high correlation between transnational terrorism and expansive restrictions on migration i.e. a high possibility of strict securitization and expansive restrictions on in-migration in event of a terrorist activity in recipient country (Avdan, 2014). The following model is hence created:

$$\ln m_{i,t}^s = \beta_0 + \beta_1 GDP_{i,t} + \beta_2 GDP_{i,t}^2 + \beta_3 LANG_i - \beta_4 DIST_i - \beta_6 SIZE_i + \epsilon \quad (1)$$

$$E_{i,t} = m_{i,t}^s + m_{i,t}^{ss} + m_{i,t}^{us} \quad (2)$$

' $m_{i,t}^s$ ' is used as a proxy for skilled emigration from source country 'i' in period 't', and total emigration from a country to a respective recipient is denoted by E, where subscripts 's', 'ss' and 'us' denote skilled, semi skilled and unskilled portions of emigrant population respectively.

While calculating the relative contribution of skilled emigrants to total emigration the data we employ coincides that of Docquier, 2006, who makes use of comprehensive data on education profiles of emigrants by grouping them into three categories; unskilled, semi skilled and skilled according to their stock of education. This primarily is because data taken from national statistics of source countries is both incomplete and incomparable because of methodological differences in data collection and interpretation. The solution therefore is to collect those chunks of immigration data from major host countries where skill/education profiles of immigrants are incorporated. Though another serious attempt for similar

primary data collection was made by Carrington and Detragiache, 1998; 1999, however beyond covering more recent years Docquier, 2006 has several advantages over their data. Their data suffered transposition problem; US immigration's education structure was replicated for other OECD countries. Additionally, only major emigrants' source countries were accounted for to estimate immigration to EU hence underreporting small countries in their contribution to brain drain.

In our model, GDP stands for per capita Gross domestic product (constant 2010 US \$) of source countries. Although intuitionally rise in per capita GDP of a source country must decrease the stocks of skilled emigrants, nonetheless ease in financial restrictions and followed economic growth may create a more than proportionate surge in emigration levels despite a fall in income disparities at home thus squared GDP (per capita) variable helps to account for this effect (Rotte and Vogler, 2000). A very important addition here is that of LANG; lingual proximity, a dummy variable. Looking at existing trends of skilled workforce migration flows we presumably expect it to be a strong determinant. DIST (distance) between source and destination may have an impact on immigrants' decision to migrate. It is also assumed that the size of country may have an impact on the openness of an economy; a proxy relating to size of source economy in terms of surface area is added. Though some early studies assume a positively proportional relationship between country size and trade openness but classic works on the topic suggest an inverse relationship between country size and the degree of trade openness, thus preceded by a negative sign (Alesina and Wacziarg, 1998).

To account for lingual proximities, the model was run for UK and France each; with both as recipient countries against data for emigrants from 20 developing countries towards these two destinations. The panel was balanced by excluding Lebanon for which GDP per capita data was missing through years 1975-1987.

The variables included in the model comprised both time variant i.e. GDP per capita and time invariant ones i.e. distance, language and size. Ultimately we cannot resort to the case where panel regression models involve subtracting group means from the regressors since time invariant variables would then be omitted. Additionally we carry out respective tests

for incidence of heteroskedasticity, serial correlation and cross sectional dependency. Durbin Watson statistic implies presence of heteroskedasticity and Pesaran (2004) test confirms existence of dependence across cross sectional units. FGLS (feasible generalized least squares) and PCSE (Prais Winsten regression-panel corrected standard errors) both intrinsically take into account cross sectional dependence. PCSE additionally takes into account existence of heteroskedasticity and can be used for serial correlation correction as well. Furthermore, Greene, 2002 recommends use of FGLS for panels where $(T \geq N)$ and PCSE otherwise. The model was hence estimated using PCSE both for UK and France consecutively and following results were obtained;

Table 2: Regression Results (UK and France)

	Model 1 (United Kingdom)			Model 2 (France)		
	R sqd = 0.7719			R sqd = 0.5983		
Var Name	<i>Coeff</i>	<i>p-value</i>	<i>PCsterrors</i>	<i>Coeff</i>	<i>p-value</i>	<i>PCsterrors</i>
GDPcapita	0.0008425	(0.003)	.0002846	.0002033	(0.001)	.0000594
GDPcap2	-1.23e-07	(0.024)	5.43e-08	3.71e-09	(0.761)	1.22e-08
Lang	4.447188	(0.000)	.0923434	2.310339	(0.000)	.0694337
Distance	-0.0001572	(0.000)	.0000172	-0.0001879	(0.000)	.0000101
Size	6.10e-07	(0.000)	1.30e-08	5.57e-07	(0.000)	2.96e-08
Cons	4.273954	(0.000)	.364544	5.762932	(0.000)	.2574455

Thus,

$$\ln m_{i,t}^s = \beta_0 + \beta_1 GDP_{i,t} - \beta_2 GDP_{i,t}^2 + \beta_3 LANG_i - \beta_4 DIST_i + \beta_6 SIZE_i + \epsilon \quad (3)$$

The results affirm our earlier contention in many ways. Both for United Kingdom and France, Lingual proximity, size of source economy and distance between source and recipient economy are important determinants of human capital flight though their relative importance is different. The p-values for GDP/capita reflect its significance. In line with the newer studies and contrary to few conventional works, the work suggests that despite a decrease in stock of skilled human capital, the ease in financial restriction and in turn economic growth creates an incentive for increased emigration the trend. A unit increase in GDP/capita may increase high skilled emigration by 0.08 %. The case of squared GDP/capita is converse; insignificant when tested for emigration to France and significant with a small coefficient when tested for UK's immigration, however negative. This thus implies that persistent increase in per capita income level at home may decrease the trend of emigration beyond a turning point from source countries; a result contrary to one suggested by (Rotte and Vogler, 2000).

Lingual proximity represented by 'Lang' exhibits through its coefficient the pivotal role it plays in shaping emigration. The coefficient suggests that United Kingdom potentially attracts 5 times more skilled immigrants from developing countries with whom a lingual proximity exists from amongst 19 countries in the panel. In other words an emigrant from a panel of 19 developing countries (excluding Lebanon) is 5 times more likely to come to UK if his country shares lingual proximity with UK in comparison to an immigrant from a country which lacks lingual proximity with UK. The results are identical for France however the coefficient relatively smaller. This simply might root from missed observations for Lebanon where second most popular language is French lagging only behind Arabic.

The relative distance does imply a negative correlation with emigration suggesting farther destinations to be less likely for emigrants. The coefficients suggest that UK and France would receive 0.01572% less immigrants from source country 'A' compared to source country 'B' when 'A' is a unit of distance closer to recipient country i.e. United Kingdom or France. Generalizations however can be erroneous; geographically, the

countries contributing larger proportions to OECD immigration are relatively closer to host countries. This is true for UK where larger proportions of human capital flight generate from Pakistan and India compared to Malaysia which is farther. The same is true for France which is closer to primary source economies i.e. Tunisia and Morocco than to Madagascar despite the existence of lingual proximity.

The size variable representing land area of resource economies is also significant. The positive sign however refutes the earlier contention which suggests an inverse relationship between country size and trade openness (Alesina and Wacziarg, 1998). Size coefficient suggests that immigrants are more likely to originate from source countries with larger land area; hence for our model country size implies trade openness. Nonetheless, bigger samples considering wider panels of source economies may suggest otherwise.

Table 3: Regression Results (US, UK and France)

	Model 1 (United Kingdom)			Model 2 (France)			Model 3 (United States)		
	R sqd = 0.7719			R sqd = 0.5983			R sqd = 0.6597		
Var Name	Coeff	p-value	PCst errors	Coeff	p-value	PCst errors	Coeff	p-value	PCst errors
GDPcapita	0.0008425	(0.003)	.0002846	.0002033	(0.001)	.0000594	0.0008406	(0.001)	0.0002444
GDPcap2	-1.23e-07	(0.024)	5.43e-08	3.71e-09	(0.761)	1.22e-08	-1.18e-07	(0.012)	4.70e-08
Lang	4.447188	(0.000)	.0923434	2.310339	(0.000)	.0694337	3.636469	(0.000)	0.0914078
Distance	-0.0001572	(0.000)	.0000172	-0.0001879	(0.000)	.0000101	-0.000136	(0.000)	0.0000111
Size	6.10e-07	(0.000)	1.30e-08	5.57e-07	(0.000)	2.96e-08	7.11e-07	(0.000)	3.69e-08
Cons	4.273954	(0.000)	.364544	5.762982	(0.000)	.2574455	6.274745	(0.000)	0.4430472

The intuitive impact of colonization on emigration flows suggests that developed countries are more probable to get bulk of their imported human capital from their ex-colonies than non-colonies because of lesser cultural differences, shared history and better information. To check the reliability of our results we thus estimate the model additionally for United States which besides being a primary OECD destination for skilled workforce from developing world, has no past colonial ties with any of the source countries in our panel. The results shown in the table below reasserts our finding for UK and France.

Again lingual proximity, size of source economy and distance between source and recipient economies appear as most significant determinants of human capital flight. Needles to reinterpret, the results provide a replication of the earlier model. Language still stands to be the most pressing factor with its coefficient suggesting immigrants from a country having lingual proximity with US are four times more likely to emigrate to US than residents of countries where second official language or medium of instruction is any language but English. The GDP coefficient also implies that economic growth originating from ease in financial restrictions surges brain drain however the process reverses at higher levels of economic growth. Furthermore, emigrants tend to flood from relatively closer locations than farther countries. The country size also entails consistent results i.e. country size is proportional to trade openness hence relatively larger immigrant masses comes from bigger countries.

Conclusion

Conventional studies attributed the incidence of “Human Capital Flight” to income and wage differentials existing between countries (source and host). Newer studies have aggrandized the traditional narrow scope of these works by investigating the role of non-income factors in shaping international skilled migration. Howbeit, scant attention has been paid to the incidence of lingual proximities in being a major influence for migration decisions of high skilled workforce. Hence, conventional literature cannot fully circumscribe the stimuli that lingual proximities provide to ‘human capital flight’. Our work by attempting to look into the lingual proximities between host and source countries interestingly found that developed countries are likely to get 4 to 5 times greater skilled workforce from countries which

share a similar language with them at national, official or academic level thus suggesting that it is primarily lingual propinquity of source and host countries that explains the human capital flight rather than discordance in growth of their income variables. In addition, increased openness causes economic growth which in turn heightens human capital flight further followed by a reversal at higher levels of per capital incomes. Larger countries exhibit higher emigration rate of skilled workforce nevertheless farther destinations and stretched distances deject skilled workers from emigrating.

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2

The Regional Convergence-Divergence Effect of the Global Economic Crisis between Turkey and the European Union¹

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According to the Convergence hypothesis, between the investigated units (nations, regions, provinces, sectors etc.), the relatively low income unit (poor) will have a higher growth performance and will converge to the high income unit (rich). One of the targets of European integration is to keep the regional development divergence in the lowest level. Within this scope the expectation from candidate countries is to converge to the Union criterias.

In the convergence literature, it has been seen that the researches about convergence between Turkey – EU are mostly before the year 2008 and not much researches could be found especially about regional convergence and crises.

In this research, the convergence after the global economic crises between East Marmara Region (TR42) of Turkey (as a EU candidate country) and regions of developed countries of EU has been investigated to find out whether the global economic crises is an advantage for East Marmara Region to converge with regions of developed countries of EU or not.

Keywords: Convergence, Divergence, Global Economic Crises

JEL Classification: O47, G01

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Introduction

According to the convergence hypothesis, the relatively low income economic units like a country, region, or state, will have a better growth performance and will converge to the high income ones in time. One of the most important targets of European integration is to keep regional differences at the lowest level. During the process of full membership a candidate country must converge to the Union averages for the defined criteria.

In this research, the regional and national convergence issue of Turkey (as a candidate) to the European Union (EU) member states has been investigated within the scope of the global economic crises (2008). The main purpose of the research is to understand whether the global economic crisis was an advantage for Turkey to converge to EU members in terms of macroeconomic figures for national and regional level between 2004 and 2015.

1. Convergence and Crisis: Concepts and Literature Review

The decrease of disparities in real income per capita between countries has been a leading topic for economists since the mids of 18th century. This phenomenon was named as convergence by Abromovitz (1986) and has been a widely discussed as of 1980's. Long macroeconomic time series of countries being available and the new techniques in econometrics being developed have made this issue popular. The theoretical basis of Convergence Hypothesis was established by Solow in 1956, but following the developments in econometrics and statistics, convergence hypothesis has not been just theoretical, it also has become an empirical field of interest (Ceylan, 2010: 49-50).

Convergence is the decrease between the differences of selected economic figures (usually gross domestic product (GDP), or GDP per capita in regional or national level. It is also defined as getting closer to one point or getting similar in time. Besides economics, convergence is used in many

scientific areas, so it has many different definitions and is used in various meanings (Quah, 1996: 1; Altun, 2009: 33).

The main argument of convergence hypothesis is, “falling behind in terms of some conditions will create a greater growth ability and productivity compared to the leader” (Rassekh, 1998: 86). According to this hypothesis, the developing countries will have a low Capital/Labour ratio compared to developed countries, and will have a higher marginal product of capital (Barro, 1991: 407). Under these circumstances, if capital increases by one unit, it will create a greater income in the developing countries compared to the developed ones. Thus, the global capital will move to regions with a higher capital output, and developing countries will have a higher growth rate compared to developed ones (Abdioğlu, and Uysal, 2013: 125-126).

The convergence hypothesis was first tested by Baumol (1996) using the real GDP series between 1870 and 1979 for 16 industrialized countries. With a cross-section regression analysis convergence was tested. The findings indicated a strong convergence between the selected countries in terms of real GDP figures (Baumol, 1996: 1083-1084).

According to DeLong (1988), the selected sample of Baumol’s research was not correct and created non-objective results. DeLong stated that, Baumol selected the richest countries of 1979 and not 1870. The discussion between Baumol and DeLong has been carried to a different dimension after the contributions of Romer (1986) and Lucas (1988) to the theory of growth. One of the two starting arguments of the new growth theory is that the convergence is not a valid hypothesis. According to the base of this argument, economic growth is affected by internal factors and the falling rate of capital hypothesis is not valid. On the other hand, the Solow Model has been insufficient to show the long term growth regularity, as the second argument of the new growth theory. The discrepancy between the new growth theory and the Solow model has also affected the scientific researches. The researches that found a convergence relation has accepted the Solow model as a valid hypothesis, and the researches which could not find a convergence relation has accepted the new growth theory as a valid

hypothesis. Since the new growth theory has also had an interest in convergence, it led to a very rich literature (Ceylan, 2010: 49).

Economic crisis is also a topic of intensive interest in academic research and various definitions have been done. The basic definition of crisis could be the occurrence of abnormal economic activities in a normal functioning economy (Bayraktutan, 2000: 15; Dursunoğlu, 2009: 4). In the economics literature word meaning of crisis can stand for words such as collapse, depression or recession. Economic crisis can appear in different shapes but can be classified in two categories. These are real sector crises and financial crises. The global economic crisis of 2007-2008 has emerged as a financial crisis but has also affected the credit flow to the household and the real sector, decreasing the consumption demand in the USA and the whole world (Güzel, Hatırlı, and Oluç, 2016: 744).

Interest rates in mortgage loans have started to increase in the second half of 2005. This was the first bad signal in the housing industry. In the following year (2006) there has been some recovery in the housing sector but has not lasted long. In this period, new and more risky mortgage products have made the mortgage loan standards stiffer. As a result, the housing sector has faced bigger problems due to late paid credit installments and seizures (Öztürk, and Gövdere, 2010: 382-383). The problems which has started in the housing market of the USA has returned into a global crisis, and affected many countries. At first, the USA and developed European countries has been effected (Işık, and Duman, 2010: 81).

In 2008, the developing countries also has started to be affected by the crises and the stock markets has had losses due to decreasing value, the local currencies depreciated or devaluated, and the speculative moves of capital increased. After the second quarter of 2008, negative growth rates were seen in developing countries, and the growth rates decreased in 94 countries. During this time, international investments decreased, global commercial performance diminished, and credit market has shrunk (Kutlu, and Demirci, 2011: 129).

2. The National Effects of Global Crisis

To understand the effects of the global economic crisis on EU member states and Turkey, macroeconomic data obtained from EUROSTAT and Turkish Institute Statistics (TUIK) were investigated. In Table–1, the real growth rate for selected EU members and Turkey is displayed. According to the table, growth rate in EU member states is between 2.1 and 3.3 before 2008.

Table-1: GDP growth rates (2004 – 2015, %)

State/Year	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
EU (28 State)	2.5	2.1	3.3	3.1	0.4	-4.4	2.1	1.7	-0.5	0.2	1.6	2.2
Euro Zone (19 State)	2.3	1.7	3.2	3	0.4	-4.5	2.1	1.5	-0.9	-0.3	1.2	2
Germany	1.2	0.7	3.7	3.3	1.1	-5.6	4.1	3.7	0.5	0.5	1.6	1.7
Ireland	6.7	5.8	5.9	3.8	-4.4	-4.6	2	0	-1.1	1.1	8.5	26.3
Greece	5.1	0.6	5.7	3.3	-0.3	-4.3	-5.5	-9.1	-7.3	-3.2	0.4	-0.2
Spain	3.2	3.7	4.2	3.8	1.1	-3.6	0	-1	-2.9	-1.7	1.4	3.2
France	2.8	1.6	2.4	2.4	0.2	-2.9	2	2.1	0.2	0.6	0.6	1.3
Croatia	4.1	4.2	4.8	5.2	2.1	-7.4	-1.7	-0.3	-2.2	-1.1	-0.5	1.6
Italy	1.6	0.9	2	1.5	-1.1	-5.5	1.7	0.6	-2.8	-1.7	0.1	0.7
Netherlands	2	2.2	3.5	3.7	1.7	-3.8	1.4	1.7	-1.1	-0.2	1.4	2
Austria	2.7	2.1	3.4	3.6	1.5	-3.8	1.9	2.8	0.7	0.1	0.6	1
Poland	5.1	3.5	6.2	7	4.2	2.8	3.6	5	1.6	1.4	3.3	3.9
Portugal	1.8	0.8	1.6	2.5	0.2	-3	1.9	-1.8	-4	-1.1	0.9	1.6
United Kingdom	2.5	3	2.5	2.6	-0.6	-4.3	1.9	1.5	1.3	1.9	3.1	2.2
Turkey	9.4	8.4	6.9	4.7	0.7	-4.8	9.2	8.8	2.1	4.2	3.0	4.0

Source: EUROSTAT ve TÜİK, 2017.

Especially Ireland, Greece, Spain and Croatia had a higher growth rate than the EU average. In 2008, when the crisis has started, many countries faced recession and in the following year (2009), the growth rates have been negative. The recovery took longer time than expected, but it was shorter in the developed countries while the effects of the crisis have lasted longer in the developing countries of EU.

Between 2004 and 2008, Turkey achieved better growth rates with the effects of economic reforms implemented after the 2001 economic crisis in

Turkey. Especially with the reforms Turkey has established a strong finance sector. During this period, Turkey's growth rate was between 4.7% and 9.4%. Similar to the EU, Turkish economy experienced a negative growth rate in 2009. In the following years 2010 and 2011, there has been a major jump in growth rates of Turkey and till 2014 positive growth rates have been realized.

Table-2: Annual Average Inflation (consumer) Rate (2004 – 2015, %)

State/Year	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
EU (28 State)	2,3	2,3	2,3	2,4	3,7	1	2,1	3,1	2,6	1,5	0,5	0
Euro Zone (19 State)	2,2	2,2	2,2	2,2	3,3	0,3	1,6	2,7	2,5	1,3	0,4	0
Germany	1,8	1,9	1,8	2,3	2,8	0,2	1,1	2,5	2,1	1,6	0,8	0,1
Ireland	2,3	2,2	2,7	2,9	3,1	-1,7	-1,6	1,2	1,9	0,5	0,3	0
Greece	3	3,5	3,3	3	4,2	1,3	4,7	3,1	1	-0,9	-1,4	-1,1
Spain	3,1	3,4	3,6	2,8	4,1	-0,2	2	3	2,4	1,5	-0,2	-0,6
France	2,3	1,9	1,9	1,6	3,2	0,1	1,7	2,3	2,2	1	0,6	0,1
Croatia	2,1	3	3,3	2,7	5,8	2,2	1,1	2,2	3,4	2,3	0,2	-0,3
Italy	2,3	2,2	2,2	2	3,5	0,8	1,6	2,9	3,3	1,2	0,2	0,1
Netherlands	1,4	1,5	1,6	1,6	2,2	1	0,9	2,5	2,8	2,6	0,3	0,2
Austria	2	2,1	1,7	2,2	3,2	0,4	1,7	3,6	2,6	2,1	1,5	0,8
Poland	3,6	2,2	1,3	2,6	4,2	4	2,6	3,9	3,7	0,8	0,1	-0,7
Portugal	2,5	2,1	3	2,4	2,7	-0,9	1,4	3,6	2,8	0,4	-0,2	0,5
United Kingdom	1,3	2,1	2,3	2,3	3,6	2,2	3,3	4,5	2,8	2,6	1,5	0
Turkey	10,1	8,1	9,3	8,8	10,4	6,3	8,6	6,5	9	7,5	8,9	7,7

Source: EUROSTAT, and TUIK, 2017.

Table-2 has been prepared with the same periods and same countries as Table-1, and the annual average rate of change in the consumer price index is displayed. Inflation rate is also one of the important indicator in terms of Maastricht (Convergence) Criteria. Before the crisis this rate was in an acceptable level for the EU. In 2008, an increase in this figure for most of the EU members was observed. In the following years, inflation rates have been very low, and it was negative for Portugal, Spain, and Ireland. These countries have faced deflation in consumer prices, and together with the low or negative growth rate, a recession process was observed in the economy.

Inflation is a chronic issue for Turkey since 1970's even though it decreased to one-digits after 2005, and it can be seen that before and after the crisis the rates are more or less the same.

At the context of Maastricht convergence criteria, public debt/GDP ratio is also an important indicator. It is expected that this ratio to be lower than 60%. In Table-3, the same period and countries have been selected and before the crisis Italy and Greece are the only countries which has a rate over 60%. After 2009 we can see that there is generally an increase in public dept.

Table-3: EU defined Gross Foreign Debt Stock rate to GDP (2004 – 2015, %)

State/Year	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
EU (28 State)	68,4	69,2	67,4	65	68,6	78,4	83,8	86,1	89,5	91,3	92	90,4
Euro Zone (19 State)	60,9	61,5	60,1	57,5	60,7	72,8	78,4	81,1	83,8	85,7	86,7	85
Germany	64,8	67	66,5	63,7	65,1	72,6	81	78,7	79,9	77,5	74,9	71,2
Ireland	28,2	26,1	23,6	23,9	42,4	61,7	86,3	109,6	119,5	119,5	105,2	78,6
Greece	102,9	107,4	103,6	103,1	109,4	126,7	146,2	172,1	159,6	177,4	179,7	177,4
Spain	45,3	42,3	38,9	35,5	39,4	52,7	60,1	69,5	85,7	95,4	100,4	99,8
France	65,7	67,1	64,4	64,3	68	78,9	81,6	85,2	89,5	92,3	95,3	96,2
Croatia	40,4	41,3	38,9	37,7	39,6	49	58,3	65,2	70,7	82,2	86,6	86,7
Italy	100,1	101,9	102,6	99,8	102,4	112,5	115,4	116,5	123,3	129	131,9	132,3
Netherlands	49,9	49,3	44,8	42,7	54,8	56,9	59,3	61,6	66,4	67,7	67,9	65,1
Austria	65,1	68,6	67,3	65,1	68,8	80,1	82,8	82,6	82	81,3	84,4	85,5
Poland	45	46,4	46,9	44,2	46,3	49,4	53,1	54,1	53,7	55,7	50,2	51,1
Portugal	62	67,4	69,2	68,4	71,7	83,6	96,2	111,4	126,2	129	130,6	129
United Kingdom	38,8	40,1	41	42	50,2	64,5	76	81,6	85,1	86,2	88,1	89,1
Turkey	59,6	52,7	46,5	39,9	40,0	46,0	42,3	39,1	36,2	36,1	33,5	32,9

Source: EUROSTAT, and Turkish Undersecretariat of Treasury, 2017.

The main reason of the increase to support finance system, overcome recession and facilitate growth and employment. We can say that public debts were financed by new debts. On the other hand, especially the impact of negative growth rates needs to be addressed for increasing public debts. During the crisis period, this public debt/GDP rate has increased in almost all EU countries but in Turkey the situation is opposite. From 2004 to 2009 there has been a decreasing trend, with the exception of 2009 when an

increase was experienced, this tendency continued hereafter and the ratio decreased to 32.9% in 2015. Turkey has been a leader in this figure among the selected EU member states.

Table-4: Unemployment Rate (2004 – 2015, %)

State\Year	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
EU (28 State)	9,3	9,0	8,2	7,2	7,0	9,0	9,6	9,7	10,5	10,9	10,2	9,4
Euro Zone (19 State)	9,3	9,1	8,4	7,5	7,6	9,6	10,2	10,2	11,4	12,0	11,6	10,9
Germany	10,4	11,2	10,1	8,5	7,4	7,6	7,0	5,8	5,4	5,2	5,0	4,6
Ireland	4,5	4,4	4,5	4,7	6,4	12,0	13,9	14,7	14,7	13,1	11,3	9,4
Greece	10,6	10,0	9,0	8,4	7,8	9,6	12,7	17,9	24,5	27,5	26,5	24,9
Spain	11,0	9,2	8,5	8,2	11,3	17,9	19,9	21,4	24,8	26,1	24,5	22,1
France	8,9	8,9	8,8	8,0	7,4	9,1	9,3	9,2	9,8	10,3	10,3	10,4
Croatia	13,9	13,0	11,6	9,9	8,6	9,2	11,7	13,7	16,0	17,3	17,3	16,3
Italy	8,0	7,7	6,8	6,1	6,7	7,7	8,4	8,4	10,7	12,1	12,7	11,9
Netherlands	5,7	5,9	5,0	4,2	3,7	4,4	5,0	5,0	5,8	7,3	7,4	6,9
Austria	5,5	5,6	5,3	4,9	4,1	5,3	4,8	4,6	4,9	5,4	5,6	5,7
Poland	19,1	17,9	13,9	9,6	7,1	8,1	9,7	9,7	10,1	10,3	9,0	7,5
Portugal	7,8	8,8	8,9	9,1	8,8	10,7	12,0	12,9	15,8	16,4	14,1	12,6
United Kingdom	4,7	4,8	5,4	5,3	5,6	7,6	7,8	8,1	7,9	7,6	6,1	5,3
Turkey	-	9,5	9,0	9,1	10,0	13,0	11,1	9,1	8,4	9,0	9,9	10,3

Source: EUROSTAT, 2017.

As mentioned before, the crisis which started at 2008 had a major effect on the EU economy. Together with recession, the capacity usage rate decreased and many companies fired their workers. In 2008, the unemployment rate has increased for all selected countries including Turkey except for Germany, Austria and Poland. Compared with the periods before crisis the highest growth in this rate has been in Greece, Spain, Italy, Croatia and Ireland. In 2015 Germany and Poland experienced a lower level than the years before the crisis, and similar figures compared to the years before crisis have been observed for the United Kingdom and Austria.

3. The Regional Effects of the Crisis

The unique part of this study is that the convergence relation will be investigated among regions of the EU members and Turkey during the global economic crisis. Within this context, the regional GDP data were obtained for NUT-2 regional statistical classification and the most developed regions were selected for each country. In terms of regional GDP, the Eastern Marmara is in 4th place in Turkey (according to the values of 2014), and it was included in the sample to represent Turkey.

When the regional statistics in Table-5 were examined, it can be seen that the regional developments in GDP are parallel to the national performances. It could be said that the effects of the global economic crisis is similar in both macro and micro levels. In Table-5, the regions of Germany, Austria, Poland, France and the United Kingdom seems to be the less affected regions from the crisis. The common point of these countries are that the growth rate has changed between 10%-29% from 2008 to 2014. On the other hand, regions of Greece, Spain, Croatia and Portugal have had negative growth rates for the same period. These negative rates have been 27% in Greece, 6% in Spain, 11% in Croatia, and 5% in Portugal. The regional GDP have been nearly the same for the region of Italy and Ireland, the values of 2008 are very close to that of 2014.

When the Eastern Marmara Region of Turkey is investigated it will be seen that developments have been parallel to the national figures. As in most of the EU regions, the highest level of GDP before the crisis can be seen in 2008. When 2014 is compared with 2008, it can be seen that GDP in Eastern Marmara has increased by %44. With this performance Eastern Marmara is one of the leaders in the EU in terms of GDP change.

