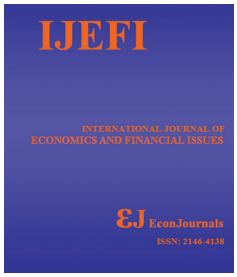


International Journal of Economics and Financial Issues

ISSN: 2146-4138

available at http: www.econjournals.com

International Journal of Economics and Financial Issues, 2016, 6(2), 578-587.

Globalization, Financial Development and Economic Growth

Altuğ Kazar[1]*, Görkemli Kazar[2]

[1]Department of Economics, Tunceli University, Turkey, [2]Department of Economics, Mersin University, Mersin, Turkey.
*Email: akazar@hotmail.com

ABSTRACT

Widespread globalization and integration remove the borders but this leads to an increase in the income differences among countries. Today, the evaluation process of economic growth experience of countries shows that globalization degree of the economy is also important as the financial development. This paper investigates the relationship between financial development, globalization and economic growth for the case of the countries classified according to income levels over the period 1980-2010. After considering the panel characteristics of the dataset, long-run relationships among financial development, economic growth and the other key growth factors are analyzed by dynamic ordinary least squares method. The empirical results suggest that the effective policy applications are different according to the country classifications.

Keywords: Economic Growth, Globalization, Financial Development, Dynamic Ordinary Least Squares
JEL Classifications: C52, F60, O40, O57

1. INTRODUCTION

Today's increasing integration of global economy by unrestricted capital mobility and less trade barriers which is sustained with less government intervention leads to a world with globalization at a level of intensity never experienced before. The ideas of integration emerged before World War I and developed at a rapid pace after World War II with multilateral trade negotiations, developments in transport and communications, technology transfer and privatization of national industries. However, the integration of the developing countries to the world economy mainly starts at early 1990s. The consequence of the globalization experience of developing countries present diverse economical and social outcomes depending on the integration level of the country to the global economy (Koç et al., 2013). China, India and some Asian countries are the ones that succeed in high productivity and economic growth within the globalization process. According to Stiglitz (2002), globalization enhances the demand, investment and the technology abilities of countries, whereas this closer degree of integration also brings the risk of unstable global capital markets as well as fragile financial systems for weaker countries. This leads to an asymmetric relation between financial markets and the economic activity as a whole (Yıldırım et al., 2013). What is more, recent global recessions show that when they have financial nature, the recovery process not only takes much longer time but also painful for the most of the developing and underdeveloped countries (IMF, 2009).

The theoretical underpinnings of the idea that financial development has the potential to affect economic growth can be traced from the early work of Bagehot (1873) and Schumpeter (1912). Following the pioneering empirical research of Goldsmith (1969), McKinnon (1973) and Shaw (1973) large literature tries to assess the nature of the relationship between financial development and economic growth. The supply-leading hypothesis which means that causal relationship moves from financial development to economic growth gain support by the earlier literature including Lucas (1988), Greenwood and Jovanovic (1990), King and Levine (1993), Roubini and Sala-i Martin (1995), Levine and Zervos (1998), Beck et al. (2000). However, in some of the studies the finance-growth nexus is defined in the form of "growth-led finance" such as Fritz (1984), Dee (1986), Jung (1986) and Ireland (1994). In addition, empirical studies of Patrick (1966), Greenwood and Jovanovic (1990), Demetriades and Hussein (1996), Akinboade (1998), Luintel and Khan (1999), Greenwood and Smith (1997), Al-Yousif (2002), Ozturk (2008), and Acaravci et al. (2009) support that there is a dynamic relationship between economic growth and financial development due to the bidirectional causality. Recently, this

disagreement among the researchers tried to be solved either by demonstating finance-growth nexus models with control variables that are associated with economic growth (Levine, 1997) or by using different measures for financial development.

Although the proxies used for financial development give clues about the financial system, it is clear that the conflicting results mainly stem from the differences in not only development levels but also globalization abilities of the countries. In the era of globalization we are living, the close connection between finance and economic growth are clarified owing to the global recession experiences that are financial in nature. Therefore, the globalization status of the country is also another important determinant of economic growth. For that reason, globalization and growth interaction also taken under consideration by many researchers. Among them Lee et al. (2004), Aka (2006), Buch and Monti (2008) concluded that economic growth leads to globalization, on the contrary, the studies of Stiglitz (2003), Dreher (2006), Leong (2007), Zhuang and Koo (2007) display globalization boosts economic growth via promoting real economic activity of an economy. The early literature even do not have a consensus about the globalization-growth nexus. This clarifies the fact that if the general characteristics of the countries can be determined correctly, then the appropriate policies could be applied to promote economic growth. The earlier studies such as Prasad et al. (2007) and Köse et al. (2010) examine the intensity and direction of the relationship between economic growth and financial globalization. In both of these studies it is agreed that structural policies must be applied to increase the benefits of the globalization for the developing countries. However, the evidence that financial development directly promote economic growth for developing countries cannot be revealed. Therefore, unlike the studies under consideration, in order to understand the effects of globalization and financial development, these issues must not be handled separately. Additionally, having been aware of the country specific differences this relation must be analyzed considering the income levels of the countries. In this study our main objective is to establish appropriate policies about globalization and financial development for different income levels of countries in order to promote economic growth. The rest of the paper is organized as follows. Section 2 provides a discussion about the effects of globalization and financial development on economic growth. Section 3 describes the data and the proxy measures of financial development, globalization, and economic growth. Besides, in this section the panel estimations results including unit root tests, cointegration tests and dynamic ordinary least squares (DOLS) estimations are given and analyzed. Section 4 provides conclusions.

2. EFFECTS OF GLOBALIZATION AND FINANCIAL DEVELOPMENT ON ECONOMIC GROWTH

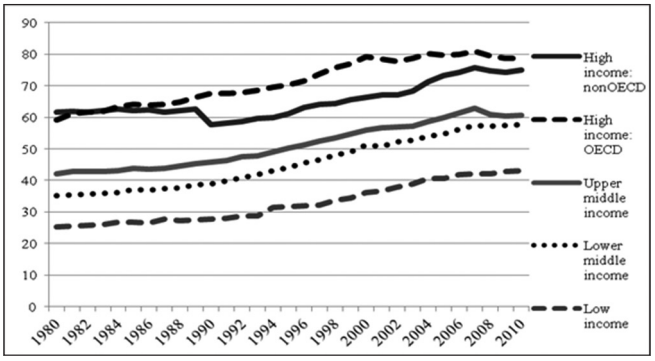
Before making an empirical analysis, the characteristics of the countries included in the various income groups must be described. Thus, the primary task is the examination of the globalization and financial development trends between the years 1980 and 2010. In the study, taking the published report of the World Bank in 2013 into consideration, the countries are classified as non-Organisation for Economic Co-operation and Development (OECD) high-income countries, high-income OECD countries, high middle-income countries