Table-5: GDP in the Selected NUTS-2 Regions of EU and Turkey GSYİH (EUR, 2004 – 2015)

State	Region / Year	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Germany	Nordrhein-Westfalen	500.825	507.794	524.797	557.255	571.561	549.737	566.753	589.009	597.688	608.544	627.219
Austria	Ostösterreich	107.767	111.847	117.987	124.110	128.793	127.108	130.351	135.433	138.321	140.936	143.029
United Kingdom	London	364.178	392.558	411.676	443.630	393.767	349.441	381.038	405.724	450.177	450.341	509.402
France	Île de France	476.583	497.045	515.788	552.691	595.566	573.590	609.330	615.232	629.004	641.753	649.101
Croatia	Kontinentalna Hrvatska	22.601	24.822	27.485	29.696	32.738	30.793	30.740	30.648	30.013	29.611	29.288
Netherlands	West-Nederland	274.647	285.816	300.268	319.297	330.114	322.290	329.002	330.595	332.511	335.495	344.956
Ireland	Éire/Ireland	156.177	169.978	184.923	197.054	187.547	169.432	166.158	173.940	174.844	179.448	189.046
Spain	Cataluña	162.716	175.032	189.854	203.403	209.005	202.028	203.324	200.185	196.011	194.268	197.004
Italy	Lombardia	302.271	310.694	320.245	333.596	346.708	331.080	346.158	353.496	347.233	348.049	348.615
Poland	Mazowieckie	41.557	50.823	57.166	65.857	75.615	66.881	78.530	82.524	85.254	87.298	91.188
Portugal	Área Metropolitana	57.128	59.469	62.134	65.590	67.279	66.245	67.653	66.073	62.276	62.791	64.010
Turkey	Eastern Marmara	16.199	20.540	23.204	26.485	28.625	24.257	30.858	33.523	38.168	41.520	41.340
Greece	Attiki	90.815	94.039	104.334	112.008	116.717	116.001	110.462	100.972	92.671	86.468	85.579

Source: EUROSTAT and TÜİK, 2017.

For regional GDP per capita, again the top regions of the countries in terms of this variable were included for the EU, and the Eastern Marmara was selected from Turkey. Similar to the regional GDP, the GDP per capita in the selected regions have shown parallel developments compared to the national level. It can be seen from Table–6, the same regions as in regional GDP comparison, have been less affected again in terms of regional GDP per capita. These regions belong to Germany, Austria, Poland, the United Kingdom and France. These regions have had a growth rate in GDP per capita between 4% to 18%, from 2008 to 2014.

When the same periods are compared for the regions of Greece, Spain, Croatia, Portugal and Ireland, it will be seen that these countries have had negative GDP per capita. These negative rates have been 24% for Greece, 9% for Croatia, 5% for Spain, 9% for Netherlands, 6% for Portugal, and 1% for Ireland.

When the regional GDP per capita is investigated for the Eastern Marmara Region there has been a major increase from 2008 to 2014. The GDP per capita was 9.256 EUR in 2008, and has increased to 11.860 EUR in 2014. This increase reaches at almost 28% and is one of the highest in the whole EU.

Tablo-6: GDP Per Capita in the Selected NUTS-2 Regions of the EU and Turkey (EUR, 2004–2015)

State	Region / Year	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Germany	Hamburg	50.100	51.200	51.700	53.200	54.600	52.300	54.200	56.100	56.600	57.400	59.000
Austria	Wien	39.600	40.800	42.700	44.100	45.500	45.000	45.700	46.800	47.100	47.300	47.300
United Kingdom	Inner London - West	132.000	142.600	149.000	163.400	145.800	132.900	145.200	151.400	166.200	155.900	172.600
France	Île de France	41.800	43.300	44.600	47.500	50.900	48.800	51.600	51.800	52.700	53.600	53.900
Croatia	Kontinentalna Hrvatska	7.700	8.500	9.400	10.200	11.300	10.600	10.700	10.700	10.500	10.400	10.300
Netherlands	Groningen	35.700	38.700	43.500	43.200	51.900	46.000	49.400	50.900	54.400	56.300	49.000
Ireland	Southern and Eastern	42.300	45.400	47.900	49.900	46.500	41.700	41.200	42.700	42.900	43.800	46.000
Spain	Comunidad de Madrid	26.500	28.100	30.200	31.600	32.200	31.400	31.000	31.000	30.700	30.300	30.700
Italy	Provincia Autonoma di Bolzano/Bozen	33.700	34.000	35.600	36.700	37.500	37.000	38.000	39.000	40.200	40.400	39.900
Poland	Mazowieckie	8.100	9.900	11.100	12.700	14.600	12.900	14.900	15.600	16.100	16.400	17.100
Portugal	Área Metropolitana de Lisboa	21.000	21.700	22.600	23.700	24.200	23.700	24.000	23.400	22.100	22.300	22.800
Turkey	Kocaeli, Sakarya, Düzce, Bolu,	5.707	7.090	7.846	8.775	9.256	7.664	9.584	10.218	11.407	12.167	11.860
Greece	Attiki	23.000	23.700	26.200	28.100	29.200	29.000	27.600	25.400	23.500	22.200	22.200

Source: (EUROSTAT and TÜİK, 2017)

Conclusion

When GP and GDP per capita is investigated with national figures, it can be seen that Turkey has shown a better performance compared to most of the EU members. Similar to the national developments the Eastern Marmara Region has shown a great performance compared to the regions of the EU member states, in terms of regional GDP and regional GDP per capita.

GDP data indicating an increase of 28% during the crisis period (from 2008 to 2014) in terms of GDP has made the Eastern Marmara one of the leaders among the regions of the EU member states. Similar to the GDP figure GDP per capita in Eastern Marmara region has increased by 44% from 2008 to 2014. With this relatively higher performance Eastern Marmara has again been one of the leaders in terms of GDP per capita growth among the regions of the EU member states. These figures and developments give us strong signals of convergence for the Eastern Marmara Region towards the developed regions of the EU members included. Speaking in the scope of these figures we can also say that crisis also has been an advantage for both Turkey and the Eastern Marmara Region to converge to and/or catch up the European counterparts.

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3

What Explains the Diversification Discount? An Empirical Examination

Mehmet Nasih TAĞ

Abstract

This chapter investigates the conditions under which diversification creates shareholders' value. According to the resource based view of the firm diversification creates value when it is motivated by exploiting potential economies of scope. Thus, higher relatedness in diversification, or lower firm diversity, is associated with value creation. The agency theory predicts that diversification is a symptom of incentive misalignment between the management and investors, and thus would likely destroy value to the extent that managers in diversified firms lack high-powered incentives. Thus, value creation in diversified firms would increase as the sensitivity of management pay to performance increases. The author tests these predictions on a sample of diversified firms. The results indicate that shareholders' value in diversified firms is negatively related to firm diversity, and positively related to CEO's compensation based on stock options.

Keywords: diversification discount, economies of scope, executive compensation

JEL classification: L25; M52

Introduction

According to a Bloomberg's news report, firms around the world spent 3.8 trillion dollars on mergers and acquisitions in 2015 (Baigorri, 2016). This phenomenon of mergers and acquisitions has been a central research topic in both management and finance? Note that most of these deals create or

extends the scope of merging firms. As such, these deals are an act of corporate diversification, which brings multiple lines of businesses together within the boundaries of a firm. These lines of businesses are managed through a hierarchy of decisions by a common corporate headquarters. According to Coase (1937), decisions within a hierarchy differ from decisions in a market. So, one potentially good reason for diversification might be that the management of specific set of businesses by a common corporate headquarters add economic value vis-à-vis the operation of these businesses independently.

Diversification does not always create value. Thus, this study is concerned with the conditions under which diversification destroys or creates shareholders' value. One strand of the related literature on diversification has mainly focused on the value consequences of related versus unrelated diversification (Hill, Hit, Hoskisson, 1992; Palich, Cardinal and Miller, 2000; Rumelt, 1974; Seth, 1990). The overall implication of this literature is that diversification creates value when it is motivated by the potential economies of scope associated with diversification (Teece, 1980; 1982), and by leveraging non-tradable resources (Penrose, 1959).

Another strand of the literature is framed in the agency theory (Jensen and Meckling, 1976; Jensen, 1986) and argues that diversification is a symptom of agency problem at the top management level. In fact, several empirical studies show that diversified firms trade at a discount relative to single segment firms (Berger and Ofek, 1995; Lamont and Polk, 2002; Lung and Stulz, 1994; Rajan, Servaes and Zingales, 2000; Servaes, 1996). This result has become to be known in the literature as the “diversification discount”. Diversification discount can be defined as the difference between the market values of a diversified firm and a comparable portfolio of single segment firms operating in similar lines of businesses as the divisions of the diversified firm.

Recently, some researchers have questioned the existence of the discount on methodological grounds (Campa and Kedia, 2002; Graham, Lemmon and Wolf, 2002; Villalonga, 2004). According to Campa and Kedia (2002), there is a sample selection bias in the documented diversification discount to the extent that the diversification decision is not random. They argue that

firms endogenously choose to diversify. Thus, the diversification decision and hence the sample of diversified firms is not random. However, they find evidence consistent with the diversification discount view even after they control for the endogeneity of the diversification decision. Villalonga (2004) argues that the financial data that most studies had used do not correspond well enough to business operations and internal organization of diversified firms, reporting the data. Thus, she argues, the level of the documented discount is doubtful. Using a different source of data, she finds a diversification premium, or excess value, rather than a discount. Finally, using estimation techniques that account for the measurement error in *Tobin's q*, the measure of investment opportunities, Whited (2001) find that diversified multi-business firms allocate resources efficiently, and that as resource allocation efficiency increases diversification discount goes down.

In 1997, FASB issued a statement (FASB 131) that requires firms to break down and report divisional financial data according to how they are organized internally. One purpose of this new statement is to let the public have access to more specific and better quality divisional financial information. Therefore, data reported post 1997 allows us to make a better comparison between diversified firms and single segment firms.

In this chapter, using post-FASB 131 data on a sample of 119 diversified firms, I first investigate whether there is a diversification discount or premium. As a proxy for diversification discount, I calculate excess value associated with diversification (Rajan et al. 2000). I find that the average level of excess value in my sample is negative, suggesting that the diversified firms in my sample trade at a discount relative to their single-segment counterparts. However, there is a significant variation in the average value of excess value. To explain this variation, this chapter links excess value to related vs. unrelated diversification as well as equity and cash based executive compensation. The heteroskedasticity-robust ordinary least squares regression analyses indicate that the level of diversity has a significant impact on the excess value. I also find some evidence indicating a positive link between stock options based executive compensation and the excess value. Overall, the results of this study are consistent with evidence

that links performance of diversified firms to the level of their operational diversity (or, focus) and managerial incentives.

The rest of the paper is organized as follows: In section 2, I discuss the theory and literature related to diversification. In section 3, I present the data and measurement of variable. Section 4 presents results, followed by robustness analyses in section 5. Section 6 discusses and concludes the study.

Theory and Literature

Does corporate diversification in fact create economic value? Diversification creates value when two conditions are met. One is that there must be economies of scope among different business lines of the diversified corporation. Second, there must be efficiency gains in managing these economies of scope under a common headquarters rather than through an alternative form of governance (Barney, 2014).

According to the resource based view of the firm (Barney, 1991; Mahoney and Pandian, 1992; Penrose, 1959; Peteraf, 1993; Wernerfelt, 1984), firms are a bundle of heterogeneous and immobile resources. Profit is generated by utilizing these resources. Since, resources or capabilities are usually unique and thus differ across firms, profitability also differs across firms in the same industry. Profitability differences would be sustainable to the extent that resources are immobile across firms. Thus, firms grow in order to utilize immobile and heterogeneous resources. In this view, diversification could create value when it is motivated by a desire to utilize own or other firm's immobile and heterogeneous resources.

Thus, when diversification is motivated by leveraging a unique resource or capability in a target market, there is a potential for value creation. For instance, there are economies of scope in distributing many consumer goods, such as chocolate and dairy products, using a single distribution asset. However, the realization of this potential depends on the relative absence of alternative methods of realizing this potential, and the efficiency of the combined firm in managing the potential economies of scope. Overall, drawing on the resources based view of the firm, one could argue

that there are motivations for diversification that are consistent with value maximization.

On the other, the empirical literature on diversification indicates that diversified firms trade at a discount, on average (Berger and Ofek, 1995; Lamont and Polk, 2002; Lung and Stulz, 1994; Rajan, Servaes and Zingales, 2000; Servaes, 1996). Why do diversified firms trade at a discount when diversification can be a source of value creation, as espoused by the resource based view of the firm? The agency theory provides an explanation for the documented discount. Note that diversified multi-business firms are large with diffuse structure of ownership. According to Berle and Means (2009 [1968]), an important consequence of a diffuse ownership structure is that a firm's ownership is separated from its control. When a control of a property is separated from its ownership, those in control would no longer bear the consequences of their decisions (Grossman and Hart, 1986; Hart and Moore, 1990; Libecap, 2003).

In most diversified multi-business firms, the CEO and other top and divisional executives control firm behavior and investment. In many cases, managers could enjoy the private benefits of control. However, to the extent that both private benefits of control are inconsequential and management incentives are misaligned with those of property owners, we are most likely to observe firm behavior and investment that is inconsistent with value creation and maximization (Jensen and Meckling, 1976). One way to align managerial incentives with those of owners is by executive compensation that link payment to firm performance. In fact, many diversified firms design complex compensation mechanisms that link both short-term and long term firm performance to executive compensation pay. Thus, according to the agency theory, compensation mechanisms that link executive pay to firm's performance would be associated with excess value in diversified firms.

To summarize, diversified firms might trade at a discount relative to single segment firm for at least two main reasons: One is that the agency problem between top management and owners manifest itself in terms of overexpansion and overinvestment. This is not to say that diversification

does not create value. Rather, in firms with agency problems, managers overdiversify. Second, a diversification could destroy value due to lack of economies of scope among divisions of the diversified multi-business firm.

Data and Variables

Sample and Data

Diversification discount is defined in relation to market value of single segment firms. Villalonga (2003) provides three conceptual definition of diversification discount: strong, semi strong and weak form. A weak form diversification discount implies that diversified firms trade at a discount relative to single segment firms in the same industries as the divisions of the diversified firm. A semi strong form diversification discount implies that diversified firms trade at a discount relative what the divisions of the diversified firms worth if they were split apart and let operate as stand-alone firms. A strong form diversification discount implies that diversification destroys value. Given data availability, I adopt the weak-form definition. That is, in this chapter, I assume that there is a diversification discount if diversified firms trade at a discount relative to stand-alone counterparts of their divisions. Therefore, in order to calculate the diversification discount, one needs first to calculate benchmarks using data on stand-alone (single segment) firms. I use Standard and Poor's COMPUSTAT files to obtain data both on diversified multi-business firms as well as single-segment firms for the years of 2002 and 2003. A diversified firm is defined as a firm that reports more than one NAICS code at a four-digit level. The rest of the firms on the COMPUSTAT database are considered single segment firms. The data on executive compensation for the years 2002 and 2003 comes from Standard and Poor's ExecuComp database. Due to missing data on divisional managers' compensation, the final sample of firms consists of 119 firm-level observations.

The Dependent Variable

The dependent variable in this study is the *excess value*. Following the related literature (Lung and Stulz, 1994; Rajan et al., 2000), I define excess value as the size adjusted difference between market value of a diversified

multi-business firm and a comparable portfolio of single-segment firms. Operationally, this definition corresponds to the difference between a multi-business firm's *Tobin's q* and its *imputed Tobin's q*. This definition assumes that the average market value of single segment firms in an industry is a good proxy for the market value of a division of a multi-business firm. Formally, the measure is stated as follows:

$$\text{Excess Value} = \text{Tobin's } q - \text{Imputed Tobin's } q$$

where,

$$\text{Tobin's } q = \left(\frac{(\text{Assets} + \text{Price} \times \text{OutShares}) - (\text{Equity} + \text{DefTax})}{\text{Assets}} \right)$$

and

$$\text{Imputed Tobin's } q = \sum_{j=1}^N w_j \times \text{Tobin's } q_j$$

In the above equations, all values are end of fiscal year values. In the equation for *Tobin's q*, *Assets* refers to the book value of a firm's total assets, and *Price* refers to the stock price adjusted for stock splits. *OutShares* is the number of shares outstanding. *Equity* is the book value of total equity, and *DefTaxes* is the book value of deferred taxes. I use book value of assets rather than the replacement value of assets for calculating *Tobin's q*, as this approach does not create a material difference in a firm's *Tobin's q* ratio. In the equation for *imputed Tobin's q*, w_j is division j 's asset weight, and *Tobin's q_j* is equal to the average *Tobin's q* of single segment firms in the same industry as division j . At least 3 single segment firms with complete data are required to calculate the average *Tobin's q* for an industry, defined at 4-digit NAICS code. To reduce the effect of outliers and achieve linearity in my data, I transformed this variable using the natural log transformation.

Independent Variables

In this study, we argue that a firm's level of (unrelated) diversification and managerial incentives explain significant part of the variation in excess value. Thus, I have two key independent variables: *diversity* and *executive compensation*. Diversity is measured with *inverse Herfindahl* index. I calculate Herfindahl index of a multi-business firm based on divisional asset shares. This index measures the level of asset concentration of a firm in an industry, defined at 4-digit NAICS code. The inverse of this index measures the level of dispersion of the firm assets over industries, and hence the level of diversity of operation of the multi-business firm. This variable as well is transformed using the natural log transformation.

To measure managerial incentive alignment, I use data on CEO and divisional managers' compensation. Specifically, I examine the effect of both long-term and short-term executive compensation on the level of excess value. For long-term compensation, I calculate pay for performance sensitivities based on both equity ownership and holdings of options (Jensen and Murphy, 1990). Formally, pay for performance sensitivity that is based on equity share ownership, which I call Equity PPS, is:

$$\text{Equity PPS} = \frac{\text{Number of shares held by executive}}{\text{Number of shares outstanding}}$$

Pay for performance sensitivity based on stock options holdings, which I call *Options PPS* is calculated as follows:

$$\begin{aligned} \text{Options PPS} \\ = \frac{\text{Change in the value of stock options held by executive}}{\text{Change in stockholders' wealth}} \end{aligned}$$

Value of stock options holdings of an executive includes Black-Scholes values of both vested and not yet vested in the money stock options plus value realized from exercising stock options (Jensen and Murphy, 1990; Shi, 2011).

In addition to managerial incentives based on long-term compensation, we consider the effect of short-term compensation, which include

compensation paid usually in cash. Hence, our variable *cash compensation* is the sum of annual salary, bonus payment and other short-term compensation. Each compensation variable is measured separately for both the top (CEO) and the divisional management. The values for divisional management reflect the average (overall value) of reported compensation data on divisional managers' compensation.

In my analyses, I control for a number of variables. One variable that is likely to affect excess value is what Rajan et al. (2000) call *q diversity*, which is simply the standard deviation of weighted divisional *Tobin's q* divided by the simple average of divisional *Tobin's q*. Divisional *q* ratios are proxied by the average *Tobin's q* ratios of single segment firms in the same industry as the division. An important rationale for the existence of the multi-business firm is the internal capital market by which the headquarters allocates resources among divisions. Hypothetically, it is possible to create value by internal resource allocation (Bower, 1970; Stein, 1997; Williamson, 1975).

Whether value creation by internal resource allocation is realized is an empirical question. Thus, I control for the level of value creation by internal resource allocation using Rajan et al.'s (2000) measure of *absolute value added by allocation*. Firm size is an important factor that affects a firm's decision making and efficiency. So, natural *log of total assets* and the *number of divisions* are used as a control for firm size. Finally, I control for the level of capital resources available for the multi-business firm, as the level of cash flows is an important determinant of investment (Jensen, 1986). *Cash resources*, the proxy for capital resources, is measured using the sum of operating income and amortization.

Results

Table 1 reports the summary statistics and correlations among variables. The mean excess value in my sample is negative 1.93, with a 5.82 standard deviation. It appears that diversified firms trade at a discount. However, relative to the mean level of the discount, the standard deviation significantly large. In fact, given the standard deviation associated with the

average level of excess value, one could conclude that there is no diversification discount, at least in this sample. Thus, the more important question is the one that is related to the causes behind the variation in excess value.

Table 2 reports the heteroskedasticity-robust ordinary least squares regression of excess value on my independent and control variables. Because there is a significant correlation between Equity PPS and Options PPS, I estimate separate empirical models by including each measure at a time. So, Model 1 reports the estimated regression results when Equity PPS is in the model.

According this model, there is a significant negative relationship between firm diversity and excess value, as expected. Specifically, 10% increase in the inverse of Herfindahl index is associated with 0.31 unit decrease in excess value ($\beta = - 3.25, p < 0.000$). On the other hand, contrary to the expectation, and somewhat surprisingly, Equity PPS for both the CEO and divisional management is negatively related to excess value. However, according to Model 1, neither Equity PPS nor cash compensation is significant determinant of excess value in our sample.

Table 1. Summary Statistics and Correlations

Variables	Mean	Std. D.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	13.
1. Excess value	-1.926	5.82	1.00												
2. Inverse Herfindahl (log)	0.505	0.33	-0.22	1.00											
3. Q Diversity	0.257	0.14	-0.35	-0.27	1.00										
4. Abs. value added by alloc.	-0.034	0.16	0.52	0.00	-0.32	1.00									
5. Total assets (log)	7.752	1.40	-0.20	0.14	0.17	-0.10	1.00								
6. Cash resources (log)	4.101	1.24	-0.14	0.18	0.17	-0.12	0.80	1.00							
7. Number of division	8.098	0.25	-0.06	0.35	-0.33	0.03	0.26	0.19	1.00						
<i>CEO Compensation</i>															
8. Equity PPS	0.022	0.066	-0.08	-0.16	0.14	-0.04	-0.11	-0.06	-0.14	1.00					
9. Options PPS	0.004	0.036	0.12	0.09	0.08	0.04	0.03	-0.01	-0.04	-0.44	1.00				
10. Cash cash comp. (x1000)	14.66	10.45	-0.20	0.22	0.08	-0.15	0.70	0.72	0.28	-0.12	0.05	1.00			
<i>Div. Mng. Compensation</i>															
11. Equity PPS	0.001	0.003	0.01	-0.15	0.03	0.03	-0.16	-0.13	-0.10	0.07	0.06	-0.12	1.00		
12. Options PPS	0.002	0.004	0.20	-0.03	-0.13	0.05	-0.26	-0.17	-0.15	-0.08	0.20	-0.13	0.01	1.00	
13. Cash cash comp. (x1000)	0.62	0.53	-0.12	0.21	0.12	-0.09	0.60	0.65	0.16	0.07	-0.02	0.57	-0.10	-0.10	1.00

Model 2 reports the estimated regression results when Options PPS is in the estimated model. In this model as well, there is a significant and negative relationship between the inverse Herfindahl index and excess value ($\beta = -3.23, p < 0.001$). In addition, there is a significant and positive relationship between Options PPS of the CEO and excess value ($\beta = 11.9, p < 0.007$). This result indicates that 1 (percentage) point increase in Options PPS for CEOs, i.e., an increase from 0.01 to 0.02, is associated with 0.12 unit increase in excess value. This finding is consistent with the increasing popularity of stock options based executive compensation (Ittner, Lambert and Larcker, 2003; Murphy, 2003). Although, the coefficient on Options PPS for divisional management appears to be positively related to excess value, it is not statistically significant. One potential explanation for this non-significant effect might be related to my relatively small sample.

Table 2. Heteroskedasticity-robust OLS Regression Estimates*

Variables	Expected Sign	Models				Results
		Model 1		Model 2		
		Coef.	P> z	Coef.	P> z	
Inverse Herfindahl (log)	-	-3.248	0.000	-3.229	0.001	Supported
<i>CEO Compensation</i>						
Equity PPS	+	-6.356	0.404			Not supported
Options PPS	+			11.904	0.007	Supported
Cash cash compensation	+	0.000	0.202	0.000	0.164	Not supported
<i>Div. Mng. Compensation</i>						
Equity PPS	+	-42.03	0.349			Not supported
Options PPS	+			60.612	0.440	Not supported
Cash cash compensation	+	0.001	0.178	0.001	0.272	Partially supp.
Q Diversity		-7.939	0.001	-8.390	0.000	
Absolute value added by allocation		26.542	0.000	26.349	0.000	
Total assets (log)		-0.785	0.121	-0.674	0.196	
Number of division		0.045	0.848	0.112	0.631	
Cash resources (log)		5.042	0.083	5.153	0.071	
Constant		-31.89	0.118	-34.04	0.088	
Number of observations		119		119		
F value		49		51		
Prob > F		0.000		0.000		
R-squared		0.72		0.73		

* The dependent variable, excess value, is calculated by the difference between the actual Tobin's q and the weighted average of the imputed Tobin's q.

Regarding the control variables, only Q diversity and absolute value added by allocation are significantly related to excess value. In both Model 1 and Model 2, Q diversity is negatively related to excess value, whereas absolute value added by allocation is positively related to excess value. The result on these two control variables is consistent with findings from previous studies. Overall, the results from Table 2 indicate that as the level of firm diversity increases diversification discount increases significantly. In addition, CEO compensation based on stock options appears to reduce the level of diversification discount. However, compensation at the divisional management level does not seem to be related to excess value.

Robustness

In this section, I check the robustness of my results in several ways. First, using an alternative measure of excess value, I recalculate the average level of diversification discount (or premium), and re-estimate the regression models using the new measure of excess value. The new measure of excess value is based on the ratio of the firm's *Tobin's q* to the *imputed Tobin's q* (Lang and Stulz, 1994). Formally,

$$\text{Excess Value} = \frac{\text{Tobin's } q}{\text{Imputed Tobin's } q}$$

I applied natural log transformation to this measure, as this transformation significantly improved the linearity of the measure. Based on this measure, diversified multi-business firms trade at a premium, on average. The average level of excess value is 1.23, with a standard deviation of 1.40. Although the standard deviation associated with this value is large relative to the mean value, the finding of diversification premium contrasts with my finding in the previous section. Table 3 presents the heteroscedasticity-robust ordinary least squares estimates of my regression models. The results from both Model 1 and Model 2 are consistent with my previous findings. For instance, according to Model 1 of Table 3, there is a strong and negative relationship between firm diversity and excess value ($\beta = -0.94$, $p < 0.000$). This result indicates that 10% increase in firm diversity is associated with 9.4% decrease in excess value. Consistent with my previous results, results in Model 2 indicate that stock options based CEO compensation has a positive impact on excess value. Overall, although the mean level of excess value differs across the two measures, the results from Table 3 confirms my findings in the previous section.

A more detailed examination of these two measures reveals that the difference measure is negatively skewed whereas the ratio measure is positively skewed. In this case, the median might be more appropriate for examining the data. The median excess value of the difference and ratio measures are -0.05 and 0.94, respectively. Comparing the medians instead

of the means shows that both measures are consistent, i.e., both measures indicate diversification discount.

Table 3. Heteroskedasticity-robust OLS Regression Estimates*

Variables	Expected Sign	Models				Results
		Model 1		Model 2		
		Coef.	P> z	Coef.	P> z	
Inverse Herfindahl (log)	-	-0.941	0.000	-0.960	0.000	Supported
<i>CEO Compensation</i>						
Equity PPS	+	-1.371	0.461			Not Supported
Options PPS	+			4.505	0.000	Supported
Cash cash compensation	+	0.000	0.361	0.000	0.314	Not Supported
<i>Div. Mng. Compensation</i>						
Equity PPS	+	-13.48	0.157			Not supported
Options PPS	+			16.35	0.539	Not supported
Cash cash compensation	+	0.000	0.302	0.000	0.369	Not supported
Q Diversity		-2.180	0.001	-2.342	0.000	
Absolute value added by allocation		2.555	0.000	2.472	0.000	
Total assets (log)		-0.160	0.129	-0.133	0.181	
Number of division		-0.039	0.638	-0.019	0.819	
Cash resources (log)		0.778	0.168	0.833	0.120	
Constant		-3.950	0.325	-4.695	0.222	
Number of observations		119		119		
F value		8.17		9.71		
Prob > F		0.000		0.000		
R-squared		0.43		0.45		

* The dependent variable, excess value, is calculated by the ratio of the actual Tobin's q to the weighted average of the imputed Tobin's q.

As further analyses, I estimate my regression models using the quantile regression estimation technique (Koenker, 2005). Table 4 presents the estimated quantile regressions for 20th, 50th and 80th percentiles. Models 1 through 3 present the results when Equity PPS is in the model. Model 4 through 6 present the results when Options PPS is in the models. The results from this models are largely consistent with results from the preceding analyses. First, note that the coefficients on Inverse Herfindahl are all

Table 4. Quantile Regression Estimates*

Variables	Expected Sign	Models											
		Model 1		Model 2		Model 3		Model 4		Model 5		Model 6	
		20th Percentile	Median	80th Percentile	20th Percentile	Median	80th Percentile	20th Percentile	Median	80th Percentile	20th Percentile	Median	80th Percentile
Inverse Herfindahl (log)	-	-2.133	0.13	-0.633	0.04	-0.995	0.00	-2.473	0.07	-0.529	0.09	-0.893	0.00
<i>CEO Compensation</i>													
Equity PPS	+	-23.22	0.05	-2.787	0.29	2.659	0.32						
Options PPS	+							4.252	0.84	5.490	0.26	####	0.01
Cash cash compensation	+	0.000	0.82	0.000	0.33	0.000	0.29	0.000	0.79	0.000	0.57	0.000	0.05
<i>Div. Mng. Compensation</i>													
Equity PPS	+	-2.989	0.99	-15.73	0.76	-68.56	0.19						
Options PPS	+							-51.90	0.79	-5.045	0.91	55.66	0.17
Cash cash compensation	+	0.000	0.99	0.000	0.25	0.001	0.25	0.000	1.00	0.000	0.50	0.001	0.00
Q Diversity		-7.491	0.25	-3.890	0.01	-4.812	0.00	-8.670	0.17	-4.028	0.01	-6.062	0.00
Absolute value added by allocation		29.28	0.00	28.23	0.00	28.94	0.00	30.10	0.00	28.13	0.00	28.35	0.00
Total assets (log)		-0.008	0.99	-0.007	0.97	-0.620	0.00	0.133	0.88	-0.089	0.66	-0.465	0.02
Number of division		-0.251	0.73	-0.115	0.46	-0.150	0.35	-0.336	0.63	-0.051	0.75	-0.221	0.14
Cash resources (log)		0.000	0.90	0.000	0.99	0.001	0.01	0.000	0.92	0.000	0.65	0.001	0.01
Constant		5.540	0.42	2.621	0.08	9.068	0.00	5.373	0.43	2.720	0.09	7.872	0.00
Number of observations		119		119		119		119		119		119	
R-squared		0.48		0.37		0.33		0.46		0.37		0.34	

* The dependent variable, excess value, is calculated by the difference between the actual Tobin's q and the weighted average of the imputed Tobin's q.

negative and significant, except for the coefficient from Model 1, which is marginally significant given one tailed test. Thus, it appears that the finding with respect to firm diversity is robust. On the other hand, the results regarding managerial compensation are mixed. According to Model 1 of Table 4, there is a negative relationship between Equity PPS and excess

value. In addition, CEO level Options PPS is significant only when the 80th percentile of the response variable is predicted.

Discussion and Conclusion

Given the number and scale of diversified firms, diversification has significant economic consequences. On the one hand, diversification could potentially create value when it is motivated by benefiting from the exploitation of unique and immobile assets. Thus, relatedness among divisions of a diversified multi-business firm is potentially economic value enhancing. In fact, this study shows that as firm diversity increases the performance of a diversified firm, measured by excess value, decreases. A corollary to this finding is that firm could create value if they follow a related diversification strategy.

Related diversification does not inexorably create economic value. To realize the potential value from related diversification, it is important that diversified firms find a way to efficiently manage economies of scope among divisions. Thus, providing high-powered incentives to critical managers is likely to be associated with value creation in diversification. Our findings indicate that diversified firms that reward their CEOs based on stock options are more likely to successfully implement the diversification strategy.

An important limitation of this study is that the sample size is limited compared to the universe of diversified firms. Thus, although our results are consistent with findings from previous studies, it is not easy to generalize our results to other diversified firms. Another limitation of this study is that our regression analyses are cross-sectional. This design ignores the longitudinal nature of information in the data. With cross-sectional time series data one could control for unobservable firm random or fixed effects, and obtain more reliable results.

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4

Comparing EU Countries, Turkey and Macedonia via Clustering Analysis for Quality of Life Indicators

Munise Tuba AKTAŞ

Abstract

Improvement of the phenomenon of development to include the quality of life resulted in an increase in the focus on the topic of quality of life especially in recent years. Because a wider approach to development, in addition to the economic growth objective of development is significant in the World Development Report published in 1991. In this context, raising the quality of life is an important challenge for developing countries. Although increasing the income level is necessary to improve the quality of life, it is not sufficient for the developmental approach today. The phenomenon of quality of life includes better education, better nutrition, better healthcare, reduction of poverty, improving employment opportunities and work conditions, equality of opportunity, clean environment, expansion of economic freedoms and wealthy socio-cultural components. The baseline of the current study is the fact that development is a multi-dimensional process and one of these dimensions is quality of life. In the present study, EU member countries and candidate countries, Turkey and Macedonia, were subjected to clustering analysis based on 2013 data in terms of their quality of life indicators and the objective was to identify the similar countries. Therefore, the relative position of Turkey would be perceived against the EU member countries and the candidate country, Macedonia.

Keywords: Quality of life, Turkey, European Union, Cluster Analysis

JEL Codes: O11, I 31

Introduction

In developing countries, improving the quality of life is a significant constituent of the development efforts. The main objective of the present study is to demonstrate the similar characteristics of Turkey, a candidate country for the European Union, with those of the member countries in terms of quality of life. Thus, it would become possible to assess Turkey's position against 28 EU countries and another candidate country, Macedonia, with respect to the pivotal quality of life indicators linked to the level of socio-economic development. The contribution of this study to literature is the evaluation of development with respect to the quality of life indicators. The hypothesis established in the present study asserts that Turkey presents similarities in terms of quality of life to Bulgaria Romania and Macedonia that the same human development rank (high human development) according to human development index in 2013 (UNDP, 2014: p.168-169).

Research on quality of life in the European Union dates to early 1970s and 1980s, to the period when the Eurobarometer and the European Values Study were established. On the other hand, EU initiated new research programs that would constitute the basis for the quality-of-life research since the mid-1990s. This development led to the enrichment of the quality of life data. The European Community Household Panel, which provides information on the different dimensions of life quality, including subjective well-being (SWB) is an example to these programs. The European Social Survey incorporates standardized inquiries regarding the quality of life and SWB, and yet addresses these issues as a part of its changing modules. On the other hand, The European Quality of Life Survey¹, which focused on the

¹ The European Quality of Life Survey was conducted first in 2003 and targeted 25 EU member states including the former and current accession countries Bulgaria, Romania and Turkey. The focus is on employment, economic resources, family and households, community life and social participation, health and health care, education and training were the main issues pinpointed in the survey in order to address a comprehensive set of knowledge regarding a holistic scope of quality of life issues (Noll, 2008: 12).

development of living and working conditions, was introduced by the European Foundation (Noll, 2008:1-2). Life satisfaction, which indicates the level of positive attainment achieved by generally evaluating an individual's quality of life, correspondingly signifies the extent of the pleasure obtained from the ongoing life (Veenhoven, 1996: p.17). In other words, life satisfaction refers to the degree to which individuals evaluate positively the quality of their life in general (Radcliff, 2001: p.939).

Life satisfaction research is being conducted in Turkey since 2003. The Life Satisfaction Survey (LSS) was used to measure the level of satisfaction of individuals living in Turkey within the main areas of life, such as the perception of subjective happiness, health, social security, formal education, work life, income, personal security and justice services, transportation services, municipal services, expectations, personal development and values etc, and to track the alterations of these levels over time (TurkStat, 2014 Life Satisfaction Survey, <http://www.resmiistatistik.gov.tr/>).

The present study is comprised of four parts. The first part addresses the concept of the quality of life and its theoretical framework. The second part provides information on the variables and the method used in the analysis. The last section presents the findings obtained from the analyzes and the latter part presents the result of the study.

Quality of Life and its Components

Quality of life turned out to be a prevalent concept in the twenty-first century, particularly with respect to research conducted on health and economics. International Society for Quality of Life Studies, an expert organization, was established and continues to publish journals addressing the 'quality of life' concept (Anderson, 2014: p.12). Due to the fact that quality of life became an important research topic in recent years, the emergence of conceptual, theoretical elucidations and of research regarding the evaluation of the concept developed. Quality of life could be expressed as an evaluation of life or society as a whole, or of their essential elements (Gasper, 2010: 353). In this framework, a detailed approach to this concept entails the quality of life related to the well-being of individuals, in addition to the inhabited societal and environmental qualities. The World Health Organization (WHO) defines quality of life as "*an individual's perception of their position in life in the context of the culture, and value systems in*

which they live, and in relation to their goals, expectations, standards and concerns. It is a broad-ranging concept affected in a complex way by the person's physical health, psychological state, level of independence, social relationships, and their relationship to salient features of their environment” (WHO Quality of Life Group, 1993, cited by Eurofound, 2014: p.9).

It could be observed that the research concentrated on the quality of life are systematized in order to include a range of different areas. In such regard, the study of quality of life by David Phillips becomes important in terms of systematically addressing the dimensions of quality of life. The study denotes the dimensions of quality of life as subjective well-being, health-related quality of life, benefits, needs and capabilities, poverty studies, social issues and social quality of life. Accordingly, it could be observed that these dimensions are comprised of social elements as well as the individual elements (Gasper, 2010: 353). Ignor (1998) emphasized that quality of life is a social, economic, health-related, and an environmentally interactive concept (Bukenya and Gebremedhin 2001: 1).

Theoretical Approaches to Quality of Life

Numerous discourses progressed upon the means to measure “quality of life,” since no clear definition for the constituents of the concept existed. Per capita Gross National Product (GNP) is a common measure employed for public policy decision making. Nevertheless, this measure is gradually accepted as inadequate and conceivably turns out to be a less appropriate measure in terms of quality of life. Opinions that integrate activities to constitute a “thriving human life” replace the measure, GNP, which originates from an utilitarian philosophy (Nussbaum and Sen, 1993, cited by Singh, 2007: p.103-104). As Sen noted, it would not be adequate to set the main objective as fostering income and wealth to a maximum level, since these are “only beneficial and for the sake of something else” as Aristotle asserts. Similarly, economic growth alone could not be considered as an objective. Development should further entail improvement of living standards and the freedoms that are benefited from. Expanding these

rightfully esteemed freedoms not only facilitates the lives of people our lives towards the more prosperous and unrestricted, but also foster the socialization of individuals through employing own preferences and through the interrelations and influences towards the inhabited realm (Sen, 1999: 14-15). Sen argues that the evaluation for the quality of a person's life could be conducted in terms of capabilities. Capability is defined as the aptitude or faculty to achieve a certain functioning². Sen categorized functionings in four overlapping categories, namely, well-being freedom, well-being achievement, agency freedom, and agency achievement. Our faculty for these four categories define our capabilities (Nussbaum and Sen, 1993, cited by Singh, 2007: p.104). In addition to Sen's approach that contemplates on quality of life in terms of the capability of an individual, there exist approaches that address the quality of life in terms of needs. Meeting the needs is considered as a basic constituent in the studies that interrogate quality of life in such a framework. Thus, those who advocate the objective view of quality of life commonly focus on meeting basic human needs. Accordingly, the quality of life refers to the level of meeting the human needs. This viewpoint deems healthy, well-nurtured, economically secure and well-educated individuals and individuals who have access to adequate housing more important than an individual's subjective feeling of well-being. However, the quality of life is the level of realization with respect to the subjective perceptions of individuals and groups on objective human needs (Sapancalı, 2009: p. 31).

In a Theory of Human Need developed by Doyal and Gough, the ultimate objective is to avoid serious risks that could harm the social participation fundamentally and continuously. Doyal and Gough investigated human needs under two separate titles, namely the basic needs and intermediate

² *Functionings* particularly characterize the array of things an individual could do or control in life, in other words, the parts of the state of a person. Alternative combinations of functionings that an individual could accomplish, and selecting one of these combinations facilitate the *capability* of that individual. The approach embraces a view that life is a combination of numerous "doings and beings" and therefore, in order to assess the quality of life the capability to achieve valuable functionings should be taken in consideration (Nussbaum and Sen, 1993, cited by Singh, 2007: p. 104).

needs. Physical health and autonomy, included in the basic requirements, are the universal provisions in achieving this objective. In addition, physical health and autonomy are considered as prerequisites for the individual's ability to be active and to be in interaction (Doyal and Gough, 1991: p. 171-191). Physical health is related to the sustainability of life. Autonomy is defined as the capacity (ability) to decide on what one wants to do in an intellectual manner. On the other hand, mental disorders, cognitive deprivation (inadequacy in comprehensive ability) and decreasing participation in social life due to inadequate opportunities cause the social participation to decrease (Sapancalı, 2009: p. 61). Intermediate needs are listed below. These are as follows:

- Food and Water
- Housing
- A non-hazardous work environment
- A non-hazardous physical environment
- Health care
- Security in childhood
- Significant primary relationships
- Economic security
- Physical security
- Education
- Safe birth control and child-bearing (Doyal ve Gough, 1991:

p.ix).

Doyal and Gough argue that, a society, which ensures the necessary prerequisites, is vital for the development and survival of the individuals. First of these prerequisites is that sufficient need-satisfiers should be produced by any society in order to provide minimal levels of survival and health, besides the additional products and services related to cultural importance. An adequate level of biological reproduction and child socialization should be assured by the society as the second of these prerequisites. The third prerequisite entails the skills and values significant for production and reproduction and the society is responsible in ensuring their communication through a satisfactory percentage of the public.

Besides, in order to successfully exercise these skills, adherence to the rules should be guaranteed via a certain system of authority as the fourth prerequisite (Doyal and Gough, 1991: p.80). In 2008, the Commission on the Measurement of Economic Performance and Social Progress was formed through the concert of Joseph Stiglitz, Amartya Sen and Jean Paul Fitoussi. Rather than focusing on a single criterion such as the GNP, this commission considers multiple criteria to measure economic and social development. In such respect, the Commission argues that the quality of life and prosperity should be measured with respect to eight areas. Briefly stated, these criteria are as follows:

- The resources required for a certain standard of life (income, consumption and wealth)
- Health
- Education
- Personal activities involving work life
- Policy and management
- Social relationships and communications
- Environment (current and future conditions)
- Confidence (economic and natural disasters)

In addition, a new index that identifies and measures prosperity in the light of the advances addressed by the Commission on the Measurement of Economic Performance and Social Progress was developed by OECD. Accordingly, OECD put the Better Life Index into practice on May 24, 2011 (Akar, 2014: p.4).

Literature Review

In this study was examined specifically, the cluster analyzes related to quality of life and socio-economic development in European countries. In this context, the studies in the literature mostly examine the relative position of some countries (candidate countries of EU, other European countries,) within European Union or European Countries in terms of socio-economic development indicators. It is grasped that studies on quality of life are more limited.

In the literature, different results have been obtained in studies for clustering European countries mainly due to the differences of variables. The information on some studies in the literature are given in the Table 1

Table 1: Literature review on Cluster analyzes related to quality of life and socio-economic development in European countries

Authour (s)	Countries	Year	Method	Variables	Result
Erkekoğlu (2007)	AB(25), Romania, Bulgaria and Turkey	Various years	hierarchical cluster analysis	39 socio-economic indicators related to demografic, education, health, information and telecommunication technologies are included	Five clusters were formed. 1. Cluster: Lithuania, Poland, Latvia, Bulgaria, Turkey and Romania 2. Cluster: Greece, Portugal, Slovenia, Slovakia, Malta, Cyprus, Hungary, Estonia 3. Cluster: Finland, Sweedden 4. Cluster: Belgium, Denmark, Germany, Ireland, France,

					<p>Luxembourg, Netherlands, Austria, United Kingdom ,Italy, Spain</p> <p>5. Cluster Luxembourg</p>
Křupka et al. (2013)	17 member states of European Monetary Union	Various years	cluster analysis algorithm TwoStep.	economic and socio-environmental variables characterised aspects of standard of living are included	<p>In the study three models of standards of living of Eurozone countries have been designed.</p> <p>According to model of complete standart of living which was proposed as the third model. In this model has been reached for three clusters; c_1, c_2, and c_3. Countries have been assigned to particular</p>

					<p>clusters as follows:</p> <p>c₁: Spain, Slovenia, Portugal, Italy, Estonia, Slovakia comprise countries with low index of standart of living</p> <p>c₂: Ireland, Luxembourg, Malta, Cyprus with average index of standard of iving.</p> <p>C₃: Finland, Netherland, Germany, Austria, Belgium, France which shows high level of standart of living.</p>
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Žmuk (2015)	34 European Countries	2015	hierarchical cluster analysis	Seven quality of life indicators are included	<p>Three different groups of European countries were obtained. These are old European Union member states, new European Union members, and non-European Union member states.</p> <p>Cluster A (old EU members): Austria, Belgium, Denmark, Finland, France, Germany, Ireland, Italy, Netherlands, Norway, Sweden, Switzerland, United Kingdom</p> <p>Cluster B (new EU members): Bulgaria, Croatia, Czech Republic, Estonia, Greece,</p>
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					<p>Hungary, Latvia, Lithuania, Poland, Portugal*, Slovakia, Slovenia, Spain</p> <p>Cluster C –(other countries): Belarus, Bosnia and Herzegovina, FYROM, Moldova, Romania, Russia, Serbia, Ukraine</p>
Ertaş and Atik(2016)	AB(28) and Turkey	2003-2014	hierarchical cluster analysis	54 socio-economic variables are included	<p>As a result of the analysis for 2003, at least two clusters and at most seven clusters were obtained. Turkey is in single cluster.</p> <p>As a result of the analysis for the year 2014, a maximum of eight and at least four clusters were obtained. Turkey was once again in a single cluster.</p>

Erkekoğlu (2007) explored to relative development of Turkey in comparison with the European Union (EU) is by using socio-economic indicators. They found that Turkey, Lithuania, Latvia, Poland, Bulgaria and Romania are in the same cluster. Krupka et al. (2013) have recognized countries with high, average and low standards of living by using cluster analysis. Žmuk (2015) claimed that the old European Union member states seem to have in average higher quality of life level than the new European Union member states . Atik ve Ertaş (2016) has reached the conclusion that Turkey has not a similar socio-economic performance to Romania, Bulgaria and Croatia. Furthermore, as a results of the analysis applied for 2003 and 2014, it is observed that Turkey didn't share the same development level with any of the EU countries.

Data and Method

The classification of Eurostat was taken into account in determining the quality of life indicators. Based on Eurostat classification, the quality of life is comprised of basic indicators, namely, material living conditions, health, education, economic and physical security, and environment. Each of these basic indicators is divided into sub-indicators (Table 2). The latest data for Turkey regarding the majority of the variables obtained from the Eurostat statistical database of the European Union date back to year 2013. Therefore, data from 2013 was used in the present study. In addition, some of the variables listed within Eurostat's quality of life data were not included in the study, since these variables were not matching for Turkey and Macedonia. Correspondingly, the relative status of Turkey would be examined with regard to the 28 EU countries and the candidate country Macedonia in terms of quality of life indicators for the year 2013. In this framework, 21 quality of life indicators were taken into consideration through the use of cluster analysis, which is a type of multivariate statistical methods. Contrariwise, it is difficult to mention high quality of life for an individual in a society where social welfare, political freedoms and democratization could not be ensured. It is highly challenging to obtain healthy, objective and comparable data regarding human freedom such as

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freedom of thought, political participation, equal opportunity (Yilmazer and Erdal, 2005: p. 91).

Table 2: Quality of life

<p>Material Living Conditions: Income and Material</p> <ul style="list-style-type: none"> • Mean and median income • At-risk-of-poverty rate by poverty threshold • Households making ends meet with great difficulty • Severely materially deprived people • Total population living in a dwelling with a leaking roof, damp walls, floors or foundation, or rot in window frames of floor 	<p>Productive or main activity: Quality and Quantity of Employment</p> <ul style="list-style-type: none"> • unemployment rate • People living in households with very low work intensity • Involuntary part-time employment as percentage of the total part-time employment • Average number of usual weekly hours of work • Temporary employees as percentage of the total number of employees 	<p>Health</p> <ul style="list-style-type: none"> • Life expectancy
<p>Education</p> <ul style="list-style-type: none"> • Population by educational attainment level, Less than primary, primary and lower secondary education (levels 0-2) • Population by educational attainment level, Upper secondary and post-secondary non-tertiary education (levels 3 and 4) • Population by educational attainment level Tertiary education (levels 5-8) • Participation rate in education and training (last 4 weeks) 	<p>Economic and physical safety</p> <ul style="list-style-type: none"> • Inability to face unexpected financial expense • Arrears (mortgage or rents, utility bills or hire purchase) • Crime, violence or vandalism in the area 	<p>Natural and living environment</p> <ul style="list-style-type: none"> • Pollution, grime or other environmental problems • Noise from neighbours or from the street

Source: Eurostat, Quality of life, <http://ec.europa.eu/eurostat/data/database>

Therefore, the present study excluded the political dimension of quality of life, which includes basic rights and freedoms. In this framework, the quality of life was limited to the following macro indicators. The selected indicators of quality of life and the codes are given as follows:

- X1 : Mean and median income,(Euro)
- X2 : Households making ends meet with great difficulty, (Percentage of total population)
- X3 : Severely materially deprived people, (Thousand persons)
- X4 : At-risk-of-poverty rate by poverty threshold, (Thousand persons)
- X5 : Total population living in a dwelling with a leaking roof, damp walls, floors or foundation, or rot in window frames of floor, (Thousand persons)
- X6: employment rate, (Percentage)
- X7 : unemployment rate, (Percentage)
- X8: People living in households with very low work intensity, (Thousand persons)
- X9: Involuntary part-time employment as percentage of the total part-time employment, (Percentage)
- X10 : Average number of usual weekly hours of work, (Hour)
- X11 : Temporary employees as percentage of the total number of employees, (Percentage)
- X12: Less than primary, primary and lower secondary education (levels 0-2), (Percentage)
- X13 : Population by educational attainment level, Upper secondary and post-secondary non-tertiary education (levels 3 and 4), (Percentage)
- X14: Population by educational attainment level Tertiary education (levels 5-8), (Percentage)
- X15 : Participation rate in education and training (last 4 weeks), (Percentage)
- X16 : Life expectancy, (Year)
- X17 : Inability to face unexpected financial expense, (Percentage of total population)
- X 18: Arrears (mortgage or rent, utility bills or hire purchase), (Percentage of total population)
- X19: Crime, violence or vandalism in the area, (Percentage of total population)

X20. Pollution, grime or other environmental problems, (Percentage of total population)

X21: Noise from neighbours or from the Street, (Percentage of total population)

In the present study, the analyses cover 28 EU member countries and 2 candidate countries. EU member countries are Belgium, Bulgaria, Czech Republic, Denmark, Germany, Estonia, Ireland, Greece, Spain, France, Croatia, Italy, Cyprus, Latvia, Lithuania, Luxembourg, Hungary, Malta, Netherlands, Austria, Poland, Portugal, Romania, Slovenia, Slovakia, Finland, Sweden, and United Kingdom. The candidate countries are Macedonia and Turkey. Since the quality of life indicators for Bosnia and Herzegovina and Montenegro, which are the other two candidate countries, could not be obtained from the Eurostat database, these countries were excluded from the analysis. In the study, SPSS 24 software was used for the statistical analysis. Since some of the variables used in the analyzes adopted levels and others adopted ratios as units, the units of measure were standardized in order to eliminate the differences between variables⁴. To distribute the countries, which are subject to this study, into homogeneous groups based on their similarities or differences hierarchical (distance) clustering analyses were used.

Cluster analysis could be defined as a collection of methods developed to cluster the observations or variables in (ungrouped) X data matrices with respect to their characteristics, in other words, to separate them into homogeneous subgroups (Alpar, 2013: p.317). Hierarchical cluster analysis

4 Clustering methods, which employ the distance measures (hierarchical cluster analysis methods), are highly sensitive to unit differences between the variables. As a rule, the effect of a variable with higher diffusion on distance-similarity measures is higher. the more common variable is the effect. Therefore, in such cases, the standardization of the data would be appropriate (Alpar, 2013: p.321). The most common form of standardization is to transform each variable into a standard value, also known as the "z score". The following formula could be used for standardization: $z = \frac{x_i - \mu}{\sigma}$. Via employing to this formula, all the data is converted to a distribution, which has an arithmetic mean of 0 and a variance of 1. Currently, standardization is conducted through computer software (Uçar, 2014: p.358).

methods aim to combine units at specific levels (cluster distance measures), considering the similarities of units. Hierarchical cluster analysis determines

Table 3: Agglomeration schedule (Ward Method)

Stage	Cluster Combined		Coefficients	Stage Cluster First Appears		Next Stage	Stage	Cluster Combined		Coefficients	Stage Cluster First Appears		Next Stage
	Cluster 1	Cluster 2		Cluster 1	Cluster 2			Cluster 1	Cluster 2		Cluster 1	Cluster 2	
1	26	27	1.111	0	0	4	16	4	19	104.436	4	8	24
2	14	17	3.624	0	0	15	17	8	29	116.009	0	0	23
3	3	25	6.564	0	0	12	18	1	7	128.085	7	0	22
4	4	26	9.852	0	1	16	19	13	22	140.627	0	0	21
5	6	15	13.73	0	0	9	20	3	11	158.221	12	11	26
6	10	28	17.879	0	0	14	21	9	13	178.254	10	19	25
7	1	16	22.284	0	0	18	22	1	5	199.969	18	14	24
8	19	20	28.693	0	0	16	23	2	8	227.968	15	17	26
9	6	24	36.22	5	0	12	24	1	4	256.193	22	16	29
10	9	12	45.163	0	0	21	25	9	18	288.487	21	0	27
11	11	21	54.189	0	0	20	26	2	3	337.7	23	20	28
12	3	6	63.608	3	9	20	27	9	30	394.066	25	0	28
13	2	23	73.225	0	0	15	28	2	9	480.464	26	27	29
14	5	10	83.301	0	6	22	29	1	2	609	24	28	0
15	2	14	93.734	13	2	23							

clusters in consecutive forms by combining the units with each other at different levels and identifies at what distance (similarity) level the components could enter these clusters (Özdamar, 2010: p.281). The assumptions, which pose great significance for many statistical methods, such as normality, linearity and constant variance, are of little value in cluster analysis (Alpar, 2013: p.320).

Findings of the Hierarchical Cluster Analysis for the year 2013

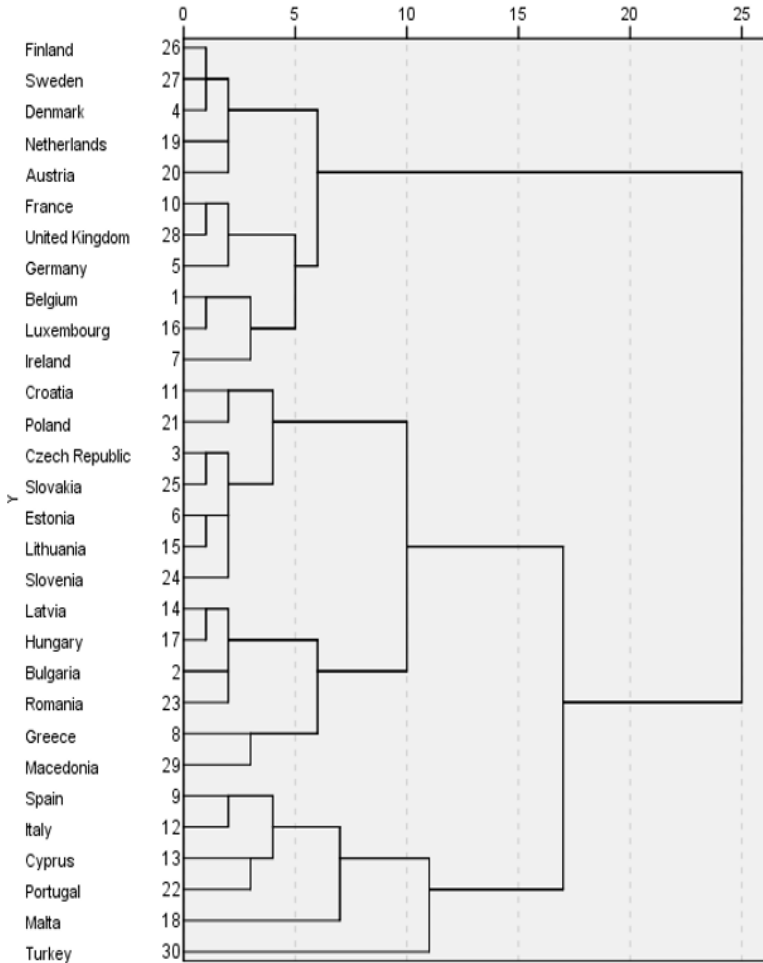
Hierarchical clustering results could vary depending on the use of clustering methods and distance/similarity measures. Therefore, a preferred approach is to evaluate the results of several methods and distances rather than interpreting the results by abiding to a single method and distance (Alpar, 2013: 333). This approach was adopted and hierarchical cluster analysis methods such as within group linkage method, between groups method, ward method and the centroid method, which is least affected from extreme values, were used in this study. All above mentioned methods were analyzed and the ward method (least variance method) was selected based on the analysis results. Comparing the analysis results obtained using the within group linkage, between groups, centroid clustering, it could be observed that the number of clusters was at most five. It is seen that when the analysis is repeated by specifying the number of clusters as five with the ward's method, Turkey was separated into different cluster as compatible with the other methods. On the other hand, in the dendrogram graph, it could be noticed that the observations mostly clustered in three groups with ward method. The dendrogram and the cluster table obtained due to the analysis are presented in Table 3 and, Figure 1 respectively.

Once Table 3 is scrutinized, it is possible to observe that the first column presents the stages of the cluster analysis and it consists of 29 steps. The first row indicates the first phase of the cluster analysis and under the Cluster combined heading, the 26th observation (Finland) and the 27th observation (Sweden) appear as the two closest observations at the first stage. In the second stage Latvia (14) and Hungary (17) appear as the closest observations. The closest observations in the third stage are the Czech Republic and Slovakia, which are the 3rd and 25th observations, respectively. The next column is the coefficient column and this column indicates the distances between the observations. In this regard, the distance between 26th and 27th observations is 1.111, the distance between 14th and

17th observations is 3.624, and the distance between the 3rd and 25th observations is 6.564. All phases could be interpreted in this manner until the 29th stage. The distance between the 1st observation (Belgium) and the 2nd observation (Bulgaria) is the largest. These coefficients are known as the squared Euclidean distance. The column, the stage cluster first appears, presents the stage in which a cluster is formed. The next stage column demonstrates at which stage the merge of two observations happen in order to form a cluster (Uçar, 2014: p.367). For instance, it is indicated the next phase after the 1st row is Phase 4. In other words, the 26th observation (Finland) and the 27th observation (Sweden) were clustered through the participation of the 10th observation (France) in 4th step. This process continued until the 29th stage.

In the dendrogram graph (Figure 1), it could be noticed that the observations mostly clustered in three groups (26 ---- 7), (11 ---- 29), and (9 - 30). In that case, there exist 11 observations in the first group, 13 observations in the second group, and 6 observations in the third group.

Figure 1: Dendrogram Using Ward Linkage Rescaled Distance Cluster Combine



Once the “Cluster Membership” table, which was obtained through the conducted analysis, is scrutinized, it could be observed that Turkey displays similarities to Spain, Cyprus, Italy, Malta and Portugal in terms of quality of life indicators (Table 4). On the other hand, as seen Figure 1, Malta and Turkey were involved third cluster afterwards. The results of the analyzes made without specifying the number of clusters are explained by given dendrogram graphic.

Table 4: Cluster membership
Cluster Membership

**Cluster
Numbers**

- | | |
|------------|--|
| 1. Cluster | Belgium, Denmark, Germany, Ireland, France, Luxembourg, Netherlands, Austria, Finland, Sweden, United Kingdom |
| 2. Cluster | Bulgaria, Czech Republic, Estonia, Greece, Croatia, Latvia, Lithuania, Hungary, Poland, Romania, Slovenia, Slovakia, Macedonia |
| 3. Cluster | Spain, Cyprus, Italy, Malta, Portugal, Turkey |

However, the number of clusters could be increased to five by taking into consideration the countries that constitute primary clusters and exhibit similarities to each other, with respect to the dendrogram and agglomeration tables. In this context, it is possible to group countries by specifying the number of cluster. For this, the number of clusters is determined as five in single solutions of SPSS. Cluster memberships, which were formed as the result of such analysis, are presented in Table 5.

Conclusion

Conceptual and theoretical approaches to quality of life suggest that the subject is multidimensional. Furthermore, the quality of life is comprised of subjective and objective components as well as its relationship with qualitative and quantitative elements of life. In such framework, converting the indicators of life quality into variables that include all dimensions and

conducting necessary measurements constitute an intricate and dynamic issue.

Table 5: Cluster membership

Cluster Numbers	Cluster Membership
1. Cluster	Belgium, Denmark, Germany, Ireland, France, Luxembourg, Netherlands, Austria, Finland, Sweeden, United Kingdom
2. Cluster	Bulgaria, Greece, Latvia, Hungary, Romania, Macedonia
3. Cluster	Czech Republic, Estonia, Croatia, Lithuania, Poland, Slovenia, Slovakia
4. Cluster	Malta, Portugal, Spain, Cyprus, Italy
5. Cluster	Turkey

Note: The clusters in the cluster tables do not demonstrate the order of development.

Considering the 28 EU countries, it is understood that these countries did not show any cognation in terms of their quality of life indicators. As a result of different levels of socio-economic development within the EU, countries do not show similarity according to their quality of life.

The findings of the analysis demonstrated that the founding members of the European Union, France, Germany, Italy, Belgium, the Netherlands and Luxembourg, and the first enlargement countries, Ireland and Denmark were similar in terms of quality of life indicators and they formed a cluster together. However, Italy stayed outside of this cluster, and the countries, Sweden, Finland and Austria, which joined the Union through the fourth enlargement process articulated this group (Table 1 and Table 2). It could be observed that the countries that constitute the first cluster are the most

socio-economically developed countries of the European Union. In this respect, quality of life levels and economic development levels are related to each other. Central and Eastern European countries are predominant in the second cluster as presented in Table 4, where the number of clusters is three. Greece is as well located in this cluster. In a three-cluster distribution, Turkey is in the third cluster, in which Malta, Portugal, Spain, Cyprus and Italy exist, and it could be observed that the countries that constitute this cluster are predominantly Mediterranean countries. Accordingly, the Mediterranean countries of Southern Europe, including Turkey, present similarities in terms of quality of life indicators. Once the number of clusters is increased to five, it could be observed that Turkey is separated from Malta, Portugal, Spain, Cyprus and Italy and forms a separate cluster. The five-cluster distribution demonstrated that countries in Central and Eastern Europe formed two different clusters consisting of the second and third clusters, unlike the three-cluster distribution. The second cluster consists of Bulgaria, Greece, Latvia, Hungary, Romania, Macedonia and the members of the third cluster are Czech Republic, Estonia, Croatia, Lithuania, Poland, Slovenia and Slovakia (Table 5). The hypothesis of the present study, “Turkey presents similarities to Bulgaria, Romania and Macedonia, which are the same group countries for human development index rankings with Turkey” was not confirmed. In this framework, in terms of the quality life indicators, Turkey was found to be close to several Southern European countries are in group of countries with very high human development. On the other hand, it could be observed that Turkey is separated from the EU countries, when the number of clusters is increased to five, with respect to the countries that constitute clusters initially.

The present study aimed to make an assessment based on Eurostat’s quality of life indicators for the EU member countries and candidate countries. Hence, it should be emphasized that this evaluation stays at a modest scale. Since, the quality of life indicators is a domain which is open to development and it is important to augment research on the quality of life through the improvement of data in this domain. It is possible to assert that more elaborate analyzes could be conducted through improving the quality of life indicators and expanding these analyses to include EU candidate countries.

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5 **Regional Development of Turkey by Microcredit System**

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Abstract

Microcredit is a financial system creates women new employment opportunities, economic value-added, enables poverty reduction and promotes financial sector development which are among the principal purposes of developing countries. Since 1970s, it is implemented by small and medium enterprises of developing countries as social and economic development strategy. The first aim of this study is to examine the impacts of microcredit usage to female labor force participation and regional development of Turkey for 2004-2016 period is analyzed by Panel data analysis. The second aim is to analyze the relationship between economic growth and female labor force participation rate and prove the inverted-U shaped pattern of this relationship, like 'Kuznets Curve'. In this regard, TR4 region (Western Marmara) of NUTS 1 (Nomenclature of Territorial Units for Statistics) in Turkey which is designated by Turkish Statistical Institute, included Kocaeli and Bilecik provinces were considered. Empirical results of this paper demonstrate that female labor force has decisive role on the selected region's economic, social well-being and their employment structures which is essential for sustainable and regional development of Turkey. Women's increasing participation role on the economy is crucial for defusing financial and economic crisis and also, it has fundamental role on poverty alleviation. For achieving these purposes, it is necessary to promote new job opportunities by microcredit financial system is the most encouraging strategy for improving female's role on the economy. Thus, empowering conditions of women have strategic importance for a global sustainable economic development models and it is necessary to promote microcredit system to encourage female labor force participation. Increasing benefits of this system enhances development of the country.

Keywords: Microcredit, Kuznets Curve, Panel Data Analysis, Poverty Alleviation, Regional Development

JEL classification: G23, I30, N20

Introduction

Since 1980s, the world has witnessed global integration of economies in goods, labor and financial markets through the development of foreign trade, led to technological improvement, cultural transmission among societies, move up in living standards, is commonly accepted as a crucial tool for economic growth, poverty alleviation in countries. Economic globalization of economies changed dynamics of financial system in the globe. According to assertion of economists, a well-functioning financial system is capable of promoting the physical capital accumulation and productivity, improving economic efficiency by development of financial system. So, it promotes long-run economic growth (Levine, 2004, 2005; Demirgüç-Kunt and Levine, 2008; Batuo et.al., 2010; Naceur et.al., 2014). Efficient financial system has a crucial point on the income distribution because more developed economies have vast credit opportunities. They allow low-income people for fighting against poverty by creating occasion to start new businesses. Thus, financial deepening has the effect of diminishing differences in income inequalities (Banerjee and Newman, 1993; Batuo et.al., 2010) so, over the years, capital investment is accepted as a fundamental factor in the economic growth of most of the developing countries. A well-functioning financial system enables economic agents to operate economies by efficient investments which lead to sectoral development. As stated by Mishkin (2003), financial sectors in developing countries do not improve the financial productivity because the existence of asymmetric information which causes to adverse selection and moral hazard (Schmukler, 2004). Microfinance is accepted as an instrument for solving this matter because it expands allocation and sources of funds.

Related with each other, investments in agricultural sector, manufacturing and services cause to higher productivity in each others and increase in

economic welfare level of countries. However, there is a serious problem is that in a such economic expansion period, the mechanism between labor demand and supply does not process efficiently because of unproductive labor. This system generates vicious cycle in which the poor have little or no land with low educational level and almost no capital for endeavoring to survive. Women in these families, create their own employment opportunities in small-scale agricultural production, develop livelihood and living strategies in informal sectors such as in food processing and sales, beer brewing, nursing, elderly caring, midwifery and petty trading (Panjaitan-Drioadisuryo and Cloud, 1999).

Microfinance is a tool of financial economy which allows opportunity to low-income, unemployed people, farmers, entrepreneurs for carrying out entrepreneurial projects to generate income, improve welfare, household's per capita income, social, human, economic development and to alleviate poverty and gender inequality (or gender employment gap) by various ways (Khandker, 1998a, 2005; Khandker and Samad, 2013a, 2013b; Khandker et.al., 2013; Koloma, 2010). It has a substantial role on achievement of the Millenium Development Goals (MDGs) by poverty alleviation which targets poverty stricken people by the aim of increasing their income, living standards, consumption habits and strengthening against economic crisis (Littlefield et.al., 2003; Akotey and Adjasi, 2016). Further, microfinance tools such as microcredit, microsavings, microinsurance can give chance the poor to develop their resistance against environmental, socio-economical risk and improve their welfare level by women empowerment (Daley-Harris, 2009; Akotey and Adjasi, 2016). Entitled as 'anti-poverty program', its target group is particularly women, small business owners, entrepreneurs, generally accepted as "unbanked", who lacking access to conventional banks and have limited opportunity for benefiting from traditional financial institutions (Khandker and Samad; 2014). The general accepted advantages of microfinance institutions to beneficiaries are giving a change for accessing financial support to diversify and increase sources of income, diminishing vulnerability of low-income micro-enterprises against financial instability, enabling regular income during economic shrinkage periods to help low-income micro-enterprises for sustaining their basic needs such as food, education, health care expenses. On the other side, the benefits of microfinance sector to economy is that they provide financial sector sustainability and deepening, allows broad-based, financially

sustainable economic growth, diminishes social and economic inequalities (Burritt, 2003).

Microfinance institutions were built in Asia and Latin America under different ideological, political, economic and cyclical conditions. Thus, there is idiosyncratic distinctness in microfinance structures of the two regions. Accordingly, after independence war of the country, modern microfinance concept was formed by Grameen Bank in Bangladesh, which means 'rural village' in the 1970s by Muhammad Yunus who is economics professor. Yunus started to give small loans to rural villages who have no chance of capitalizing from conventional banks with their own means, without collateral contract. This idea is practiced by Grameen Bank which became the most famous microfinance institution of the world by years, with a strong sense of developmental idealism (Weiss and Montgomery, 2004).

On the other hand, microfinance in Latin America was settled under peculiar states. In Bolivia, a collapsing populist regime gave cause for huge unemployment rates. Banco Sol as a pioneering microfinance institution of the region, determined to solve the problem of urban unemployment and provide loan to financially embarrassed informal sector. Bolivian microcredit was developed as a branch of commercial banking. The thought of commercial profitability was raised relatively early in this approach. In this way, the first microfinance intuitions worked up with the 'economically active poor' people needed to capital (Rutherford, 2003; Weiss and Montgomery, 2004).

In the related literature, it is pointed out that, installation principles of Grameen Bank widely vary from conventional banks. Accordingly, guidelines of Grameen Bank totally base on potential of a person who are generally poor women although conventional banks focuses on rich people. While main goal of conventional banks is to maximize their profits, Grameen Bank aims to put social and financial supports particularly behind low-income women for the purpose of overcoming their poverty by building viable social and financial environments. Besides, microcredit foundations are situated especially in the rural areas unlike conventional banks which are placed more commonly in town centers of urban areas. In the microcredit system, there is no legal mechanism between lender and borrower so, it reschedules the payment of borrowers when they do not make loan payments on time. However conventional banks activate legal

mechanism if borrowers do not pay their repayments right on time. In conventional banks, charging of interest rates is not interrupted, rather, increasingly continues by depending on periods. On the other hand, in microcredit system, interest rates do not charged if total interest repayments exceed capital. Moreover, Grameen Banks take notice of borrowers' families, support them by scholarships, student loans, welfare services such as in social, environmental, educational, healthcare fields which are known as "sixteen decisions". In this system, when borrowers die, Grameen Bank does not regard family of deceased responsible for their credit repayments (Yunus, 2009).

Microcredit institutions are non-profit organizations which mostly established in underdeveloped regions such as South Africa, Middle East, Eastern Europe, Central Asia, Turkey (Carter, 2013). They are regarded as an innovation for developing countries. Its the most fundamental role is fighting against various reasons of poverty by fostering economic well-being, generating high social living standards in economies. Thus, it also signifies to 'self-empowerment' because it generates income to micro-enterprises by cost effective loan and permits them to become self-employed.

The primary target of the microcredit, which is given by non-profit establishments, is to perform banking activities to the poor, suppress the abuses of low-income micro-enterprises, provide income-generating opportunities for unemployed people (TGMP; 2017; Khandker et.al., 2016). According to Grameen Bank, the most important characteristic feature of microcredit is that it does not rely on bilateral agreement, juridically obligated contracts, guarantor, mortgage, stipulation, etc. Rather, it is found by confidential relation and trust. It is defined as an obligatory and voluntary savings program by which the poor can benefit from various income generating activities that include animal husbandry activities, agricultural facilities, dairy plants, poultry farming, grocery store, restaurant, bakery, beauty parlor etc. Grameen Bank opposes to classify the low-income people as 'not creditworthy' because it repudiates the classical norms of conventional banking system. It gives priority to building social capital so it encourages them for self-empowerment and also put them under protection from unexpected accidents by microinsurance. Grameen Bank seems loans as a human right because it believes that socio-economic

policies make unutilized or underutilized skilled poor people poorer in the under developed countries. It also considers that charity is not a solution of poverty. Contrarily, it promotes poverty because of wasting time, restraining energy and creativity. For these reasons, Grameen Bank enables low-income housewives to bring out their existing abilities by providing new business opportunities (Grameen Trust Annual Report, 2015; GrameenBank, 2017).

Microcredit Framework in Turkey

Microcredit is identified as a loan which is given to dirt poor people without collateral for creating self-employment opportunities, is a remarkable instrument supported by international organizations such as International Monetary Fund (IMF), United Nations Development Program (UNDP), World Bank (WB), International Labor Organization (ILO) and non-governmental organizations. In Turkey, although microcredit is a new phenomenon dated back to recent past 2002 (Günel and Aytulun; 2006), microfinance foundations as public, private and non-profit organizations, extend back a longer time. Besides, the Social Solidarity Fund (SSF), was found in 1986 collaborated with World Bank, microfinance services such as the General Directory of Social Services, Child Protection, General Directorate for Women's Status and Problems and Regional Development Programs were organized to reduce unemployment and poverty, generate social protection to poor households. Like the other non-profit microfinance organizations, the Social Solidarity Fund (SSF) was established on the purpose of providing capital to low-income people by long-term (5-year) interest-free loans to support their small income generating projects. However, following the 2001 economic crisis, the SSF budget got pushed for money consisted in extra-budget resources. To meet the budget deficit, World Bank practiced the Social Risk Mitigation Project (SRMP) to subsidize SSF. The project was used for one-transfer to beneficiaries rather than widespread and long-term fund for low-income people (UNDP, 2003).

Since 1970s, government-subsidized institutional programs were originated to solve socio-economic problems of Turkey such as poverty, women empowerment and unemployment. Found in 1950s, Halkbank's main aim is to provide credits for tradesmen and Small and Medium Enterprises

(SMEs). The other bank provides small loans for agricultural sector since 1916, is Ziraat Bank. These banks do not operate microfinance sector in Turkey effectively, because of policy measures taken by the government, their concentration of profit maximization, sustainable equity and asset growth. Following Neoliberal policies of 1980s, it is targeted to restrict government interference to Turkish economy. This strategy brings about focusing on microcredit programs (Dincer, 2014; Yayla and Gaygisiz, 2012).

Past experiences and researches related to microfinance indicate that low-income, ‘unbanked’ people need to long-run access to microfinance institutions rather than one-time loans. As a long-term solution for poor and vulnerable people, two microcredit foundations attract the attention. The first of them is Maya Enterprise for Microfinance which an independent profit-oriented non-governmental organization, was established by KEDV (Foundation for the Support of Women’s Work) in June 2002. It grants financial support for low-income women entrepreneurs already established small or medium scaled foundations including activities such as early child care and education, economic empowerment by selling handicrafts, dressmaking, home cooking products etc. in Marmara region cities like Kocaeli, Adapazarı and Istanbul. Maya credit terms range between 4 or 6 months depending on credit amount, interest rates (Burritt, 2003; UNDP, 2003; Altan-Olcay, 2014).

The Turkish Grameen Microfinance Program (TGMP), is Turkey’s largest microfinance foundation, established as a joint venture of Turkish Foundation for Waste Reduction (TISVA) with the backing of the Grameen Trust by Prof. Dr. Aziz Akgül in Diyarbakır. The main purpose of this program is to provide financial support to economically active low-income women micro-enterprises in Diyarbakır, promote their income-generating occupations and small businesses, alleviate poverty, enhance economic and social welfare of the region with collateral-free, small credit. Later on, the project was expanded all over the country. The project is financed by donations given by various institutions, organizations and prudent people in care of Diyarbakır Governor’s Office (TGMP Annual Audit Report, 2015). The program has essential role on Turkey’s micro-financial development

with its 164.934.933 \$ total loan disbursement and 13.605.416 \$ outstanding loan portfolio since 2003 (TGMP, 2017).

TGMP includes seven types of credit which are basic loan, enterprise loan, contracted loan, short-term animal breeding loan, loan for struggling members, social development loan and communication loan. Accordingly, basic loan is the major type of micro-credit. All beneficiaries receive their first credit through basic loan which includes one-year term and varies between minimum 100TL to maximum 5000TL credit limit. Repayment duration is 46 weeks. Enterprise loan comprises capable, hardworking and successful people who benefit one-year from basic loan. Its minimum limit is 1000TL while maximum limit is 10000TL. The credit should be repaid over 46 weeks. Contracted loan is the precaution tool for the beneficiaries who had difficulties in credit repayments before. By this type of credit which allows to extend the credit period, reshape the agreement conditions. Short-term animal breeding loan dates back to 2009. The low-income people who live in rural region, can get this loan to engage with animal breeding as an income-generating business. This type of loan is provided six months before of the Feast of the Sacrifice and is compensated by the sale of animals acquired with the loan six months after the Feast of the Sacrifice. The credit term covers the period of 26 or 46 weeks. Loan for struggling members is expedient to poverty-stricken people such as beggars or a down-and-outer people. Social development loan is given to low-income women to provide them additional income and increase their social benefits. Repayment term covers the 46 weeks. Communication loan is supplied to poor women to obviate digital inequality. The loan is paid over 46 weeks (TGMP Annual Audit Report, 2015).

TGMP adopts seven main principles to achieve its goals. Firstly, as we mentioned above, TGMP's strategic target is to overcome poverty without profit maximization. TGMP is a financially and economically efficient project. TGMP or TISVA does not pay any salaries or other financial benefits to their senior managers. TGMP cumulates its profits within its own constitution with the intend of reaching more underprivileged women. TGMP aspires to become the first carbon-neutral microfinance organization in the world. Although, TGMP's employees are made market payments, they work with enjoy (TGMP, 2017).

Literature Review

The related literature examined the effects of microcredit system on regional development of countries is not so extensive. The papers analyzed this relationship mostly focus on the microfinance system of developing countries. With their pioneering views, Pitt and Khandker (1998) and Khandker (1998b) state that the microcredit gives support to female empowerment and their poverty alleviation in their studies. Burritt (2003) examines the microfinance sector of Turkey. Khandker et.al. (2008) used panel data on 888 rural women live in Bangladesh and the results suggest that young women demand the credit rather than older women. Although their microcredit borrowing is effective on their annual household per capita expenditure and fertility rate, there is no relation between young female labor force participation and their children's school enrollment. Mahjabeen (2008) analyzed microfinance system of Bangladesh for the period of 1999-2000 and support the opinion that microcredit has prominent effect on income-consumption relation of household while improving equality and social welfare. The other papers (Hulme and Mosley, 1996; Goetz and Gupta, 1996; Sharma and Zeller, 1997; Montgomery and Weiss, 2011; Haile et.al., 2012; Weber and Ahmad, 2014) suggest that microfinance programs strengthen female financial empowerment. Because of their credit-worthy manners, their active role on microfinance programs enhance their productivity in labor markets. Kai and Hamori (2009) state that microfinance has important impact on diminishing inequality, supporting Kuznet's inverted U shaped-curve while improving economic development.

Khandker and Samad (2013a, 2013b, 2014) suggest that in rural Bangladesh, microcredit enhances income, especially non-farm income, total per capita expenditure, especially non-farm expenditure; labor supply of both men and women; school enrollments of children. Carter (2013) examined the relation between credit amounts and income levels of microcredit borrowers by using TGMP's Damlabank database in Turkey. She concluded that there is a significantly positive effect of microcredit on low-income segments of Turkey. Woutersen and Khandker (2014) used more than 20 years of panel data on Bangladesh household and found that microcredit programs have significant role on income growth and net worth of the participants.

In this study, we aspire to specify socio-economic effects of microcredit programs on women's empowerment, poverty alleviation, encouraging self-employment, examining sectoral distribution and development of labor market in Turkey. Additionally, the relationship between economic growth and female labor force participation rate was analyzed in the context of microcredit program which demonstrates the inversed-U shaped relation, 'like Kuznet's Curve'.

Data and Econometric Results

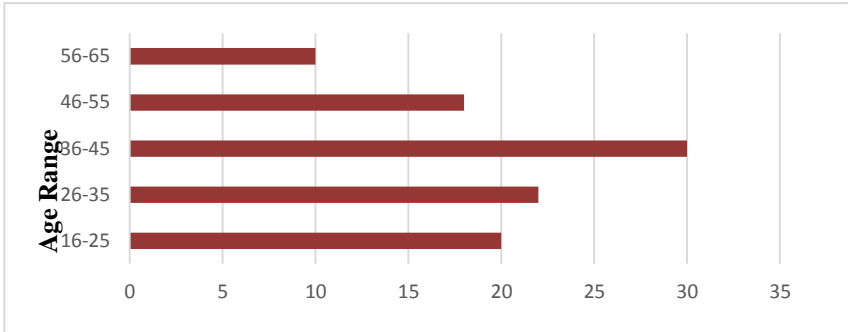
Data and Findings

The aim of the paper is to test effect of providing microcredit on alleviating poverty in Kocaeli and Bilecik. For this purpose, TR4 region (Western Marmara) of Turkey which is designated by Turkish Statistical Institute, included Kocaeli and Bilecik provinces were analyzed by panel data analysis for 2004-2016 period. The population of survey is generated by fifty women in each of Kocaeli and Bilecik provinces. Field research was applied by survey method and interview to microcredit borrower low-income women live in districts of Kocaeli and Bilecik regions. In this study, the parameters of econometric analysis base on changes in income, spending and saving levels of women before and after microcredit usage. In this section of this study, the results of the survey were presented by considering histograms and crosstabs of the answers given to the questions.

Demographic Results

Graph 1 shows age distribution of 100 microcredit beneficiary low-income women. According to our estimations which cover 2004-2016 period, nearly %30 of these women's age range is between 36-45. This implies that microcredit owners mostly compose of middle-aged women while 56-65 age range constitutes only %10 of microcredit borrowers.

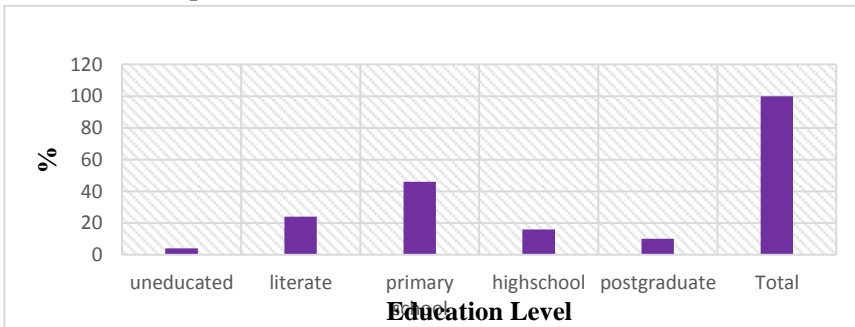
Graph 1: Age Distribution of Microcredit Owners



Source: www.tuik.gov.tr

Graph 2 indicates education level of microcredit owners. This graph indicates that nearly %45 of microcredit beneficiary women educated from primary school while approximately %10 of them is postgraduate. These findings are keeping with primary aim of microcredit usage.

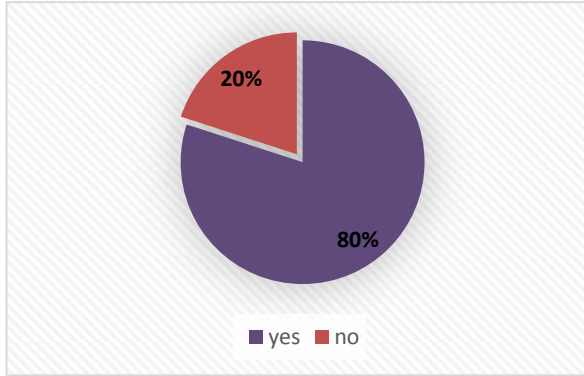
Graph 2: Education Level of Microcredit Owners



Source: www.tuik.gov.tr

Graph 3 shows families of microcredit owners' labor force participation status. Accordingly, husbands of %80 of microcredit beneficiary women has active role in labor market. This means that most of the low-income women benefit from microcredit with the intend of giving financial support to their family budget.

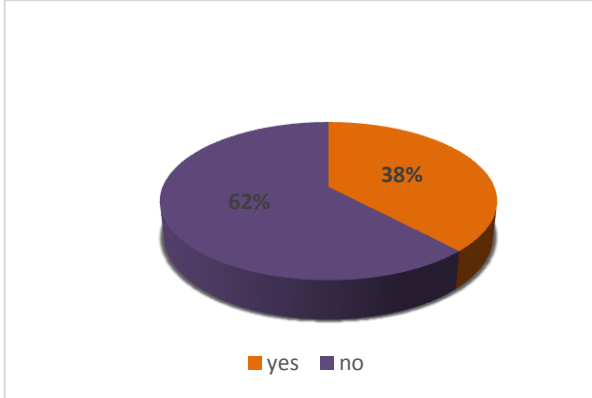
Graph 3: Percentage of Working Wife/Husband



Source: www.tuik.gov.tr

Home ownership rates of microcredit beneficiary low-income women is indicated in Graph 4 which states that only %38 of the borrowers become a homeowner. This supports the findings related with poverty level of the low-income women.

Graph 4: Home ownership Rates within Microcredit Owners

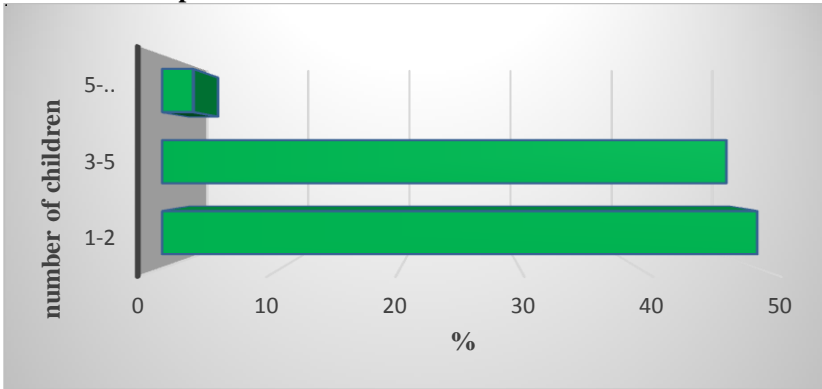


Source: www.tuik.gov.tr

Graph 5 points children numbers of microcredit beneficiaries. Accordingly, %50 of the borrowers have 1 child or 2 children while approximately %5 of

the women have more than 5 children. This result indicates that the women participated in survey conscious about family planning.

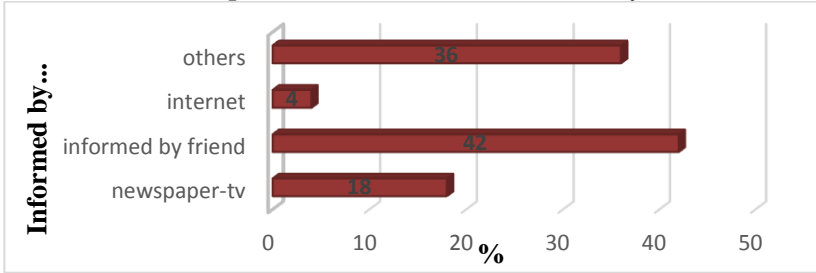
Graph 5: Children Numbers of Microcredit Owners



Source: www.tuik.gov.tr

Graph 6 indicates awareness rates of low-income women about microcredit by which way. This finding supports the opinion that social circle is efficient way on having knowledge about microcredit for low-income microcredit beneficiary women. Further, this graph signs another point is that the beneficiaries have limited opportunity for giving access to technological development because only %4 of this women are informed about microcredit by internet.

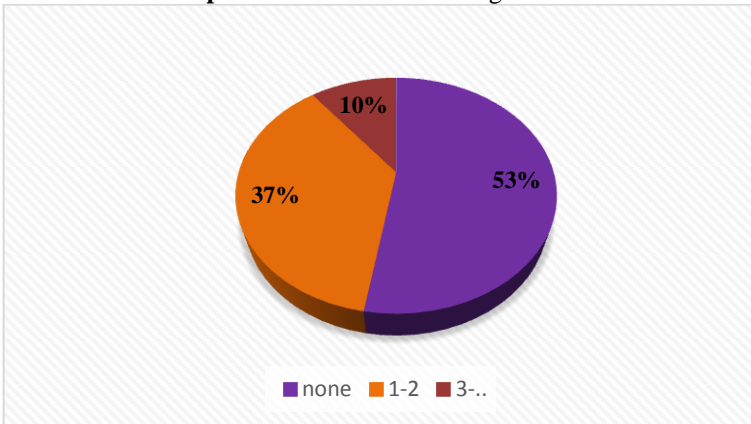
Graph 6: Awareness about Microcredit by



Source: www.tuik.gov.tr

Graph 7 signs to schooling children numbers of microcredit beneficiary women. Our findings purport that %53 of the analyzed women do not have children or their children are not on schooling age. %10 of the women have more than 3 schooling age children.

Graph 7: Number of Schooling Children

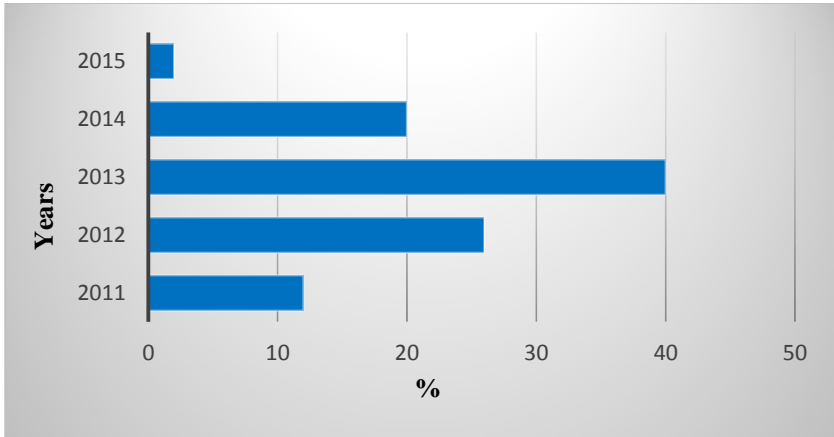


Source: www.tuik.gov.tr

Graph 8 refers to initial providing microcredit date of low-income women. The graph shows that %40 of the beneficiaries start to get microcredit in 2013. In this situation, economic crisis of Eurozone in 2012 which severely affected Turkish economy, may have influential role. This crisis period is

strongly influenced most of the households and microcredit gave a chance them for setting up a new business by providing their family income.

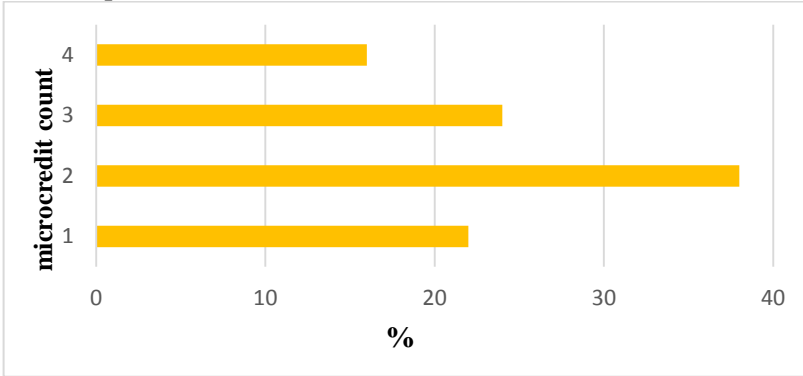
Graph 8: Start Date of Providing Microcredit



Source: www.tuik.gov.tr

Graph 9 indicates to total number of microcredit used by the beneficiaries. Estimations point out that nearly %38 of the microcredit borrowers get 2 microcredits while nearly %23 of these women provide 3 microcredits. This finding argues that microcredit is accepted as a beneficial way in poverty alleviation.

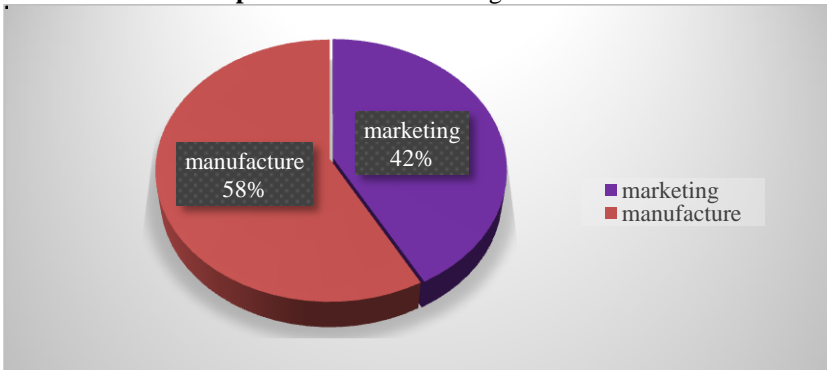
Graph 9: Which Number of Microcredit Was Used as Last One?



Source: www.tuik.gov.tr

The aim of the women in providing microcredit consists of mainly (%58) manufacturing facilities. Considering analyzed region's (Kocaeli and Bilecik) sectoral characteristics, this finding is not surprising. Marketing facilities have 42 percentage effect on proportional distribution of the economy.

Graph 10: Aim of Providing Microcredit

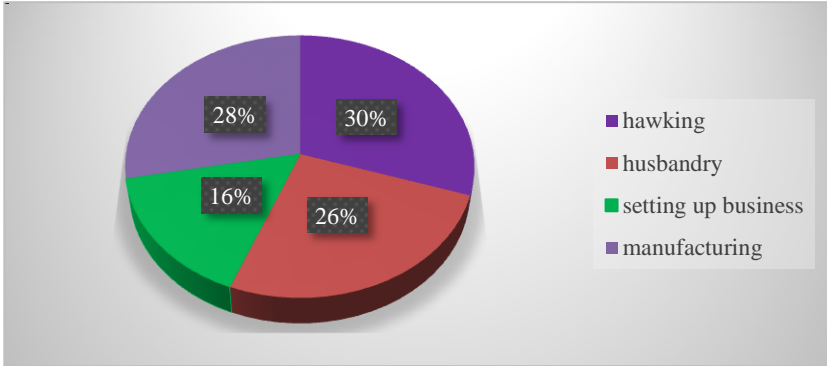


Source: www.tuik.gov.tr

Graph 11 shows the sectoral distribution of microcredit. According to our results, %30 of the borrowers use microcredit for the aim of hawking, %26

of them prefer microcredit for husbandry. This determination signs to strong impact of microcredit on participation of women to free market economy.

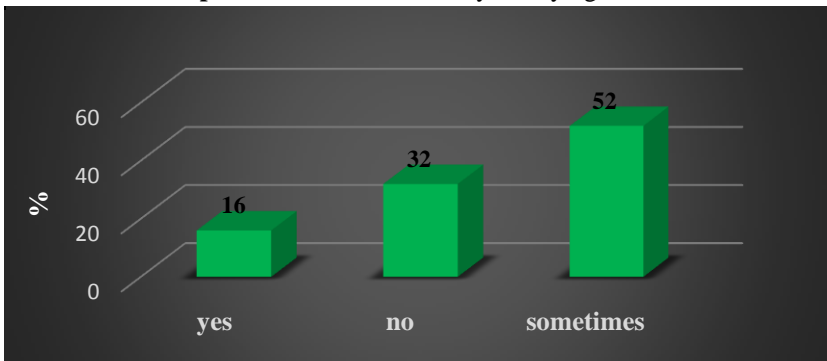
Graph 11: Distribution of Microcredit by Sectors



Source: www.tuik.gov.tr

Graph 12 represents reasons of having financial difficulty in paying microcredit. Accordingly, %16 of the beneficiaries experience difficulty in paying microcredit while %32 of them do not have. %52 of the microcredit borrowers 'sometimes' have trouble in paying microcredit.

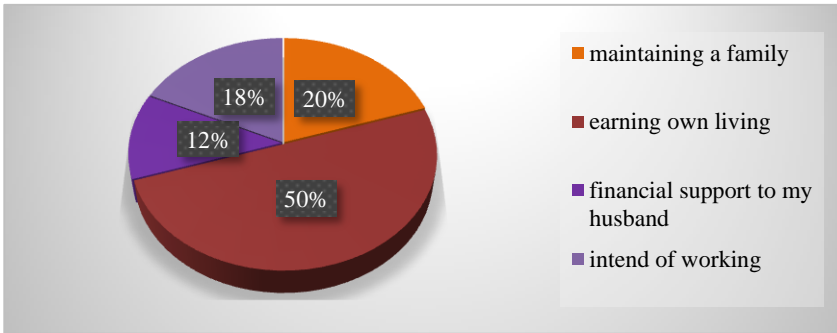
Graph 12: Financial Difficulty in Paying Credit



Source: www.tuik.gov.tr

Graph 13 refers to main reasons of microcredit owners for getting it. Economic estimation of this paper shows that vast majority of the beneficiaries (%50) provide microcredit for earning their own living. %18 of the women demand for microcredit with the intend of working. This rate remarks microcredit's efficient role on encouraging women to participate labor force.

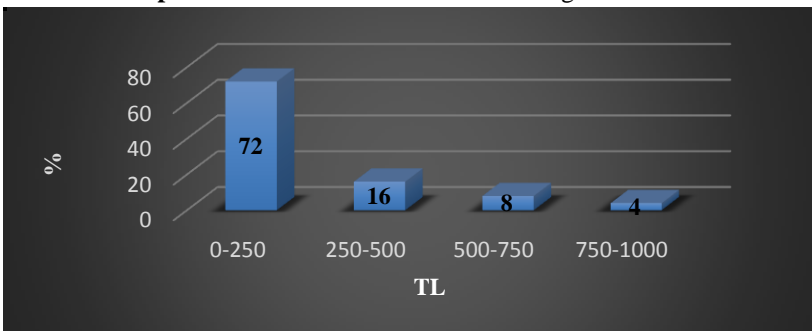
Graph 13: Reason of Providing Microcredit



Source: www.tuik.gov.tr

Graph 14 emphasizes the income level of microcredit owners before providing microcredit. Accordingly, %8 of the women benefits from microcredit with the income level range from 500TL to 750TL. This graph will be meaningful if it is interpreted with the following graph.

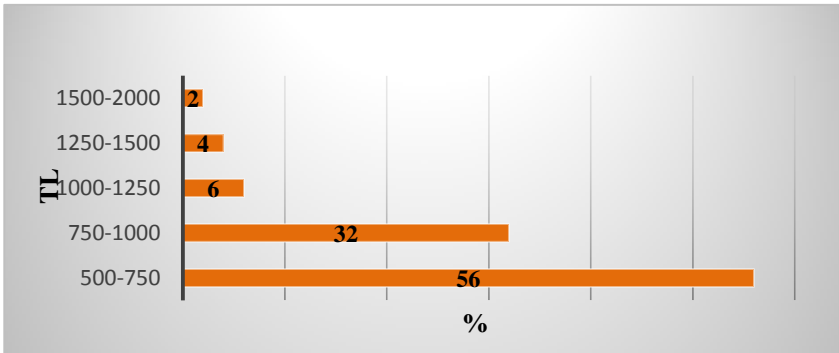
Graph 14: Income Level Before Providing Microcredit



Source: www.tuik.gov.tr

Graph 15 signs to income level of microcredit beneficiaries receiving microcredit. Considering abovementioned notions, this estimation specifies that while %8 of the microcredit used women's income level ranges between 500TL-750TL, this ratio rises to %56 after providing microcredit. This is a substantial outcome in demonstrating effectual role of microcredit in reduction poverty, increasing income level of households.

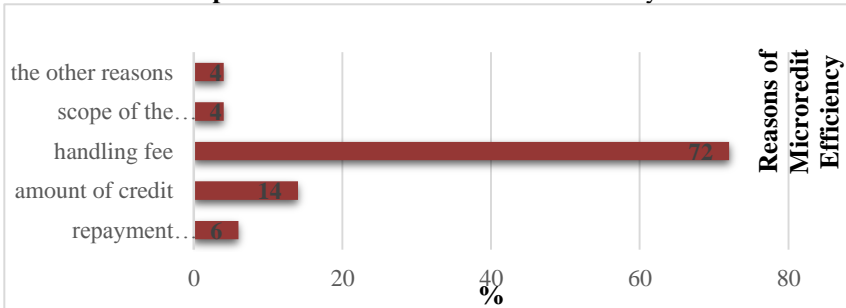
Graph 15: Income Level after Providing Microcredit



Source: www.tuik.gov.tr

Graph 16 points out the reasons of microcredit efficiency which were suggested by the analyzed women. They suggest that handling fee is the most important reason in microcredit efficiency with its 72 percentage.

Graph 16: Reasons of Microcredit Efficiency



Source: www.tuik.gov.tr

Table 1 indicates the fact that %10 of high school educated women is informed about microcredit by newspaper and television while %24 of primary educated women have knowledge about microcredit by social environment. Econometric estimations of this study present that social environment of low income group has active role on awareness about microcredit.

Table 1: Crosstab of Education Level of Microcredit Receivers and Their Awareness Way about Microcredit

		Awareness about microcredit by				TOTAL
		newspaper & tv	friend	the others	missing	
Education level	Uneducated	0	2	2	0	4
	Literate	4	8	10	2	24
	Primary Du.	2	24	18	2	46
	High School	10	6	0	0	16
	Postgraduate	2	2	6	0	10
	TOTAL	18	42	36	4	100

Source: www.tuik.gov.tr

Table 2 implies that %24 of the primary educated women provide microcredit firstly in 2012 while this ratio declines to %16 and %4 in 2013 and 2014, respectively. Low rates of postgraduate women attract notice in this analysis. Educated women benefit from microcredit mostly in 2012 and 2013 which correspond to economic crisis period of Turkey.

Table 2: Crosstab of Education Level of Microcredit Receiver and Their Start Date of Providing Microcredit

		First date of providing microcredit					
Education level	YEAR	2011	2012	2013	2014	2014-2016	TOTAL
	Uneducated	2	0	2	0	0	4
	Literate	4	0	14	6	0	24
	Primary Du.	2	24	16	4	0	46
	High School	4	2	6	2	2	16
	Postgraduate	0	0	2	8	0	10
	TOTAL	12	26	40	20	2	100

Source: www.tuik.gov.tr

Table 3 denotes the sectoral distribution of microcredit among educated women. Accordingly, %12 of the primary school educated women provide microcredit for husbandry and only %2 of the postgraduate low-income women get this loan for production facilities. This estimation emphasizes the importance of education level of women in getting microcredit and its effective role on particularly low-income female labor force participation.

Table 3: Crosstab of Education Level of Microcredit Receiver and Sectoral Distribution of Microcredit

		Microcredit is get in the sectors for the purpose of				
Education level	PURPOSE	hawking	husbandry	setting up business	production	TOTAL
	Uneducated	0	0	0	4	4
	Literate	6	10	0	8	24
	Primary Du.	8	12	12	14	46
	High School	8	4	4	0	16
	Postgraduate	8	0	0	2	10
	TOTAL	30	26	16	28	100

Source: www.tuik.gov.tr

Table 4 states the ratio of educated low-income women in having difficulty in microcredit repayments. The survey results of this paper assert that %22 of the microcredit beneficiaries ‘sometimes’ have difficulty in microcredit repayments and only %10 of the primary educated and %2 of the postgraduate women experience difficulty in microcredit repayments.

Table 4: Crosstab of Education Level of Microcredit Receiver and Having Difficulty in Repayments

		Having Difficulty in Microcredit Repayments			
		having difficulty	not having difficulty	sometimes	TOTAL
Education level	Uneducated	0	0	4	4
	Literate	4	6	14	24
	Primary Du.	10	14	22	46
	High School	0	10	6	16
	Postgraduate	2	2	6	0
	TOTAL	16	32	52	100

Source: www.tuik.gov.tr

Table 5: Crosstab of Education Level of Microcredit Receiver and Cause of Getting Microcredit

		PURPOSE	maintaining family	earning own living	support for my husband	intend of working	TOTAL
Education level	Uneducated	0	4	0	0	4	
	Literate	2	14	8	0	24	
	Primary Du.	16	18	4	8	46	
	High School	2	6	0	8	16	
	Postgraduate	0	8	0	2	10	
	TOTAL	20	50	12	16	100	

Source: www.tuik.gov.tr

Table 5 shows the main reasons of microcredit beneficiaries in providing microcredit. The estimation results specify that %18 of the primary educated women provide microcredit for the purpose of earning their own living. This ratio decreases to %4 for the aim of supporting female income among this type of women. While only %2 of the postgraduate women provide microcredit by intending of work, the estimation results sign that main purpose of the women for getting microcredit is to earn their own income and this women's determination on being financially independent.

Table 6 reveals the fact that %10 of the primary educated women have difficulty in microcredit repayment and %4 of the postgraduate women complain about insufficient microcredit amount.

Table 6: Crosstab of Education Level of Microcredit Receiver and the Most Critical Difficulty in This Process

		The Most Critical Difficulty Having in This Process					
		repayment	group meeting	income growth	insufficient loan amount	the other reasons	TOTAL
Education level	Uneducated	0	0	0	4	0	4
	Literate	0	14	4	4	2	24
	Primary Du.	10	16	2	14	4	46
	High School	2	8	2	2	2	16
	Postgraduate	0	6	0	4	0	10
	TOTAL	12	44	8	28	8	100

Source: www.tuik.gov.tr

Table 7 clarifies reasons of microcredit efficiency among low-income women. According to %30 of the primary educated women, handling fee is the main reasons of microcredit efficiency and %4 of the literate low-

income women figures amount of credit as a reason of microcredit efficiency.

Table 7: Crosstab of Education Level of Microcredit Receiver and Reasons of Microcredit Efficiency

		Efficient Way of Getting Microcredit					
		repayment maturity	amount of credit	handling fee	scope	the other reasons	TOTAL
Education level	Uneducated	0	2	0	2	0	4
	Literate	2	4	18	0	0	24
	Primary Du.	4	8	30	0	4	46
	High School	0	0	14	2	0	16
	Postgraduate	0	0	10	0	0	10
	TOTAL	6	14	72	4	4	100

Source: www.tuik.gov.tr

Conclusion

Microcredit is accounted as a financial tool for supporting labor force participation of low-income women in free market economy. The results of this paper demonstrate that having knowledge about microcredit by the effect of social environment has substantial role on low-income women who benefit from this type of loan. According to the results of interview, it is surprising that microcredit user low-income women complain about weekly repayments and time scarcity about this rather than payment amount. More clearly, they are obliged to make a sacrifice from their lunch break to arrive microcredit collection agency by passing long queue. Thus they make a suggestion related with this issue is that microcredit collection should be made in weekends, fortnightly or monthly. This is a feasible way on obtaining efficiency in providing microcredit. As a second point, they allege

that grouping is an inefficient way in microcredit application because, most of the time, microcredit users have to become partner with someone who they do not closely know each other only for gathering together in fivesome team. So, they may encounter with problem about microcredit repayment. Additionally, if one of the group members does not refund their repayments, husband of this woman and each of the rest members of the group are responsible for this amount of loan repayment. This case causes to lower microcredit rating of this group.

The results of this study approves that microcredit is accepted as an efficient microfinance tool in creation micro-enterprises, alleviating poverty, expanding business circles of low-income women, educational improvements of children living in rural areas. Therefore, microcredit is considered as a key factor in establishing small businesses or self-employment occasions especially in developing regions. Although, the problems of moral hazard and adverse selection problems of developing countries, this microeconomic system developed and demonstrated a belief that microcredit beneficiaries will have a better economic status after benefiting from it.

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6 Training and Development Practices in Albanian Public Administration: A Case of Study

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Abstract

Training and development activities, as a process undertaken for the improvement of employee's performance in terms of their attitude, skills, knowledge and behavior, have become a very important tool of human resource management. Quality training can lead to better-skilled employees which result in higher benefits for the organization. This study aims to determine the impact of training and development on public sector organizations taking into account five institutions of Albanian public administration. The research purpose is to define the role and impact of training and development on civil servants with emphasis on specialist, supervisory and management level and whether training has improved employees' performance. To realize the goals of this paper, a questionnaire is designed using closed and open-ended questions to collect primary data. Afterward, the questionnaire is distributed in the sample institutions of Albanian public administration whose data are further processed. Finally, some conclusions are reflected.

Keywords: Development, Human Resources Management, Performance, Public Administration, Training.

JEL classification: O10, O15, H83

Introduction

In today's dynamic market the stipulate for professional and highly skillful workforce is necessary for every organization to perform well and be prosperous. Both, the employer and the employee, have responsibility for

improving skill levels. Training, as a strategic activity linked to the organization's mission and long-term objectives, is the main contributor to the development of qualified, flexible, motivated and committed workers (Bartel, 2000; Barney and Wright, 1998). While combined with other functions of Human Resources Management (HRM), training offers organizational benefits (Huselid, 1995; Pfeffer, 1994). Training means a planned effort of the organization to facilitate employees' learning of the competencies related to work (Noe, 2010). (Deutsch, 1979) lists some training effects, showing that training serves to enhance career development of employees in the organization, enables adaptation to technological changes affecting the workplace and often, simply introduces new employees to the working world. Many countries are oriented to reforms in training systems in order to become more competitive. Several national studies have shown that countries with better training systems such as Japan and Germany, which invest more in training employees than less developed countries do, have been effective in maintaining a competitive global economy position and reduce the impact of unemployment (OECD, 2004).

A developing country like Albania, with its rich natural resources and the necessary financial support, can also experience such economic success if the appropriate attention is given to the development and training of its Human Resources (HR). It is thus seen that the political and social-economic situation in Albania makes necessary for public and also private organizations to provide long and systematic training and development programs for employees.

Overview on Albanian Economy

During the 45 years of communist regime Albania became a very rigorously centralized economy. Central planning virtually replaced all forms of market mechanisms. After 90's Albania entered the process of economy privatization. The government of that time planned some major reforms in the economic sector, which included transforming it from a communist one to an open-market economy. However, the intense social-economic transformation in Albania, from the old system of a command economy towards a new market system, was accompanied by certain events and consequences that were not foreseen properly. The main features of the early '90s were: a significant drop in the work force, reduced number of the active population, a high level of unemployment, primarily caused by

drastic cuts in the state-owned or public sector entities, and migration as a result of opening the borders with other countries. Although this process required a long time, Albanian economy has made progress toward development and is now considered as a market oriented economy (Lame and Cela, 2004).

Factors that have influenced HR practices in Albania

Economic Development

Considering the very fact that Albania was a communist country for more than 45 years, where central planning replaced all forms of market mechanisms, labor market developments have been influenced by the transition processes which took place after '90s in all economic and social spheres. In an economy where jobs and skills needs are constantly changing and where new technologies keep being introduced, citizens from Albania are confronted with the need and opportunity to adapt their knowledge and skills constantly.

Gender Inequality

The gender gap in the labor market is the result of both social and cultural factors as well as the skills currently in demand. The labor force participation rate in 2013 was 68.3% for men and 46.8% for women, while the unemployment rate was 12% for men compared to 17.1% for women. Women earn 35% less than men (UNDP, 2008; SHKP, 2014). In general, women in Albania, face significant levels of exclusion from political, social and economic spheres (Nikolovska, 2008).

Lack of Qualification

Albanian universities (public and/or private ones) until early 90's did not offer programs on HR. The only source for HR qualified people was from those who studied abroad, even though most of them did not come back to their home country, causing that brain drain effect (Dibra, 2013).

The motivation to conduct this study raised as a result of work experience in Albanian Public Administration (PA), from 2011 to 2015. The purpose of this work is to define the role and impact of training and development on civil servants. The authors evaluate the training and development process of

PA and whether training has boost employees' performance. Finally, based on the analysis of the collected data some conclusions are reflected.

Methodology

Based on previous research conducted on Albanian PA and the authors working experience, this study is conducted with a set of hypotheses:

1. Managers in PA are not completely aware about the significance of training and development activities. As consequence this process has not taken yet the proper importance.
2. Training and development in PA is unplanned and unsystematic.
3. Training does not affect the performance of employees.

This study is a survey made through questionnaires in Albanian PA, during the period 2013-2014. Some of the main institutions of PA, such as: Ministry of Economic Development, Trade and Entrepreneurship, Ministry of European Integration, Ministry of Finance, Albanian Agency for Investment Development, General Directorate of Patents and Trademarks, have been selected as sample for the purpose of this study.

Two hundred employees appertaining to management level, supervisory level and specialist level were selected randomly, to which questionnaires were administered. Questionnaires were composed with both closed and open-ended questions and tend to gather information on respondents in terms of work experience, education, key variables of the study, such as: employee motivation, employee level of training and performance, etc. Questionnaires were used as the primary instrument of data collection, as they provide an avenue for the researchers to ask investigative questions, are fast, cheap and can be self-administered. From the sample employees of 200, in total 113 employees filled in the questionnaires (56.5%), of which 16 were management level, 34 from supervisory level and 63 from the specialist level. The secondary data were gathered from the institutions of HRM policy, annual reports on Albanian HR Development, books and journals (Nikolovska, 2008; Dibra, 2013; Tafa, 2013; Apostol, 2013; ASPA, 2014).

Data Analysis

This section represents the analysis and the results of this work. The aim is to verify whether the established scheme of training and development in PA function properly, and what is its impact on employees' performance and productivity. The presented data are collected and analyzed using tables and charts for the interpretation in relation to the research questions conducted. The technique used for quantitative data analysis is the frequency distribution and percentages, which are used to determine the proportion of respondents choosing the various responses. This is done for each group of items related to the research questions. The proportion shows the diverse views of employees on the various sub-issues.

1. Age of Respondents

In order to categorize the employees, data related to the age of respondents were collected. Figure below summarizes the data obtained on the age of respondents. Figure 1 shows that 44 respondents were between 31 - 40 years, representing 39%. 32 respondents between the ages of 22 - 30 years, representing 28.5%. 24 respondents between 41 - 50 years, representing 21%, and 13 respondents aged between 51 - 60 years, representing 11.5% of the total of respondents.

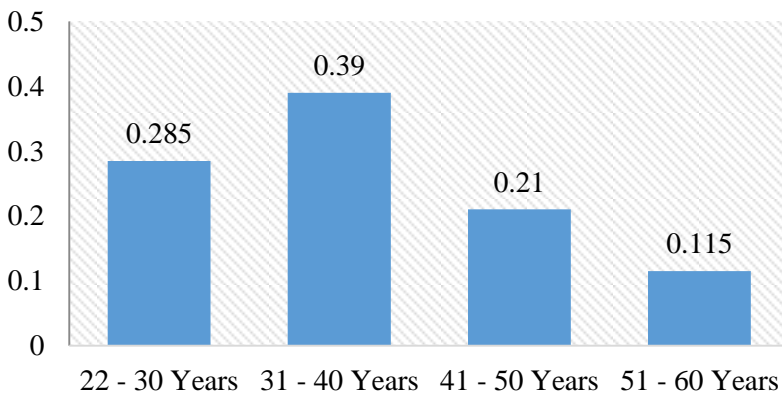


Figure 1: Age of respondents

2. Gender of Respondents

In Figure 2 is shown that the total number of the female respondents formed the majority with a total of 62%, while 38% of the respondents were males. However, is worth highlighting that if data are analyzed separately (management and supervisory level, with specialist level) the results at the management and supervisory level turn over to a higher percentage of males in such positions, which indicates that men are on the top of managerial levels.

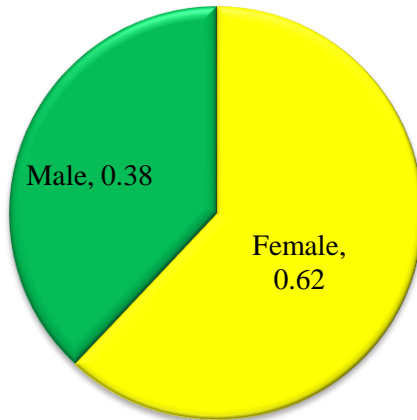


Figure 2: Gender of respondents

3. Educational Background of Respondents

It was also necessary for the study to determine the education level of the respondents, which could determine what kind of training might be most appropriate for them. In Figure 3, is shown that the respondents hold a range of educational qualifications from university diploma level to PhD level. The majority of the employees have a Master Diploma, representing

49%. University diploma level constituted 7%. Masters studies ongoing employees constituted 19%, and PhD diploma holders constituted 25%. Undergoing through a more detailed analyze, it comes out that the mass of employees ageing between 51-60 years hold a university diploma only, maybe due to the fact that Albanian universities did not offer master courses when they conducted their studies.

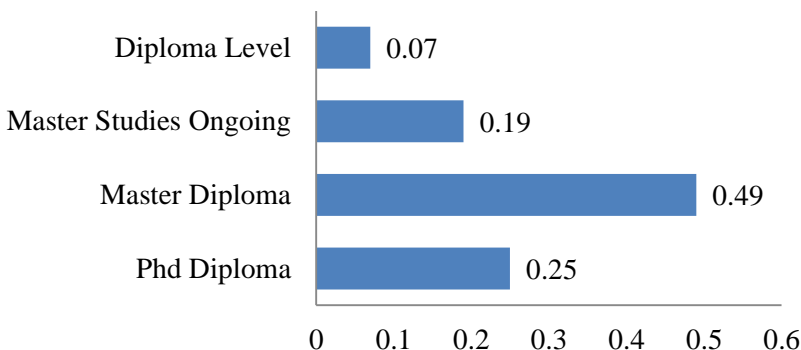


Figure 3: Educational background of respondents

4. Years of Service in the Organization

Figure 4 represent the categories of years of service as indicated by the respondents. It shows that the respondents have served in PA from 1 to 25 years. Respectively, 48 respondents forming the majority, have been serving in PA from 1-2 years, representing 43%. 12 respondents have been serving from 3-5 years, representing 11%. 22 respondents have been serving from 5-10 years, representing 19%. 27 respondents have been serving from 10-20 years, representing 24%, and 4 respondents have been serving from 20-25 years, representing 3%. Analyzing this data becomes evident the fact that most of the staff is totally new to the respective positions. The authors assume, this fact is connected to the change of government in constituency elections of 2013.

5. Participation in Training

The importance and relevance of training to the organizational performance cannot be taken for granted. The study sought to know the proportion of respondents who participated in any form of training program, so as to assess the methods in use. From the total responses it came out that almost 62% of respondents have participated in training activities, while 38% have not participated in any form of training. This is very interesting because, in spite of the known benefits of training, the majority of respondents are new on their job positions and training is necessary for them to adapt to the needs of the institution. Furthermore, in a more detailed analysis, appears that managerial level employees hold the largest number of attended training activities, followed by the supervisory level. On the other hand, the specialist level employees that perform most of the daily tasks, hold the lowest number of attended training activities.

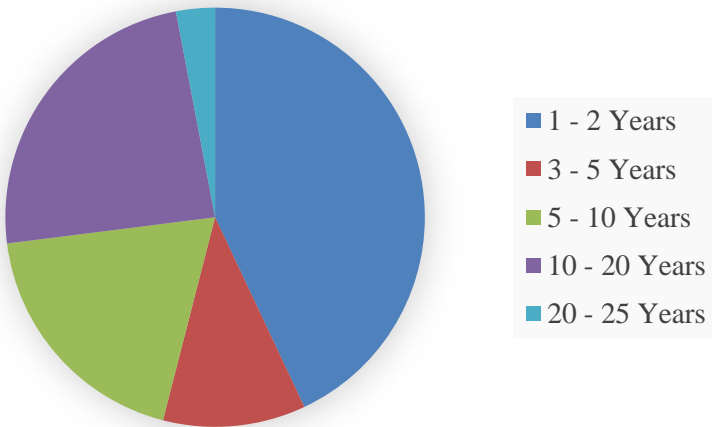


Figure 4: Years of service of respondents

6. Employee Awareness of Existence of Training Activities

In order to understand how much importance is given to training, respondents were asked if they were aware of training activities in their institutions. The results showed that 64% of the respondents are aware of

training activities while 36% are not aware of training activities carried out in their institutions. In addition, they claim they should search by themselves for possible training opportunities.

7. Selection for Training

According to (Cole, 2002), training is a planned and systematic flow of activities, involving: determining training and development needs, planning, implementing and evaluating the training. Selecting participants through a careful process, identification of training needs is therefore the proper process of initiating the training. Subsequently, respondents were asked a series of questions to determine the nature of the training and development process on PA. Figure 5 indicates that many respondents, 69 %, do not know how they were selected for the training programs they participated in.

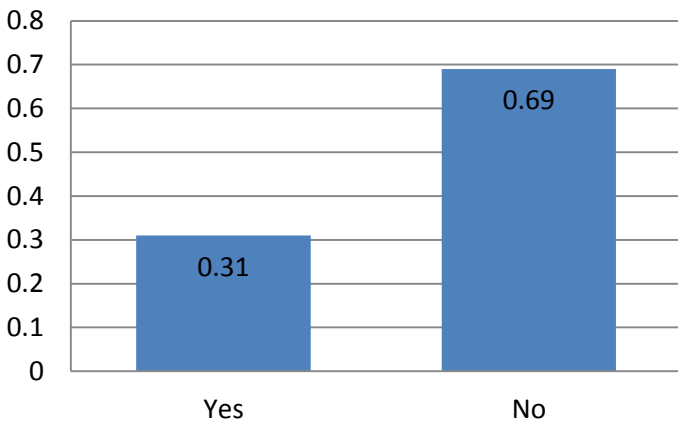


Figure 5: Selection for training

Moreover, analyzing the responses collected from respondents of management level, regarding the criteria of selection, it comes out that participants are selected based on various criteria, but not exactly specified what kind of criteria. Regarding the process of determining the needs for training, results show that this is a process that is carried out depending on various circumstances where the most important factor is the budget allocated by relevant authorities.

8. Purpose of Training and Development in PA Institutions

The basic purpose of training is to improve knowledge and skills, in order to boost organizational effectiveness and performance. Training is one of the most potential motivators which can lead to many possible benefits for both individuals and the organization. However, many organizations engage in training for different purposes. Thus, it was necessary to find out what major purpose underlies training on PA institutions. The analyzed data shows that the purpose of training and development activities on PA institutions is to improve employee's knowledge and skills in order to increase effectiveness and productivity.

Table 1 shows that 54% of respondents that participated in training activities, have been part of it to improve knowledge and skills, however, when they were asked to explain what kind of knowledges and skills they improved most of them were not able to explain it exactly. 22% participated in order to customize the learning to fit institution needs exactly, and 24% of respondents did not know the purpose of the training.

Table 1: Purpose of training and development

Purpose	%
To improve knowledge and skills in order to increase effectiveness and productivity	54
To customize the learning to fit business needs exactly	22
Not sure	24

9. Types of Training

An important point of this work, is to identify what are the most usual types of training undertaken on PA institutions. Results from management level indicated that PA institutions usually are engaged in the job training, orientation training (for new employees), development training, refresher training (for existing employees), etc. The specialist level employees were also asked what type of training they had received over the period and their results are summarized in the figure below, as a percentage of the total for each type.

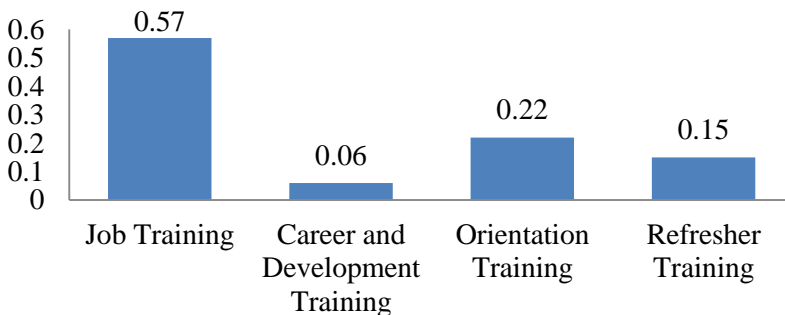


Figure 6: Type of training received

Respectively, job training 57%, orientation training 22%, career development training 6%, refresher training 15%. In addition, the results showed that the most common used methods of training are in the form of formal lectures, seminars and workshops.

10. Training Evaluation Measures

Regarding training evaluation, the responses from the management level stated that not much has been done in terms of training evaluation. It is only limited to immediate assessment of trainers and the training program after completion. In terms of results obtained from specialist level, 92% of the respondents indicated that they are not aware of how training is evaluated.

11. Motivation through Training

One of the known benefits of training is the motivation it provides to those who receive it. Employees who receive training have increased confidence and motivation. Training is known to increase the availability and quality of staff (Cole, 2002). The study therefore sought the opinion of the respondents whether they feel motivated and satisfied from the training they obtained. The results showed that a majority of respondents, 62%, feel motivated by the training activities they obtained. This is significant because motivation generally seeks to boost employees' morale to work hard and thus increase productivity. Even so, undergoing a more detailed analyze it comes out that the higher the job position of the respondents, the

higher the motivation they get through training activities. 100% of the management level respondents answered YES to the question if they feel motivated or not by training and development activities. However, it's worth highlighting that most of the duties in PA institutions are performed by supervisory and specialist level, which did not show the same level of motivation as management level respondents. Only 28 respondents from the specialist level were answered YES to the question if they feel motivated or not by training and development activities. The authors think this happens due to the fact that management level employees have more access to training and development activities than supervisory and specialist level employees.

12. Employee Potential for Development through Training

Respondents were asked: Has training offered you the opportunity to identify any potential to further development? In the overall opinion of the respondents, training has not offered any opportunity for personal development. Majority of the respondent, 89%, answered “No”, as shown in Figure 7. Those who answered “Yes” to the question belong to managerial level.

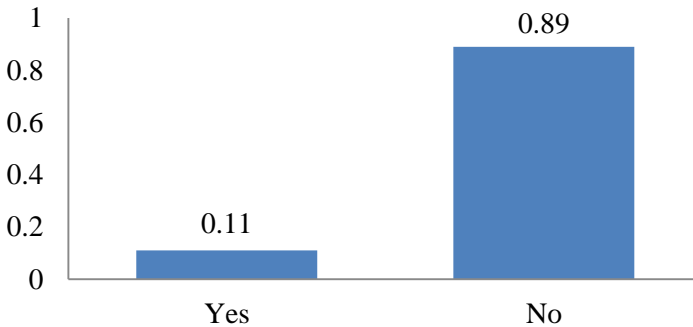


Figure 7: Opportunity for personal development

13. Training and Employee's Performance

In order to recognize the effect of training and development on worker performance and productivity, respondents were asked the key question: In your opinion, do you think training has helped to improve your performance since you joined this institution?

In Figure 8 is illustrated clearly that 66% of the respondents do not link their performance to training. In addition, 13% are not sure of any link, while only 21% of the respondents answered YES to the question. Nevertheless, in a more comprehensive analyses comes out that all participants from management level, 5% of supervisory level and 2% of specialist level, answered "Yes" to the question. The authors consider, such results are directly connected to the fact that management level employees have more access on training and development opportunities, thus leading to a higher satisfaction and motivation, while specialist level employees have just a few possibilities for training and development. Such results can lead to the conclusion that the higher the ranking in the organization the more satisfaction and motivation employees get from such activities.

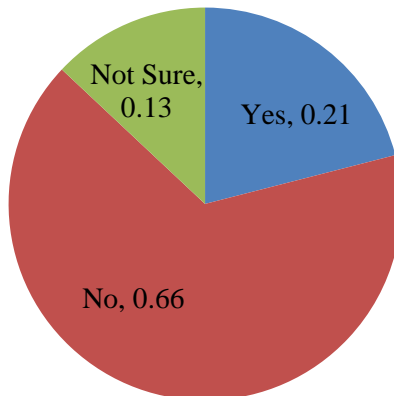


Figure 8: Training and employee performance

This is significant because the purpose of training is to improve individual and organizational performance and if most of respondents think training does not affect their performance, then the whole process of training need to be reviewed.

Conclusion

Summarizing the above mentioned findings, PA institutions in Albania have been involved continuously in training and development activities. However data showed that, 38% of the sample employees did not participate in any form of training in spite of the known benefits of it. 43% of sample employees declared they have been serving from 1-2 years in organization, thus being considered new in their job positions, to which training is necessary in order to adapt to the needs of the institution. Furthermore, 36% of respondents proclaimed they are not aware of training activities carried out in their institutions, declaring they should search themselves for possible training opportunities.

Wherefore, the 1st hypothesis ascertaining that *mangers in PA do not have the proper awareness about the significance of training and development activities, is supported by evidence from data collected.* The results also indicated that training and development in PA is unplanned and unsystematic. They showed that the change of government led to staff replacement in PA institutions, resulting in a constant need for training and development of employees, while most of them did not participate in any form of training.

The results revealed that 69 % of the respondents do not know how they were selected for the training programs, and 24% declared they were not sure about the purpose of the training. Furthermore, there is not a straight relationship between level of education and training activities attended by the employees. Moreover, the results showed that the process of determining the needs for training is carried out mostly depending on the budget allocated by relevant authorities. Training activities are largely not evaluated and career development projects are minimal. Thus, all the above mentioned facts support the 2nd hypothesis of the study that *training and development in PA is unplanned and unsystematic.*

In addition, the results show that many of the respondents feel motivated by the training offered, especially those belonging to the management level. However, 66% of them think, training did not affect their performance and did not offer any opportunity for personal development. The majority claimed, training activities did not provide them with new skills. All the above findings go to support the hypothesis that *training and development activities has not affected the performance of employees*. How to successfully establish and promote training schemes in Albanian Public Institutions can be future topics for further research.

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7

Credit Constraints, Firm Exports and Financial Development: Evidence from Turkish Firms

Moussa OUEDRAOGO

Abstract:

In this paper we assess the impact of credits constraint on Turkish firms' exports. In doing so, data on 1344 Turkish firms has been retrieved from World Bank enterprise survey for the period of 2013. Credits constraint is measured based on the responses given by each firm. It is a self-reported measure of credits constraints. In order to solve endogeneity issues associated with this type of measure, we control some unobserved variables such as productivity and some characteristic of the firms. Following this precondition, a recursive bivariate probit modelling is used to capture the relation between variables. Based on the results, we find that a credit constrained firms have the probability to export reduced by approximatively 20%, others factors remained constant. The results therefore advocate for further flexibility in access to financial resources. More specifically, in the case of Turkey characterized by a huge depreciation of its currency, a reduction of credits constraint can help them face the increasing cost of imported good and facilitate penetration in the foreign market.

Keywords: Credits constraints, Export probability, financial development, Recursive Bivariate probit

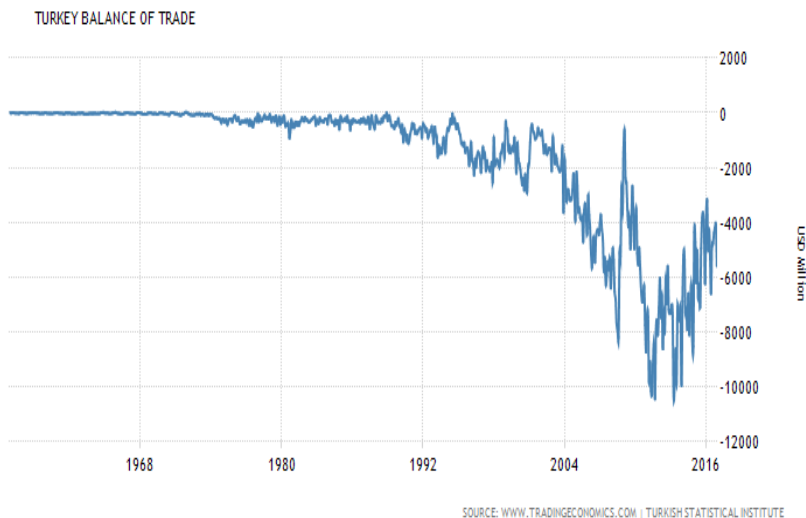
JEL classification: E51, F40, O15, C00

Introduction and background

In a competitive world, a country's economic growth and its firms competitiveness is directly related to export performance. Over the last fifteen years, a large literature has been developed highlighting the characteristics of exporting firms. The 2007–2009 financial crisis has renewed interest in these issues, with recent studies affirming that credit tightening was an important factor in the collapse of global trade (Chor and Manova ,2012; Freund and Klapper ,2009). Exporting firms differ from their non-exporting competitors, not only in terms of their actual characteristics such as size, productivity but also in terms of their financial characteristics. Furthermore companies that come for the first time on the export markets have better financial health than their non-exporting competitors even before they enter in the export markets. Empirical studies have established that financial development promotes the expansion of industries relying heavily on external finance in export markets (Beck, 2003; Svaleryd & Vlachos, 2005 and Manova, 2008). Access to financial resources is therefore a significant determinant of firms'probability to export and its exports performance. These features render financial markets crucial and well-functioning financial institutions can play an important role for firms' export activity by providing financial resources. Indeed strong financial institutions benefit from comparative advantage and a better export performance than financial vulnerable sectors (Chaney, 2013). Financial development reduces credit constraints and thereby facilitates profitable entry into export markets for firms located in developing and emerging countries (Fauceglaia, 2012). These conclusions are important for policies designing in less developed economies where many of them rely heavily on trade for economic growth but suffer from inefficient capital markets.

In recent years, financial development has played important role in countries' participation in international trade, particularly in firms' international orientation. Almost all firms, particularly exporting firms routinely rely on external capital because of high entry costs that can't be

funded out of internal cash flows. Entry in a foreign market involves some costs (greater transaction risks, products customizing to fit local tastes and higher working capital needs due to longer shipping times) than domestic producers and only firms with sufficient liquidity can cover them. Limited access to external finance and imperfections in the credit market can therefore hinder business growth; investors will not be willing to finance their trade costs (Chaney, 2013; Manova, 2010a), especially those located in developing countries with less developed financial system. Turkey is mainly characterized by a deficit of its foreign trade since 1968.



This deficit of foreign trade can be explained by institutional rigidities such as rigidities in the labor market, corporate governance methods, and the failure of mechanisms of public business support and also by financial constraints. It is believe that a more efficiency in financial system may therefore ease credit constraints and allow Turkish'firms to profitably access foreign markets. In this view, access to financial instruments to overcome firms' liquidity problems can be seen as one of the main factors that determine the export performance of firms.

There is growing evidence in literature about the importance of credit constraints as determinant of global trade patterns particularly for firms' export. Although there is an intensive literature concerning the importance of credit constraints on export participation, there are still conflicting results. Indeed Greenaway et al (2007) using panel data of manufacturing firms in the UK over the period 1993–2003, investigate the impact of the financial condition of the firms on their export decisions. They find no evidence that firms with better financial health are more likely to start exporting, while there is evidence that export activity may be a factor to improve the firm's financial situation. In other words, there is causality from export performance to financial health. Similar results are demonstrated by Stiebale (2011) for French firms. Stiebale (2011) studies the effect of financial strength indicators on foreign market entry in a panel of French firms and concludes that there may be unobserved firm characteristics that improve a firm's financial situation and enable it to enter an export market. Contrary to these studies, some find that credit constraints matter in developing countries.

Chaney (2005) indicates that liquidity constrained firms are less likely to export. He found that the scarcer the available liquidity and the more unequal the distribution of liquidity among firms, the lower are total exports. Using firm level data on China, Manova et al (2009) provide firm-level evidence that credit constraints restrict international trade and affect the pattern of multinational activity. Particularly the authors show that foreign affiliates and joint ventures in China have better export performance than private domestic firms in financially more vulnerable sectors. In same view Minetti and Zhu (2011), analyzing the impact of credit rationing on firm's export using survey data from Italian manufacturing firms, find that probability of exporting is 39% lower for rationed firms and that rationing reduces foreign sales by more than 38%. These results about the importance of credit constraints in firms exports are also confirmed by Berman and Héricourt (2010), Egger and Kesina (2013).

In summary, there are some papers that find a negative effect of credit constraints on export participation (Greenaway et al., 2007 ; Stiebale 2011 etc..) while there are others that find credit constraints matter in developing countries (Minetti and Zhu,2011;Berman and Héricourt,2010; Egger and Kesina ,2013 or Manova,2009). Therefore the literature is far from consensus. The findings depend on the characteristics of the country and types of variables and the methodology used.

Research Question and Motivations

Regarding the conflicting results concerning the impact of credit constraints on export participation found in the literature, it becomes interesting and challenging to study this relationship in an emerging country such as Turkey. We can end up with a powerful instrument to boost economic activities. Therefore it is important to ask in a context of Turkey “**Does the credit constraint Spur Exports?**”.

In this context, the main purpose in this paper is to investigate the causal relationship between the financial development and firms exports particularly the impact of credits constraints on firms’ export. While most of studies investigate on the relationship between credit constraints and exporting or investment using macroeconomic data from one country, this paper employs a firm-level sample. The study is conducted in Turkey to provide a contribution and a different insight to literature with firm-level evidence on the financial development-trade nexus. Intuitively, it is expected a negative relationship between credits constraints the probability to exports (Manova, 2010; Chaney, 2005). Exploring the link between financial development and exports is interesting and motivating for several reasons. First, assuming that the level of financial development does have an effect on exports, it means that financial development can be considered as an instrument of economic policy and also there is a need for financial sector reforms. Second, exploring the links between financial development and exports also has implications for the theory of international trade.

Indeed endowments of labor, land and physical capital is the basis of Heckscher-Ohlin model while technological differences across countries explains international trade flows in Ricardian model. In this study, access to finance is considered either as part of the production technology or as determining the level of physical capital in the economy. Finally, a possible link between financial development and exports has policy implications.

Review of the literature

There is an intensive theoretical and empirical studies that highlight the impact of credits frictions and firms' decisions and dynamics. This paper is related to studies that seek to link financial development and international trade. Financial sector development is considered as on one of the most important sources of comparative advantage (Kletzer and Bardhan, 1987; beck, 2003). Modigliani and Miller (1958) study on the relationship between financing and firms decision to invest. They show that firm's financial condition doesn't affect its decision to invest when credit market functions perfectly. On the other hand they notice that credit markets imperfection affect firms' internal fund and can hinder investment volume. Modigliani and Miller (1958) findings are considered as a theoretical benchmark. In the same view Bernard and Wagner (2001) in Germany and Bernard and Jensen (2004) in USA show the importance of the link financial development and export performance in a country and indicate that the more there is financial development the less there is financial constraints. Beck (2003), Becker and Greenberg (2005) find that there is a positive effect running from financial development to exports, especially in industry that highly depend on external finance. In the same view Love (2003) studies the effect of financial development on investment expenditures. She reports that the marginal effect of the internal funds variable in the investment equation is lower in countries with better financial systems. Therefore, her result suggests that financial development decreases credit constraints

On the empirical side, there is a few micro level studies on the relationship between financial constrains for firm trade activities. In industrialized countries, the question of causality between financial constraints and export firms was explored by Campa and Shaver (2002) on a panel of Spanish manufacturing firms. The authors show that investment sensitivity to cash flows is higher for the group of non-exporters than for the exporting companies. They conclude that the first group of firms is more constrained financially than the second. They conclude that exports loosen financial constraints. Similar results have been found by Greenway et al (2007) using panel data of UK manufacturing firms over the period 1993–2003. They find that exports improve firms' financial health. Bellone et al. (2010) using French firm-level data find that firms with better financial health increases the probability to export whereas exports dont improve financial health. This interpretation is however disputed by Chaney (2005). He based his arguments on the fact that the validity of the interpretation should lead to a negative link between financial constraints and exports intensity whereas Campa and Shaver (2002) don't find a significant link between these two variables. Chaney (2013) considers in his analysis liquidity constraints in the financing of the costs to enter into export markets. He finds that imperfection in the credit market and financial underdevelopment affect the optimality by decreasing the number of exporting firms. He concludes that only firms with enough liquidity will export. Manova (2010b), through a new framework, analyses the possibility of financing the cost by borrowing. She concludes that in a presence of credit constraints, financial development and production are the main determinant of firms' exports. Berman and Hericourt (2010) using firm-level data for several developing, and emerging economies, Muûls (2008) on Belgian firms and Minetti and Zhu (2011) on Italian firms, find a similar results showing that financial constraints reduce the probability of firms to export.

Data and credit constraint measurement

The main source of information is the standardized firm-level data collected by the World Bank's Enterprise Surveys⁵ in the period between 2013. Stratified random sampling is the methodology used for Enterprise Surveys. It is characterized by homogeneous groups from which a simple random sample is constructed and allows computing estimates for each of the strata with a specified level of precision while population estimates can also be estimated by properly weighting individual observations. The strata are divided into firm size, business sector, and geographic region within a country and. The sample is restricted to privately owned firms in Turkey, in order to consider firms that have limited access to fund.

To capture the presence of credits constraints, some studies use the liquidity ratio⁶ based on the relationship between exports and the availability of internal fund measured by liquidity ratio . This can be explained by the fact that firms should draw a sufficient productivity and generate enough liquidity, operating profits to face the fixed exporting cost (Melitz, 2003). It is expected a negative relationship between liquidity ratio and financing development. This negative interaction helps to identify the effect of internal liquidity as a proxy of financing difficulties. Other studies use debt leverage as proxy of financing constraints (Whited, 1992). This is because indebted firms have at least in the past received substantial fund from investors (Bellone et al, 2010). Bellone et al. (2010) introduce a composite indicator of credit constraints that considers the size, financial health and the profitability of a firm. Unlike previous studies, Minetti and Zhu (2011) consider a self-reported measure of credit constraints. This measure is derived from firms' responses to the survey rather than indirectly inferred

⁵ <http://www.enterprisesurveys.org>: the survey covers a broad range of business environment topics including access to finance, corruption, infrastructure, crime, competition, and performance measures

⁶ See Egger & Keuschnigg (2009); Tirole(2006); Fauceglia (2014).

from firms' financial statements. However this measure suffers from endogeneity. Some unobserved attributes of the firm could affect the probability of firm to be credit constrained. Therefore some variables need to be controlled. Since our study is based on the survey, we use the self-reported measure of credit constraints.

Methodology

Different methodologies have been used to capture the relationship between credits constraints and firms' exports. Minetti and Zhu (2011) using a recursive bivariate probit model, examine the effect of credit rationing on the extensive margin of export(the probability of exporting). They initially define an ordinary probit model which links the probability that firm i exports and credit constraints. Since credit constraints may be endogenous, they define a second ordinary probit model to investigate the probability of being rationed related to the extent of credit risk of a firm, other firm attributes, and the supply side of the credit market. These two probit models form a recursive bivariate probit model. The authors measure exports as a binary variables credits constraints (divided in weak and strong rationing) based on firms' response to different questions in the survey. Therefore endogeneity is likely to come out from this type of measure and lead to some bias in the estimates. This is because of the correlation between unobserved firms characteristics and credits constraints. In fact lenders evaluate the credit risk of a firm on the basis of the firm's characteristics. In order to tackle these endogeneity issues, Minetti and Zhu (2011) add productivity and other relevant firm attributes as controls variables. In the same line, Fauceglia (2014) develops a binary outcome model of the exporting decision. The decision to export is modeled as a function of directly observed export profitability and credit constraints. Export is a binary variable taking the value 1 for an exporter and 0 for a non-exporter while liquidity ratio is considered as proxy of credits constraints. In addition to liquidity ratio, Fauceglia (2014) adds a vector containing other firm characteristics. Chaney (2013) builds a model of international trade with liquidity constraints based on Melitz (2003). Liquidity constraints are

introduced in the context of a model of trade with heterogeneous firms a la Melitz (2003). Two countries (Home and Foreign) are considered with two sectors. One sector provides a single homogeneous good that can be used a numeraire while the other sector supplies a continuum of differentiated goods. Chaney (2013) formalized liquidity constraints in the following way: the sum of liquidity from domestic sales and the value of domestic liquidity shock should be at least greater than the fixed entry cost. Similarly to Chaney (2013), Manova (2013) developed a model of credit constraints in trade based partial on equilibrium model à la Melitz (2003) in which a continuum of firms produce differentiated goods in each of J countries and S sectors. Manova, Wei and Zhang(2010) in order to assess the effect of financial frictions on firm exports and on the pattern of multinational activity, have developed a linear model which relate exports to financial vulnerability.

Since our study is based on self-reported measure of credits constraints, we follow the methodology proposed by Minetti and Zhu (2011). We use a recursive bivariate probit model to examine the effect of credit rationing on the extensive margin of export. The model is stated as follows:

$$prob(export = 1) = prob(\alpha_1 + \beta_1 C_i + Z_i \gamma_1 + \varepsilon_i) \dots \dots \dots (1)^7$$

Where C_i is a binary variable that equals 1 if firm i faces credit rationing, 0 otherwise; Z_i is a vector of variables representing firm characteristics⁸; and ε_i is normally distributed random error with zero mean and unit variance and captures the unobserved firm attributes.

Since C_i may depend on unobserved characteristics of firms; consequently there can be a problem of endogeneity. We need to take it into account. We model credits constraint as follows:

$$prob(C_i = 1) = prob(\rho I_i + Z_i \delta \mu_i) \dots \dots \dots (2)$$

⁷ Credit constraints can influence a firm's ability to pay off the fixed costs of entering a foreign market: $\pi = \alpha_1 + \beta_1 C_i + Z_i \gamma_1 + \varepsilon_i$. If $\pi > 0$ firm i is exporting

⁸ Z vector includes Educ NE ME AS AP ISO FC

Where Z represents the firm characteristics as in equation 1 and I^9 is represents variables that determines credits constraints which are not in Z . equation (1) and (2) represent the recursive bivariate probit model.

Based on Manova (2010) and Chaney (2005), we expect negative relationship between the probability to export and credits constraints. This is because credit-constrained firms don't have enough resources to cover the entry cost in foreign market.

We define below each variable used in our study:

- **Exporter:** this variable is a binary variable. It drawn from the survey's question "is the firm exporting or not?". We define 1 if firm i is exporting and 0 otherwise.
- **Credits Constraints (C):** it represents the firms' access to credits. In the survey, each firm ranks his level of access to credits from 0(no constraint) to 4 (100% constraints). For our purpose we decide to recode such that 0 if firm i is not constraint and 1 otherwise.
- **Number of Employees (NE):** It represents full-time employees employed by the establishment at the start of operations.
- **Top Manager' Experience (ME):** It represents Top Manager's number of years of experience working in the sector.
- **Recognized Quality Certification (ISO):** We ask each firm whether or not they have an internationally-recognized quality certification. 1 if yes and 0 if not
- **Productivity (AP):** it represents the labor productivity growth of each firm annually in percentage.
- **Sales (AS):** Sales variables represent the amount of goods and services sold in one year. We consider the growth of sales.
- **FA:** represents the percent of firms buying fixed assets and it is a binary variable where 1 represent firm buying fixed asset.

⁹ I vector includes Age FA .

- **Education (Educ):** Average number of years of education of typical production worker
- **Fuel Cost (FC):** we consider the amount of money spent by each firm on fuel.
- **Age:** It represents the age of firm since the year of formal registration of the establishment.

Before estimating we summarize the statistics of variables used in our sample in table 1

Table 1: Summary statistics

Variable	Obs	Mean	Std. Dev.	Min	Max
Exporter	1344	0.3542	0.4784	0	1
C	1081	10.8233	31.0818	0	100
EDUC	909	8.8108	3.2256	5	60
NE	1074	80.6034	167.1755	0	1700
ME	1290	22.7031	11.3451	1	60
AS	667	0.1048	0.2787	-0.998	1.000
AP	640	0.0359	0.3034	-0.998	1.000
ISO	1293	0.4671	0.4991	0	1
FC	392	10.0527	2.3718	0	18.89
FA	1310	0.3847	0.4867	0	1
AGE	1270	2.8601	0.5940	1.099	4.533

The sample used in our sample comprises 11270 observations spanning 1344 firms working in different sectors (manufacturing, retail and core etc...)

Results and Discussion

This section constitutes the core of the study as far as we estimate the relationship between credits constraints and exports. The model starts by

estimating equation (2) and then equation (1) in order to solve the risk of endogeneity of C_i .

Table 2: Results

	(1)	(2)	(3)
VARIABLES	C	exporter	athrho
C		-0.200***	
		(0.003)	
Educ		0.129**	
		(0.050)	
NE		0.003	
		(0.002)	
ME	-0.002	0.014**	
	(0.013)	(0.010)	
AP	-0.053**	-0.322	
	(0.822)	(0.463)	
ISO	0.336**	0.389***	
	(0.093)	(0.014)	
FC		-0.114*	
		(0.049)	
Age	0.326		
	(0.182)		
AS	-0.397**		
	(0.018)		
FA	0.273**		
	(0.023)		
Constant	-2.439***	0.621	14.350***
	(0.586)	(0.634)	(1.372)
Observations	113	113	113

Robust standard errors in parentheses. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$

Table 2 reports the results of the empirical model. The column (1) of table 2 represents the results from the estimation of the 2nd equation. Productivity,

firm age, ISO, firms owning fixed assets, annual sales and top manager's experience are all significant¹⁰ and reduce the probability of being constrained. Based on the results we found that owning an international certification and fixed assets helps firms to access to credits by reducing the probability of being constrained respectively by 33.5% and 27.3%. More importantly, the results show that annual sales are highly determinant to access to credits. It reduces the probability for firms to be credits constrained by 39,7%

The column (3) represents our interest in this research as far as it reveals the relationship between credits constraints and exports. Based on the results we found that a credit constrained firm reduces its probability to export by 20%. This is because almost all firms, particularly exporting firms routinely rely on external capital because they incur large upfront costs (greater transaction risks, products customizing to fit local tastes and higher working capital needs due to longer shipping times) that cannot be funded out of retained earnings or internal cash flows from operations; Only firms with sufficient liquidity can cover them. Limited access to external finance and imperfections in the credit market can therefore hinder entry in a foreign market. Furthermore, the results indicates that the more there is educated workers in the firm, it increase the probability to exports by 12,9%. The manager experience as well as the fuel cost each firm faced is also determinant of export performance. Indeed manager's number of years of experience working in the sector increases the probability to export by 1% while fuel cost reduces it by 11,4%.

Access to financial resources is a significant determinant of firms' probability to export and its exports performance. The study therefore advocates for a better financial markets and well-functioning financial institutions. Development finance institutions, financial intermediaries, and governments should help improve access to finance for firms. Government

¹⁰ Significant at 1%, 5% and 10%

can promote the technological advances in developing financial infrastructure to lower transaction costs. A more developed financial infrastructure can make more information available about potential clients, and therefore reduce transaction costs and expand credit, particularly for small firms. This will enable them to grow faster and face the entry costs in foreign market. Coordination between government and private sector to implement policies to support improvements in the legal framework and financial infrastructure can also help for better access to credit. Furthermore through funding to financial intermediaries such as partial credit guarantees, strengthening of access to finance for private firms could be achieved. Indeed it can mitigate the credit losses of financial institutions in case of default and promote lending to firms. Other policies might be promoting more competition in the financial sector and increase support to financial intermediaries which can expand their services to businesses and reduce costs and risks for intermediaries. Finally a better regulation can spur creation of businesses and promote the creation of new companies and the closure of inefficient and unprofitable ones, and end up reducing lending cost and profitable businesses to flourish

In the case of Turkey characterized nowadays by a huge depreciation of its currency, a reduction of credit constraint can help them face the increasing cost of imported materials and also facilitate penetration in the foreign market.

Conclusion

This study examines the firm-level impact of credit constraints on exports in Turkey. A credit constraint keeps firms from entering in a foreign market and taking advantage of opportunities. In order to investigate this relationship, data from World Bank enterprise survey is used for the period of 2013. Consequently a self-reported measure of credit constraints is used; Therefore endogeneity is likely to come out from this type of measure and lead to some bias in the estimates. This is because of the correlation between unobserved firms characteristics and credit constraints. In order to tackle it, we control variable such as productivity and certain firms'

characteristics. A recursive bivariate probit modelling is used to capture the relation between credits constraints and firms' exports.

Based on the results, a credit constrained firm reduces its probability to export by 20%. Furthermore, the results indicates that the more there is educated workers in the firm, it increase the probability to exports by 12,9%. The manager's experience as well as the fuel cost each firm faced is also determinant to export performance. Indeed manager's number of years of experience working in the sector increases the probability to export by 1% while fuel cost reduces it by 11,4%.

The results advocates the idea that development finance institutions, financial intermediaries, and governments, through different policies such as regulation, competition, financial intermediaries etc..., should help improve access to finance for private companies

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8 Do Agricultural Support Payments Raise Olive Oil Exports in Turkey?

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Abstract

This study empirically investigates the effects of agricultural support payments on Turkish olive oil exports for 2000 - 2014 period. It employs an aggregate export demand model by utilizing the OLS estimation method. Our study finds that although the estimated coefficients of all variables have expected signs, only domestic production and consumption of olive oil and world olive oil prices significantly affect Turkish olive oil exports. Agricultural supports payments implemented in Turkey are not effective to raise olive oil exports though. These results indicate that the more domestic production and less consumption of olive oil and the higher world olive oil price, the more exports of olive oil.

Keywords: Agriculture Trade, Olive Oil Sector, Agricultural Support Payments, Turkey

Jel Classification: F14, Q17

Introduction

Changes in the pattern of world edible oil demand have affected the world olive oil consumption, production, and foreign trade in the last few decades. Both world olive production area and world supply/demand for olive and olive oil have grown significantly since 2000. Almost 90 percent of the

world olive cultivation takes place within the boundaries of the Mediterranean region. The world's major olive producer countries are Spain, Italy, Greece, Tunisia, Syria and Turkey, respectively. The share of European countries in world production is about 65 percent on average, varying from year to year though. However, olive cultivation area is gradually increasing in other countries. If this trend continues, countries including Turkey may have more shares in the international olive (oil) markets in the long-term. Nevertheless, for Turkey, marketing issues could be more important than raising production in order to have a significant role in the world olive oil markets (Turkiye Sanayi Sevk ve Idare Enstitüsü, 2015). Spain and Italy are the two countries directing the world olive (oil) trade due to their marketing infrastructures and good prestige in terms of quality. Additionally, they take geographical indication for their products since they plan to follow marketing strategies that depend on forming the country and region image, which can strengthen their market shares (Bayramer, 2015). After 2005, Turkey also takes measures in the same direction via supporting the exports of olive and olive oil products labeled with a registered Turkish trademark and "Made in Turkey" inscription.

Moreover, major importing countries (such as the USA, Canada, Japan, the UK, Portugal, Germany, and Australia) have been raising their consumption implying the potential export growth for olive producer countries. Although Turkey has targeted to be the world's second main producer in the near future, she is not close to her targets (Pehlivan Gurkan, 2015). Export and production incentives are the major instruments for governments in encouraging the olive production as heavily implemented in European countries. These incentive have been increasing in Turkey in recent years as well, but as stated in Toplu Yilmaz (2013) these supports are still considerably at lower levels compared to European countries. Although the government raises the export incentives to olive and olive oil exports, the market share of Turkish olive oil remains almost the same in recent years. It is thus important to analyze the determinants of Turkish olive oil exports in order to identify the barriers in front of the potential future export increase/performance and improvement of competitiveness of the sector on a healthy basis. Although there are several studies examining the olive (oil) sector in Turkey, our study is the first investigating the effects of agricultural support payments on Turkish olive oil exports.

The rest of the study is organized as follows. Section 2 contains a brief glimpse at olive (oil) sector in Turkey. Section 3 reviews the literature on determinants of agricultural commodity exports. In Section 4, methodology and the data are briefly explained. In Section 5 and 6, we present our empirical results and concluding remarks, respectively.

A brief glimpse at olive (oil) sector in Turkey

There is an increasing attention to an olive sector since Turkey is among the principal producers/players in the world olive oil markets and there is almost a consensus about the need of improvements in the whole sector- in the all production/distribution stages from cultivation to consumption. High periodicity of production, high number of small producers, high production costs, inefficient or old-fashioned production structure along with wrong or inefficient fertilization, disinfection, irrigation and harvesting methods are the main issues of production problems of olive cultivation in Turkey (Ozkaya et al., 2010; Turkekul et al., 2010; Türkiye Sanayi Sevk ve Idare Enstitüsü, 2015; Artukoglu, 2002 and Kooperatifçilik Genel Mudurluğu, 2016). Marketing and competitiveness problems generally consist of quality, branding and positioning of Turkish olive oil in foreign markets. In addition, high tariff rates on Turkish olive oil exports especially from European countries and exports of olive oil mostly in bulk (causing decrease in added value of olive oil products) are the other important export problems of the Turkish olive oil sector (Tunalioglu, 2010; Ozden, 2006; Turkekul et al., 2010; Bayramer, 2015).

The Turkish government has long noticed these problems and taken several important measures as giving agricultural supports to producers and export refund payments (thereafter will be called export incentives) to exporters. Agricultural supports regarding olive oil production have been started as early as in 1966 in Turkey and discontinuously continued up to the present. Both type and quantity of support payments have been varied over the years though (Kooperatifçilik Genel Mudurluğu, 2016; Bayramer, 2015). As to the best of our knowledge, while export incentives for olive exports has a long history, export incentives for olive oil products began to be given in 1998. In Appendix Tables A1, A2, A3 and A4, we present categorized export incentives in detail that are given in the case of olive and olive oil products from Turkey and export values of olive and olive oil products that classified

with regard to those payment categories, respectively. As can be seen from these tables, in the last decade, the government with the aim of increasing exports of higher value added products, encouraging branding, and increasing the packaged exports decides to pay higher export incentives to small packaged and branded olive and olive oil products.

Table A1 and Table A2 in appendix reports the data about export incentives to olive and olive oil exports in Turkey from 2005 to 2015, respectively. Firstly, we divide export incentives as general export incentives and special export incentives according to their provisions. There are basically two provisions; one is about positioning favorable “Made in Turkey” image of Turkish brands, and the other is about net weight of packaged products. While general incentives have a provision only on net weight of the exported products, special incentives are paid for the exports that meet both of the provisions.

There are some important points about the export incentives and provisions. If net weight of the packaged olive and olive oil products are more than 18 and 5 kg, respectively, exporters cannot take any payments in the context of neither general nor special incentives. Special export incentives can be classified in three categories in terms of net weight of the packaged products (up to 1 kg., from 1 kg. to 2 kg., and from 2 kg. to 5 kg). As net weight of the packaged export products increases, value of special export incentives decreases. In addition, general incentives for olive oil do not show a significant increase in nominal terms over the years, rather they have been decreased, especially in the last years. However, special incentives have been raised in recent years. All of these clearly indicate the government’s aim to increase the export of high value added products, as an alternative to the exports of olive/olive oil in bulk.

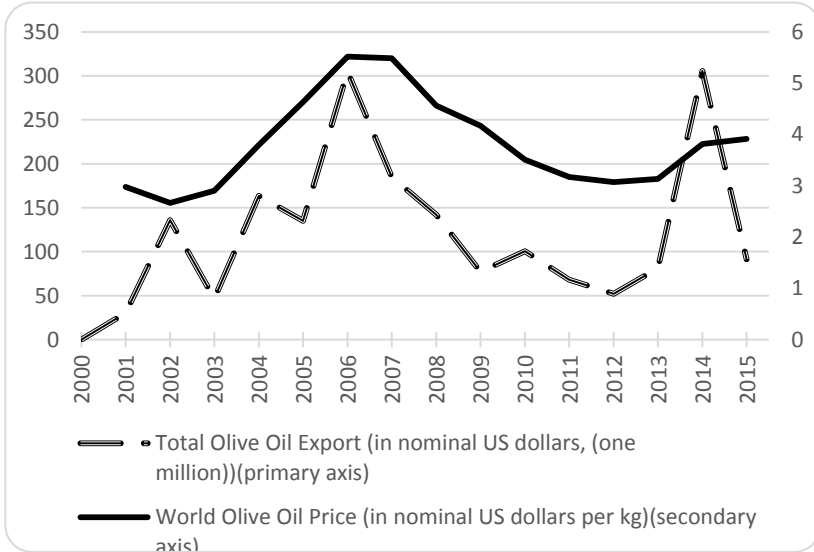
In Appendix, Table A3 lists the export incentives for olive (oil) exports in Turkey from 1995 to 2004. Tables A1, A2 and A3 clearly imply that special export incentives don’t show any significant variation until 2012. However, olive oil exports not eligible for incentives have a considerable share in total olive oil exports, although the government supports them less. Since exports of olive oil products subjected to minimum refund payments shows important changes year by year (but generally in parallel with production changes), Turkish olive oil exporters are generally inclined to sell less value

added products to abroad, which may be due to less recognition of Turkish olive oil products in world markets or others. Moreover, there is a consensus in the literature that most of the less value added olive oil exports are sold in bulk. This problem (exports of olive oil in bulk) is highly emphasized in the literature as associated with high tariff rates imposed on high value added olive oil exports of Turkey especially to European countries (Ozden, 2006; Ozkaya et al., 2010; Bayramer, 2015). Note that exports of olive oil mostly in bulk are mainly considered to be the artifact of the Inward Processing Regime implementations of European countries especially Italy and Spain (Ozden, 2006; Ozkaya et al., 2010; Turkiye Sanayi Sevk ve Idare Enstitusu, 2015).

Considering the 2005-2015 period, the share of Turkey in world olive oil production and trade is about 5 percent on average. The same numbers for table olive production and trade are 15 and 10 percent, respectively (Kooperatifcilik Genel Mudurlugu, 2016; Bayramer, 2015). The principal importer countries of Turkish olive oil are the USA, Saudi Arabia, Japan, Iran, Spain, and Italy and the principal importer countries of Turkish table olive are Germany, Romania, Iraq, Bulgaria, and the USA (Turkiye Sanayi Sevk ve Idare Enstitusu, 2015).

Figure 1 shows the values of Turkish olive oil exports and world olive oil price over 2000-2015 period. The values of olive oil exports exhibit extremely fluctuant movements over time. This volatile structure of olive oil exports puts forward both the importance of the determinative factors in Turkish olive oil exports and provides clues about the difficulty in modeling of them.

Figure 1: Turkish olive oil export and world olive oil price trend, 2000-2015



Source: Turkish Statistical Institute, 2016; Food and Agriculture Organization of the United Nations, 2017

Literature review

There exist a wide range of studies in the literature on the determinants of individual agricultural commodity exports. These studies generally apply basic demand/supply models with changing/additional explanatory variables such as exchange rates and promotional/support expenditures. For example, Sarwar and Anderson (1990) argue that US soybean exports can significantly be affected by some variables about importing countries such that income, production, real exchange rate fluctuations, price of soybeans and price of competing goods. Tambi (1999) reports that exchange rates, national income and export prices relative to domestic prices affect Cameroon's exports of coffee and cocoa. Nkang et al. (2006) indicate that cocoa export supply responds negatively to changes in real producer prices

in the short run and positively in the long-run in Nigeria. Abolagba et al., (2010) find that domestic rubber production, producer price and interest rate have positive effects on rubber exports of Nigeria, while domestic consumption and exchange rate have negative. They also find that cocoa export of Nigeria is positively related with domestic production and rainfall, and negatively related with domestic consumption. Yanikkaya (2001) states that exchange rate plays an important role in determining Turkish exports of tobacco and cotton.

Although studies on the effects of agricultural supports/export promotion programs on agricultural exports is very limited, most of which are focused on US data (Armah and Epperson, 1997; Le et al., 1998; Onunkwo and Epperson, 2000; Muhammad and Kilmer, 2008; Bakay and Huang, 2010). While some studies find that effect of agricultural support payments on agricultural exports is negative, some of them find neutral or positive evidence. Koo et al. (1994) claim that price of beef, livestock production and meat quality have an important role on the determining exports of meat, while producer subsidies do not have any effects on it. They also find that importer countries' policies are more influential on volume and direction of meat trade than those of exporter countries. Onunkwo and Epperson (2000) point out that export promotion expenditures have not any effects on US walnut exports to the EU. They also indicate that marginal return to decreasing promotion expenditures for walnuts exports to Asia is very high. Armah and Epperson (1997) indicate that own-price, real exchange rate of the importing country and trend have a negative effect on frozen concentrated orange juice exports of US, while the real income of the importing country, and export promotion programs have a positive one. Le et al. (1998) find that export promotions on red meat in the US have a positive impact on the red meat import demand of South Korea from the US, but not on that of Hong Kong, Singapore, and Taiwan. Bakay and Huang (2010) claim that there is a positive relationship between agricultural subsidies and exports of six agricultural commodities from the US to Mexico and Canada. Yanikkaya and Koral (2013) find that agricultural supports have mixed effects on the exports of individual agricultural commodities of Turkey.

Studies on the olive (oil) sector in Turkey focus on production, organization and marketing problems, government support and foreign trade policies

(Ozkaya et al., 2010; Turkekul et al., 2010; Türkiye Sanayi Sevk ve Idare Enstitüsü, 2015; Artukoğlu, 2002 and Kooperatifçilik Genel Mudurluğu, 2016), while only Tunalioglu et al. (2010) empirically examine the effects of some factors on Turkish olive oil exports. Two of the most important problems regarding Turkish olive oil exports are considered as high tariff rates on Turkish olive oil exports especially to European countries and exports of olive oil in bulk (Tunalioglu, 2010; Ozden, 2006; Turkekul et al., 2010; Bayramer, 2015; Türkiye Sanayi Sevk ve Idare Enstitüsü, 2015 and Kooperatifçilik Genel Mudurluğu, 2016). Moreover, documenting the relatively much lower levels of Turkish agricultural supports to olive producers compared to the European countries, Toplu Yilmaz (2013) emphasizes the importance of implementing production support systems similar to that in European countries in order to provide price and income stability to Turkish olive farmers.

There are only two studies empirically investigating the determinants of olive oil exports in the literature. Larbi and Chymes (2010) examine the determinants of Tunisian olive oil exports by using basic export function and Ordinary Least Squares (OLS) method. They find that only two variables, level of national production and international prices of olive oil, significantly affect the Tunisian olive oil exports, while European consumption and production of olive oil along with Tunisian national price of olive oil do not have any significant effect on it. Tunalioglu et al. (2013) find that exchange rate volatility, domestic and world olive oil prices significantly affect Turkish olive oil exports in a positive way.

Methodology and data

Export demand models generally consider income and price elasticities along with several additional variables such as consumption and production levels, openness and export promotions in order to examine the determinants of a country's commodity exports. In our analysis, following Larbi and Chymes (2010), we use an export demand function as;

$$EXP_{it} = \beta_1 CON_{it} \beta_2 PRO_{it} \beta_3 PRO_{jt} \beta_4 PRI_{it} \beta_5 PRI_{jt} \beta_6 SUP_{it} \quad (1)$$

i =Turkey, j =world, and t = 2000, 2001, ..., 2014.

EXP_{it} = values of Turkish olive oil exports to world markets, real terms in U.S. dollars

CON_{it} = domestic olive oil consumption in Turkey (in tonnes)

PRO_{it} and PRO_{jt} = total domestic olive oil production in Turkey and world total olive oil production (in tones)

PRI_{it} and PRI_{jt} = olive prices in Turkey¹¹ and world olive oil prices, in real U.S. dollars per tones

SUP_{it} = agricultural support payments to olive production in Turkey, in real U.S. dollars¹²

Here, variables affecting commodity export demand are hypothesized to be domestic and world olive oil prices, domestic and world olive oil production, domestic olive oil consumption, and government support payments to olive producers in Turkey. As the economic theory suggests, an increase in the world production, domestic consumption, and domestic prices are expected to have a negative effect on export of Turkish olive oil, while increases in domestic production and world prices are expected to have a positive effect. The indirect impact of agricultural support payments to olive producers through the increased production on exports of olive oil is expected to be positive.¹³

¹¹ Due to the unavailability of olive oil prices in Turkey, we employ olive prices.

¹² Data on export values and olive oil prices, and support payments in US dollars are converted into real values by deflating them with US CPI (2010=100).

¹³ Although export incentives (instead of agricultural support payments) could have direct effects on olive oil exports, we could not be able to obtain the data due to international agreements signed with the World Trade Organization.

Annual observations from 2000-2014¹⁴ for Turkish olive oil export values to world markets are obtained from TURKSTAT (Turkish Statistical Institute). Data on olive prices are also taken from the TURKSTAT database. Data on Turkish and world olive oil production, and Turkish olive oil consumption are obtained from the International Olive Council databases. World olive oil prices are taken from the International Monetary Fund (IMF) Primary Commodity Prices database. Data on support payments to olive oil producers in Turkey are obtained from the Republic of Turkey Ministry of Food, Agriculture and Livestock. Table 1 presents the summary statistics of the data (in log) used in our analyses.

Taking the logarithm of variables in order to apply linear regression estimation methods is a generally accepted tradition in an empirical analysis. After log linearization of the equation, we use the OLS method for both levels and first-differences of the data.

$$\log EXP_{it} = \beta_0 + \beta_1 \log CON_{it} + \beta_2 \log PRO_{it} + \beta_3 \log PRO_{jt} + \beta_4 \log PRI_{it} + \beta_5 \log PRI_{jt} + \beta_6 \log SUP_{it} + \varepsilon_t \quad (2)$$

Note that this study employs one period lagged values of both domestic and world olive oil production variables because harvest season of olives corresponds to nearly end of a given year, products from those olives could thus possibly be exported in the following year.

As stated in Pareja and Vivero (2004), the difficulty in determining the true representation of the variables is an important estimation issue in short time series data. We try to solve this problem by controlling the robustness of our results through the first difference estimation method as Pareja and Vivero (2004) did, which also reduces the severity of multicollinearity.

¹⁴Since the availability of the data about agricultural support payments is limited to that period, we could not expand our analysis over a longer time period.

Table 1: Summary statistics

Variable	Obs.	Mean	Std Dev	Mini	Max
Total Olive Oil Export	25	7.907	0.398	6.893	8.52
Domestic Olive Oil Production	24	5.019	0.231	4.602	5.301
Domestic Olive Oil Consumption	25	4.877	0.168	4.663	5.176
Domestic Olive Price	24	3.057	0.157	2.78	3.292
Total World Olive Oil Production	25	6.392	0.094	6.162	6.521
World Olive Oil Price	25	3.648	0.114	3.474	3.919
Total Value of Domestic Incentives to Olive Cultivators	16	7.123	0.461	6.346	7.788

Note: See the text for data source and definitions.

Empirical results

Table 2 presents the OLS estimations for log and first-differences equations. Firstly, an important part of the variance of Turkish olive oil exports to world markets is explained by the variables at hand in both of the estimations. In the first-difference estimations, the estimated coefficients on all variables have the expected signs. The estimated coefficients on the olive oil production and consumption of Turkey indicate that the more domestic production and the less consumption of the olive oil, the more export of it. The other statistically significant variable is world prices. As expectedly, there is a positive relationship between world prices and Turkish olive oil exports. These results are consistent with Larbi and Chymes (2010) and Tunalioglu et al. (2013).

In the both set of estimations, domestic olive prices, world olive oil production and agricultural support payments in Turkey do not have any statistically significant relationships with Turkish olive oil exports. The insignificance of the coefficient of world olive oil production could be the result of the dependency of agricultural production to climatic conditions or climatic similarity among all the producer countries. Theoretically, there should be a negative relationship between Turkish olive oil exports and world olive oil production. However, if other things are equal, Turkish olive oil production and exports in turn could not increase when the world olive oil production decreases since most of the olive production originates from the same region (Mediterranean basin), practically they should move in the same direction. The insignificant coefficient of domestic olive prices could be related with their highness relative to world prices. Although it is difficult to explain the insignificant coefficient on agricultural incentives to olive cultivators¹⁵, there are examples in the literature finding similar evidence such as Koo et al.(1994), Onunkwo and Epperson (2000) and Yanikkaya and Koral (2013). Another explanation could be the fact that ineffectiveness of incentives might be the results of the relatively much smaller amount of government supports in Turkey compared to the EU countries.

Overall our results indicate that the export performance of Turkish olive oil exporters is dependent mainly on domestic production, domestic consumption and world prices. It seems that export incentives fail to improve the performance of olive oil exporters. We should increase either olive-olive oil production in Turkey or obtain higher world olive oil prices in order to increase Turkish olive oil exports. We then increase the export performance of Turkey via increased production. However, in the short run, raising the number of olive trees is not possible, efficiency problems should thus be taken into consideration. Indeed, the problems stemming from product(ion) characteristics could be well understood and solved through modern cultivation, harvesting and processing methods. In addition, other

¹⁵As agricultural support payments are more likely to affect exports of olive oil through raising domestic production, we then exclude domestic production and re-estimate the regressions and find that regarding the inclusion or exclusion of domestic olive oil production, the estimated coefficients on support payments remain unaffected.

issues related to quality, marketing and foreign trade policies in olive oil exports are not subject of our study, and several studies, as discussed in the literature review section, clearly reveals these problems and solutions in detail.

Table 2: Estimation results

Dependent Variable: Turkish Olive Oil Export	Total Log	First Difference
Method: OLS (Robust errors)	Estimation	Estimation
Domestic Olive Oil Production	1.04***	0.838**
	-3.56	-2.58
Domestic Olive Oil Consumption	0.164	-2.624**
	-0.4	(-2.99)
Domestic Olive Price	-0.701	-2.006
	(-1.31)	(-0.04)
Total World Olive Oil Production	0.712	-0.038
	-0.75	(-0.85)
World Olive Oil Price	2.69***	51.628*
	-3.71	-1.9
Total Value of Domestic Incentives to Olive Cultivators	-0.105	0
	(-0.76)	-0.12
Constant	-9.407	16979.31
	(-1.16)	-1.31
R²	0.71	0.92

** and *** denote significance at 1 and 5 per cent level respectively. t values in parenthesis

There are important points to note about the structure of olive oil exports in Turkey, which can cause the ineffectiveness of agricultural support policies on Turkish olive oil exports. On the one hand, Turkish olive oil exports

constitutes average less than 20 percent of its olive oil production in the last decade, and an important part of its exports (60 percent) sold in bulk, which is said to be associated with the Inward Processing Regime implementations of European countries especially Italy and Spain (Ozden, 2006; Ozkaya et al., 2010; Türkiye Sanayi Sevk ve Idare Enstitüsü, 2015). On the other hand, high level of customs duties to exports of high value-added olive oil products especially in European countries restrain our potential of increasing these high-value added exports, and possibly forcing to sell them in bulk, too. In this regard, the important concern in exports of Turkish olive oil products might be about the conditions with which they are facing in importing countries, rather than how Turkish government supports them.

Conclusion

This study empirically investigates the effects of agricultural support payments on the Turkish olive oil exports over the 2000-2014 period. We conduct our analysis with the aggregate data and use export demand model by utilizing the OLS estimation method. In our study, variables affecting aggregate export demand are hypothesized to be domestic olive and world olive oil prices, domestic and world olive oil production, domestic olive oil consumption, and government support payments to olive producers in Turkey. Our results imply that although the estimated coefficients on all variables have the expected signs, only domestic production and consumption of olive oil and world olive oil prices significantly affect the Turkish olive oil exports. The estimated coefficients on both of these variables indicate that the more domestic production of the olive oil and the higher world olive oil price, the more Turkish export of olive oil. Since Turkey has not ability to affect world prices, it must increase net domestic production in order to increase olive oil exports. Estimation results indicate that agricultural support payments to olive cultivators do not have any significant effects on Turkish olive oil exports. The ineffectiveness of agricultural supports might be explained by the relatively much lower amount of government supports in Turkey and high import tariffs faced by olive oil exports especially in the European markets. Moreover, given that most of the Turkish olive oil exports is in bulk, there exists an urgent need of necessary measures to minimize in bulk exports of olive oil, which in turn substantially raises the added value of these exports.

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Appendix

Table A1: Export refund payments to olive oil exports in Turkey, 2005-2015

Harmonized System Code	Definition	Provision	2005	2006	2007	2008	2009	2010	2011-12	2013-14	2015	
			\$/Tonne									€/Tonne
1509	Olive oil & its fractions, not chemically modified	Packed max. net 5 kg.	150	100	125	100	100	80	40	50	30	
151620910014	Olive oil (packed <= 1 kg)											
151620980011	Olive oil (other purposes, free fatty acids>= % 50, packed>1 kg)											
	Maximum rate of payment		10%			15%	5%		2%			
150990000016	Olive oil; other (weight ; 2 kg up to 5 kg., packed)	Exported products with a "registered Turkish trademark" and "Made in Turkey" inscription	150	150	175	175	175	175	200	360	360	
150910900013	Olive oil; virgin (weight; 2 kg up to 5 kg., packed)		(%10)								(%5)	
150990000015	Olive oil; other (weight; 1 kg up to 2 kg., packed)			200	250	300	300	320	360	650	675	
150910900012	Olive oil; virgin (weight; 1 kg up to 2 kg., packed)										(%10)	
150990000014	Olive oil; other (weight; up to 1 kg., packed)			300	350	400	500	500	550	650	1,250	1,300
150910900011	Olive oil; virgin (weight; up to 1 kg., packed)			(%15)							(%15)	
	Maximum rate of payment (in parentheses for some years)		15%						20%			
	Quantitative barrage		100%									

Source: Authors' own composition from a substantial amount of Official Gazettes dated between the years 1995-2016. Information about these Gazettes are available from authors upon request.

Table A2: Export refund payments to olive exports in Turkey, 2005-2015

Harmonized System Code	Definition	Provision	20	20	20	20	20	20	2011-	2013-	201	
			\$/Tonne							€/Tonne		
20.01, 20.04 and 20.05	Olives rank under these codes	Packed max. net 18 kg. (20.01 and	68	68	75	75	75	75	40	75	50	
	Maximum rate of payment		20%			15%		10	4%		2%	
200190650015-(25)	Black (green) olive; prepared or preserved by vinegar/ acetic acid, 2 kg < net weight <= 5 kg, pre-packed	Exported products with a "registered Turkish trademark" and "Made in Turkey" inscripti										
200490300017-(27)	Black (green) olive; without vinegar, canned (frozen), 2 kg < net weight <= 5 kg, pre-packed		88	100	125	125	125	125	130	235	235	(%8)
200570000015-(25)	Black (green) olive; without vinegar, canned (not frozen), 2 kg < net weight <= 5 kg, pre-packed											

3-(23)	frozen), net weight up to 1 kg, pre-packed								
	Maximum rate of payment (in parentheses for some years)		20%	10%			13%		
	Quantitative barrage		51%			55%			

Source: Authors' own composition from a substantial amount of Official Gazettes dated between the years 1995-2016. Information about these Gazettes are available from authors upon request.

Table A3: Export refund payments to olive and olive oil exports in Turkey, 1995-2004

		1995-96	1997	1998	1999	2000	2001	2002-03	2004
		-		\$/Tonne					
Harmonized	Provision			Packaged	Packaged max. net 5 kg.				
1509	Olive oil & its fractions, not chemically modified	-		96	200	200	200	180	180
1516209 10014	Olive oil (packed <= 1 kg)								
1516209	Olive oil (for other purposes, free fatty								

80011	acids>= % 50, packed>1 kg)									
	Quantitative Barrage	100%								
	Maximum rate of payment	10%								
Harmonized System Code	Provision Definition	Olives rank under 20.01 and 20.05 codes ; packaged max. net 10 kg	-	Olives rank under 20.01 and 20.05 codes; packaged max. net 10 kg					Pack aged max. net 18 kg.	Pack aged max. net 5 kg.
20.01, 20.04	Olives rank under these codes	50	-	57	55	55	65	68	68	88

and 20.05										
	Quantitative Barrage	100%	-	72 %	85 %	85 %	71 %	60%	51%	
	Maximum rate of payment	-	-	20%						

Source: Authors' own composition from a substantial amount of Official Gazettes dated between the years 1995-2016. Information about these Gazettes are available from authors upon request.

Table A4: Total export values of olive and olive oil 2005-2015, in nominal US dollars ¹⁶

Harmonized System Code	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
1509¹⁷	22265282 5	12668436 4	84446189	24847888	53335944	25224441	10302394	29368179	21958370	23046015	11348809
151620910014; 151620980011									-	-	-
150990000016; 150910900013		15854604	20017043	15932452	14667908	11926360	9182141	11721285	19017464	13042542	7866664
150990000015; 150910900012		11873877	3666477	3368512	3554697	2787519	3449004	3370111	5283109	3778102	4196617
150990000014; 150910900011	77880927	25879619	27739143	27000900	25122297	25756491	26511882	32066869	50641660	47983714	36618187
20.01, 20.04 and 20.05¹⁸	77221873	68366349	87012742	29943896	27436057	31430425	31748849	27164911	27454016	29113735	27323373

¹⁶We consider that olive exports are more responsive (sensitive) to support payments than olive oil exports. Once export refund payments for a group of olive product decrease (increase) over years, export of that product also decrease (increase) over years. In conclusion, it can be said that export refund payments for olive compared to that for olive oils are more efficient in directing exporters to sell what and how the government wants.

¹⁷ Olive oil products rank under 15.09, and not subject of any special export refund payments.

¹⁸ Olives (not raw) rank under 20.01, 20.04 and 20.05, and not subject of any special export refund payments.

Halit YANIKKAYA, Zeynep AKTAŞ KORAL (Do Agricultural Support Payments Raise Olive Oil Exports in Turkey?)

200190650015 -(25); 200490300017 -(27); 200570000015 -(25)		937422	3797669	21199521	18999618	18653172	19922065	21136676	20669343	23871147	17893702
200190650014 -(24); 200490300016 -(26); 200570000014 -(24)		679691	605807	12623465	17675233	24476905	25934957	22238277	27926953	26577658	26437113
200190650013 -(23); 200490300015 -(25); 200570000013 -(23)		6099424	7498948	40302182	38997979	42012853	48624756	46962736	54570977	55272579	52974661
Total of 20.01, 20.04 and 20.05	77221873	76082886	98915166	10406906 4	10310888 7	11657335 5	12623062 7	11750260 0	13062128 9	13483511 9	12462884 9
Total of 15.09 1516.2091.00.1 4 1516.2098.00.1 1	30053378 2	18029246 4	13586885 2	71149752	96680846	65694811	49445421	76526444	29455347 8	87877803	60116568

Source: Turkish Statistical Institute, 2016

9

Economic Efficiency of Common Property (Shamilat Land) in the Province of Khyber Pakhtunkhwa Pakistan (A Case Study of District Charsadda)

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Ghazala YASMEEN

Abstract

The current research paper envisages the common ownership of agricultural land has always been a source of socio, cultural, economic conflicts and other disputes. Present study was conducted to explore the remedies of impediments of these divergences particularly in rural set-ups. the issue became more accentuated as common property (land) is majorly held by elite group of the area. This study has made an attempt to assess the quantum of under common ownership owned by different clans in the study area. The main dimension of the study was to deal with issues and consequences of Shamilat or common property along with the overall effects on land productivity.

The universe of the study – district Charsadda – was divided into two strata for selection of sample. Stratum -1 comprise of the owners selected via simple random technique (lottery method) and Stratum -2 consists of non-owners selected randomly. Two comprehensive interview schedules were used to gather data from 60 owners and 120 non-owners.

The analysis exhibited that common ownership upon lands is major problem causing inefficiency in production of agricultural land. The overall effects of the common property of the Shamilat owners have increased conflicts among the clans and within the clans. The unequal distribution of wealth among the clans led to social disequilibrium. The unequal distribution of land has also decreased the efficiency and output of land.

Keywords: Common Property, conflicts, Agrarian Structure, owners, non-owners, land productivity

JEL classification: Q12, Q15, R1

Introduction

Pakistan is an agrarian country. About seventy (70 %) of its population reside in rural areas, majority of them do not possess agricultural land, but they are somehow linked to the agriculture sector. The few who own agricultural land are either, farmers or tenants. Among the owners, some are the joint owners of common property (Agricultural Land) that is locally Shamilat (Common Property). This common property (Shamilat) is owned by a number of clans in the rural areas. However, the common ownership over pieces of land has led to various socio, cultural, economic and other disputes in the areas that in turn has affected the productivity of land. People in the rural areas take land a matter of honor and something worth sacrificing their lives for. Therefore, the land, be in the common ownership or individual proprietorship, has become a source of conflict among the clans who possess ownership over the common property since ages.

There is complicated relationship between common property and clans who claims their ownership over such land. According to the Khyber Pakhtunkhwa Tribune, majority (80 %) of the population belong to Muhammadzai tribe that is further divisions into various sub-tribes locally known as “Khels” among which the most influential in terms of landownership are Pareech Khel, followed by Khwazai Khel and then Shamozi. The 1929 Bandobast (Documented Evidence) of village Utmanzai, highlight the same fact where (60%) of land ownership lies Pareech Khel, (30%) with Khwazai Khel and (10%).

Apart from vested ownership, people at times capture resources by force or at sometimes occupy out of necessity or in good faith. Land being an economic asset and a scarce resource, when captured or occupied illegally always fund conflicts (UN Report, 2012) and as a result become a common land where the elite group may claim share or right of ownership. Also, in

the absence of registered ownership, with no exclusive rights in individual/group may provide an opportunity to the elites to establish their rights over pieces of land. Because, the elites in the primitive societies is always powerful and managed obtaining resources for having support in government that in turn also support them (Agrawal, 1996). However, this goes in stark contrast to what common property imply about the availability of goods (Michal, 1996) to all and therefore it may become a source of conflicts in rural areas.

Common ownership (Agricultural land) among others such as fisheries, forests, open grazing fields and ground water (Adilkhari, 2001, Agarwal, 2007) that may be adding fuel to the fire by contributing more to the inefficiency of the land and causing conflicts among the clans. Moreover, the common ownership may also have given rise to many conflicts, person to person, groups to groups, between and among the clans.

Research Question: Does common property play any role in initiation of conflicts in population?

Literature Review

Common Property is defined as shared rights and duties of the claimants towards the resource (McKean, 1996). With the concept of common property is linked the “tragedy commons” by Hardin (1968) more particularly referred to over exploitation of natural resources liable to open access and lack of regulations (Feeny et al, 1998). However, open access and absence of institutional control at times give an edge to the people who are physically near to resources and have the opportunity of using the resource without being any property rights or ownership invested in them(Mckean,1996).

The mere proximity and use of resources neither establish any legal status for non-owners not it loses the rights of the owners who do not use the resource. So, the term “common property” basically relates to distribution of property rights in resource in which a number of owners are co-equal in their rights to use (Ciciary-Wantrup- 1975). These basic characteristics of co-equality in their rights to use become complex and lead to conflicts when the competing owners strives for greater share. The primitive societies though dependent on agricultural land usually get in conflicts with other competing users in an effort (Gordon, 1954) to maintain status quo. Also,

the gradual transformation of common property give rise to social conflicts as pointed out by Mikhlesur (1995) for wetlands in Bangladesh.

Agricultural land is valued in agrarian societies because it determines the political influence and social status (Viqar et al, 2001) and plays a significant role in agrarian structure. Moreover, land is valued because it is a scarce resource and a source of conflict when registration is ambiguous. (Yamano et al, 2005) in his survey in Kenya has found the increasing conflicts because of varied registration in parcels and titles.

Objectives: An attempt was made to achieve the following objectives during the research study

- To determine the number of owners and quantum of common property (land) in our population.
- To determine the role (if any) of common property (land) in the initiation of disputes among the population.

Hypothesis:

- The quantum of common property (land) is more than personal land.
- The number of conflicts between owners and non-owners is not different.
- The operational holdings of Shamilat owners are assumed to be fragmented

Research Methodology

The study covers owners and non-owners in District Charsadda with respect to conflicts arising because of common land. First, stratified random sampling was employed. Stratum 1 contained the owners who operated and owned the agricultural lands while stratum 2 consisted of non-owners who did not operate or own any agricultural land. It was assumed that the basic characteristics of farms operated by the common property (Shamilat owners) were homogenous. Therefore, even a small sample size has fairly represented the whole group. It was proposed that a small sample size of 60

individuals from Shamilat owners' farmers would be sufficient. Therefore, the sample size of 60 for Shamilat owners was distributed proportionately among the khels using the formula

$$N_i = \frac{n \cdot n_i}{N}$$

Where N = Total

Since the number of Shamilat is more than the number of common property owners, therefore, the sample size of 120 from this category was randomly selected. In this way the total sample size for the target area taken was 180. Two comprehensive interview schedules, one addressed to the owners and other addressed to the non-owners, were used for data collection. Simple tabulation and averages were used for finding the results and cross tabulation were used

For comparison of efficiency between the two categories of Shamilat owners and non-owners. The latter category of farmers was also included in the sample. Since the number of non-owners of Shamilat is more than the number of owners of Shamilat, therefore, it is suggested that the sample size of this category would be 120. In this way the total sample size for the target area was suggested to be 180. This study has used two comprehensive interview schedules for data collection from respondent categories of both owners and non-owners.

Results & Discussion: Agrarian Structure of Common Property

The main focus of this section is on the agrarian structure of the common property owned by the Shamilat owners. The subsequent sections deals with operational holdings, tenancy, arrangements, land utilization, fragmentation, cropping pattern, land use intensity and cropping intensity.

Table 4.1: Total and Average Operational Holding by Tenurial Status

Tenurial Status	Shamilat Owners			Non-Owners		
	Total Area	Average	% age	Total Area	Average	% age
Owned land	180	0.44	43.90	90	0.45	45.00
Rented in	100	0.24	24.39	62	0.31	31.00
Rented Out	130	0.32	31.71	48	0.24	24.00
Total Operational Holdings	410	1.00	100	200	1.00	100

Source: Field Survey

Operational holdings by tenurial status

From the view of table 1, it can be concluded that the Shamilat owners usually rents out the land to others while the non-owners go for self-production on these farms. Shamilat owners owned 43.9% of the total area while non-owners contain 45 % of the total area on self-owned basis. This shows that the resources of Shamilat owners are usually being generated from the farmers working on the lands which also add to the cost of production.

Land UTILIZATION:

Land utilization is one of the important economic and technical factors that affect the total output of the farm. Appropriate land use may influence the agriculture produce positively.

The total cultivated area of Shamilat owners (273 acres) and Non-Shamilat owners (186 acres) is significantly higher than the non-cultivated area (137 acres) and (14 acres) respectively.

Table 4.2: Land Utilization in the Sample Area

Land Use	Shamilat Owners		Non-Owners	
	Total	% age	Total	% age
a) Cultivated Area				
• Net Sown Area	217	52.93	150	80.65
• Current Fallow	56	13.66	36	19.35
Total (i+ii)	273		186	
b) Uncultivated Area				
• Area Under Forests	0	0	02	01
• Not available for cultivation	78	19.02	5.5	2.75
• Culturable Wastes	59	14.39	6.5	3.25
Total (i+ii+iii)	137		14	
Total Holdings (a + b)	410	100	200	100

Table 4.3: Total and Average Size of Common Property by Khel

Khel	Total Area	Average	Percentage
• Pareech Khel	246	0.60	60.0
• Khawzai Khel	139	0.34	33.9
• Shamozai	25	0.06	6.2
Total	410	1.00	100

Total and Average Size of Common Property:

Pareech Khel, Khawzai Khel and Shamozai. The Pareech Khel holds the major area in the Shamilat i.e. 60% of the whole acreage. This particular reality makes them the “KHANS” of the area.

Table 4.4 Total Numbers of Individual Shamilat Owners by Khel

Khel	Number	Percentage
• Pareech Khel	150	23.44
• Khawzai Khel	220	34.38
• Shamozai	270	42.19
Total	640	100

Source: Field Survey

Total Numbers of Individual Shamilat Owners

The number of individuals taken from the Pareech Khel is 150 while Khawzai Khel is 220 and Shamozaai 270. This particular table is included only to show that the Shamilat lands are fragmented in smaller parts as the Pareech Khel land is divided in 23.44% of the whole area, the Khawzai Khel land is divided in 34.38% of the total area among in small parts of land and Shamozaai is 42.19% of the whole area. These fragmentation percentages are taken in compliance with the sample size of 60 % which can either be incorrect.

Table 4.5: Distribution of Shamilat Owners by Responses on Disputed Lands

Responses	No	Percentage
• Yes	48	80
• No	12	20
Total	60	100

Source: Field Survey

Shamilat Owners by Responses on Disputed Lands

Responses taken from Shamilat owners show that there are major disputes going on among Shamilat owners. 80 % respondents out of 60 sample size believe that the disputes upon the ownership of land are the major problems causing the inefficiency in production of the Shamilat land.

Table 4.6: Size of Disputed Land by Khel

Khels	Total	Percentage
Pareech Khel	148	71.84
Khawzai Khel	04	19.41
Shamozee	18	9.00
Total	170	100

Size of Disputed Land

The table shows overall percentage of culturable waste in Pareech Khel is 72.84% while in Khawzai Khel is 19.41 % and Shamozeai is 9.0 %. From the percentages it can be concluded that the Pareech Khel being the major owners of land, contains the major resources for cultivation. The use of these resources enables them to avoid major wastes

Table 4.7: Khel Wise Distribution of Shamilat Owners by Responses on the Existence of Culturable Wastes

Responses	Pareech Khel		Khawzai Khel		Shamozee	
	Number	%age	No	%age	Number	%age
Yes	25 (54.35)	78.12	13 (28.26)	72.22	08 (17.39)	80.00
No	07 (50.00)	21.88	05 (35.71)	27.78	02 (14.29)	20.00
	32	100	18	100	10	100

Culturable Wastes

From the table it is inferred that the people working under Shamilat lands believe that the culturable wastes area are a big constraint in achieving the desired output. The percentage of Pareech Khel that believes that culturable wastes are present is 78.12 % which is less than the Khawzai Khel and Shamozee percentages of responses in acceptance. This further strengthens the above mentioned inferences that the Pareech Khel contains many resources to reduce their wastes in comparisons to other two Khels.

Table 4.8: Distribution of Shamilat Owners by Number of Fragments

Number of Fragments	Pareech Khel		Khawzai Khel		Shamozee	
	Number	%age	No	%age	Number	% age
Up to 2	64	43.24	05	12.5	02	11.11
3-5	38	25.67	08	20	04	10
6-8	26	17.57	10	25	05	27.77
9 and above	20	13.54	17	42.5	07	38.88
Total	148		40		18	

Number of Fragments

The process of fragmentation influences the productivity level of the farm adversely. From the table it is seen that the Pareech Khel lands are not that much fragmented in smaller fragments as compared to other two Khels. This shows that the Pareech Khel usually possess lands under their own guidance rather than fragmenting it into smaller parts. This particular behavior of Pareech Khel enables them to enhance their productivity and generate handsome revenues from the available land in comparison to other Khels.

Total Area of Culturable Wastes of Shamilat

The total area of culturable waste of common property under Pareech Khel is 26 acres while average is 0.44 acres, under Khawzai Khel it is 32 acres and average is 0.54 acres and under Shamozee it is one acre and average is 0.02 acre.

Table 4.9: Total Area of Culturable Wastes of Shamilat

Khel	Total Area	Average Area
Pareech Khel	26	0.44
Khawzai Khel	32	0.54
Shamozee	01	0.02
Total	59	100

Table 4. 11: Farm Area of Shamilat Owners by Irrigation Status

Irrigation Status	Pareech Khel		Khawzai Khel		Shamozee	
	Area	%age	Area	%age	Area	%age
• Irrigated	181 (63-07)	73.58	92 (32.06)	66.19	14 (4.88)	56.00
• Un-irrigated	65 (52.85)	26.42	47 (38.21)	33.81	11 (8.94)	44.00
Total	246	100	139	100	25	100

Irrigation Status:

Irrigation status is an important input in farming. Its relationship is direct with agricultural procedure. Yield per acre of crops can be increased if recommended numbers of irrigation are applied.

According to table , it is seen that Pareech Khel is having more resources and are able to irrigate their lands properly while other two Khels are not containing much resources and too much fragmentation are unable to irrigate their lands properly. This reason causes the culturable wastes to all three Khels but Pareech Khel are on safe side.

Table 4.13: Cropping Patterns of Shamilat Owners Areas in Acres

Major Crops	Pareech Khel		Khwazai Khel		Shamozee	
	Area	% age	Area	% age	Area	% age
Maize	94	38.21	54	38.85	05	20.00
Sugarcane	123	50.00	79	56.83	15	60.00
Rice	---	----	---	---	----	---
Vegetables	15	7.08	02	1.44	03	12.00
Others	14	5.69	04	2.88	02	8.00
Total	246	100	139	100	25	100
Wheat	212	86.18	128	92.08	16	64.00
Gram	---	---	----	---	---	---
Barley	08	3.25	02	1.44	03	12.00
Vegetables	15	7.00	03	2.16	03	12.00
Others	11	4.47	06	4.32	03	12.00
Total	246	100	139	100	25	100

Source: Field Survey

Cropping Pattern

While determining the farm productivity specially yield per acre, the vitality of cropping pattern cannot be ignored. Cropping pattern indicates the relative share of each crop grown on the farm., in the total cropped area, which is influenced by the climatic conditions, nature of soil and irrigation

status ect. Optimization of crop production means to how much of each resources including land should be allocated to each crop so that net farm returns are maximized. Cropping pattern on the common property of Shamilat owners is presented in table below.

In the Kharif season the major lane is occupied by the cultivation of sugarcane and maize. The other important crops are either neglected of the soil fertility doesn't permit the cultivation of vegetables, pulses and no cultivation of rice. So the proper infrastructure of land calls for the practical steps to be taken to develop the proper infrastructure, irrigation faculties and provision of advance technology at a least cost in order to enhance the productivity.

Likewise is the case of the Rabbi season because major area is cultivated for wheat only. The government is required to pay proper attention for enhancing the fertility of land to increase the agricultural output, which will boast the financial and social status of the people in the three said Khels.

Table 4.14: Distribution of Shamilat Owners by responses on the effects of Common Property

Effect/Response	Pareech Khel		Khawzai Khel		Shamozai	
	Number	% age	Number	% age	Number	% age
Increase in conflicts						
Yes	23	71.87	08	44.44	07	70
No	09	28.13	10	55.56	03	30
Total	32	100	18	100	10	100
Decrease in Output						
Yes	23	71.87	08	44.44	07	70
No	09	28.13	10	55.56	03	30
Total	32	100	18	100	10	100
Rise in culturable Wastes						
Yes	25		13	71.88	08	80
No	07		05	28.12	02	20
Total	32		18	10	10	100
Adverse effects on socio-economic						

conditions						
Yes	<u>23</u>	71.87	08	44.44	07	70
No	<u>09</u>	28.13	10	55.56	03	30
Total	<u>32</u>	100	18	100	10	100

Source: Field Survey

Effects of Common Property

The analysis shows that the conflicts among the Khels on matter of Shamilat are high and even rising because the ownership of lands is not properly surrounded by boundaries.

The increasing conflicts lead to diversion of attention from the proper cultivation of land to the immaterial & rubbish fights. Such fights also distort the land's fertility. The overall effect is negative on the output level as land could not be properly utilized by the farmers indulged in conflicts.

The ill attention on land facility causes the increase of the culturable wastes. Moreover, the absence of proper forests also reduces the fertility of land in addition to the loss of cultivable decay of the ill transportation & communication system.

All these factors effects the social status of the people in terms of their status in society and also disturbs the economic status as the government cannot earn the proper revenues from the land output.

Table 4.15: Land Use Intensity of Common Property of Shamilat Owners and Non-Owners

Total Operational Holdings	Net Sown Area	Culturable Area	Land Use Intensity
Shamilat Owners	217	410	52.93
Non-Owners	150	200	75.00
Total	367	610	60.16

Land Use Intensity

The land use intensity is an important factor in explaining the agrarian structure of common property of Shamilat owners and non-owners and determining the level of farm productivity. Higher is the intensity of land

use, more will be the total output and vice versa. Much difference is found is found between the intensities of the land use on common property of Shamilat owners and non-owners. The figures are 52.93 & 75.00 respectively. Although the difference is statistically insignificant and may be attributed to relatively less culturable wastes and due to application of mechanized farm practices on the lands owned by Shamilat owners.

Table 4.16: Cropping intensity on Common Property by Shamilat Owners and Non-Owners

Total Operational Holdings	Net Sown Area	Culturable Area	Cropping Intensity
Shamilat Owners	217	273	$273/217 \times 100 = 125.81$
Non-Owners	150	186	$186/150 \times 100 = 124.00$
Total	367	459	$459/367 \times 100 = 125.07$

Cropping Intensity

Intensity of cropping also helps in describing the agrarian structure and the extent to which a piece of land is put to given the cultivated area, higher cropping intensity means greater number of crops raised and thus more returns and greater yield per acre.

The cropping intensity of common property of Shamilat owners is 125.81 % while it is 124.00 % on the non-owners farm. The difference between the two is not significant. However, it may be due to more use of family human resource, fragmentation of farms while other factors influencing the cropping intensities are climatic conditions and irrigation status etc.

Summary and Conclusion

An attempt has been made to analyze the socio-economic and institutional factors determining productivity levels in common property. The main objective of this dissertations were to identify the size of common property, to access the disputed area and culturable wastes, to compose the general ecology of shareholders and non-shareholders of the common property, to

study the agrarian structure of the owners of the Shamilat , land intensity and cropping pattern.

In the light of the title and objectives of the study, it was decided to study a sample of 60 owners of Shamilat and 120 non-owners were interviewed. Proportional random sampling technique was used for the selection of respondents, to draw conclusions about the impact of Shamilat and to give suggestions for improvement of the situation.

Main Findings

The general ecology of Shamilat owners and Non-owners

The average Shamilat owners are estimated to be eight while from non-Shamilat owners it stood 14. It means that the family size of non-shamilat is larger than the Shamilat owners.

The Agrarian Structure of Common Property

Shamilat owners usually rent out the land. The total land owned by Shamilat owners is 43.90 % of the total area, while the non-owners go for self-production. They contain 45 % of the total area on self-owned basis.

Among the three Khels, the Pareech Khel holds the major area in the Shamilat, i.e. 60% of the whole acreage.

The Shamilat lands are fragemented in smaller parts as Pareeech Khel land is divided in 23.44 % while Khawazai Khel land is divided in 42.19 % of the whole area. However, the Pareech Khel lands are not much fragemented as compared to the other two Khels.

The overall percentage of the disputed land among the three Khels are 71.84% of Pareech Khel, (19.41 %) of Khawazai Khel, amd (9.00 %) of Shamozaı.

About 80% of People in Shamilat owners of the sample size of 60 believe that disputes upon the ownership of land cause inefficiency in production of the Shamilat lands.

The total cultivated area is (66.58%) of the shamilat owners and (93.00 %) is much higher than the cultivated area (33.41%) of the Shamilat owners and (14.00%) of the non-owners.

The culturable wastes are a big constraint in achieving the desired output. The total area under culturable wastes of Pareech Khel is 26 while in Khawzai Khel it is 32 and in Shamoza it is 1. The Pareech Khel being the major owners of land contains major resources which enable them to avoid the major culturable waste.

The irrigated land of Pareech Khel, Khawzai Khel, and Shamoza are 73.58%, 66.19% and 4.88% respectively. The proportions of un-irrigated areas on common property are 26.42, 38.21 and 8.94 respectively.

The proportions of Pareech Khel, Khawzai Khel and Shamoza affected by water logging are 60, 60.86 % and 37.5 while salinity exist in the percentage proportions of 40, 39.14 and 62.5 respectively. The percentage of land damaged by water logging and salinity problems is less for Pareech Khel in comparison to the two other Khels.

The proportions of production of Wheat, Maiza, and Sugarcane are higher on the common property of the Pareech Khel as compared to both the Khel for Pareech Khel in comparison to the two other Khels.

Monthly consumptions and expenditure of Shamilat owners are much opposite. The two financially stable Khels have a snobbish attitude towards the expenditure while Shamilat are much below in consumptions and expenditure as compared to the Pareech Khel & Khawzai Khel.

The overall effects of the common property of the Shamilat owners have increased the conflict among the Khels and also with the Khel. The unequal distribution of wealth among the Khels leads to social disequilibrium. The un-skewed distribution of land has also decreased the efficiency and output of land.

Verification of Hypothesis:

The null hypothesis was rejected and it was concluded that more than 50% of owners had non-Shamilat lands.

Conflicts among the shareholders have been seen with the 71.87%. Resultantly the assumptions stand proved.

Small fragmentation was also observed which resulted in the verification of relevant assumption.

Suggestions:

After going through the whole process of research, I come up with the following suggestions

The area under Shamilat is having many disputes that are causing heavy losses in the output level. This is the end result in relatively less revenue generations. So the area under Shamilat should be legally distributed by a special legal committee, whose members must be appointed by the government and the heads of Shamilat owners.

The major area under Shamilat is divided in many small fragments. Thus the modern technology and pesticides etc cannot be properly applied on small fragments. Thus, I suggest that the land should be worked upon as a single land so to enhance the capacity to apply advance technology.

Mostly, the farmers are not able to meet the expectations of advance technology and pesticides etc. So the agricultural credit should be properly and justifiably allocated on easy terms to enable the majority farmers to increase the productivity.

The problem of irregular irrigation and abuse of the culturable area causing the loss in the output. So small Bairaaj and tube wells should be constructed by government to make water supply properly and sufficiently available for the farm land.

In the season of Kharif and Rabbi, most of the major crops are not even cultivated. So measures should be applied to develop the culture of cultivating more than one crop of two kinds of crops. This will further add to the productive output.

Forests are like the backbone for the long lasting fertility of land. But the area under Shamilat has no forests which causes the reduction in the fertility of land. The people and government should mutually concentrate on the development of forests in the areas under Shamilat.

The land areas under Shamilat are major getting snobbish and spend good proportions of their income on food and clothing. Because of this the net

remaining revenues are insufficient to hire the advance technology for the cultivation. This habit needs to be reduced.

Literacy rate is very low the areas under Shamilat. Government should seriously concentrate on increasing the literacy rate in the areas under Shamilat.

Proper transport and communication system needs to be developed on advance basis in the areas under Shamilat to reduce the loss of perishability of agricultural output.

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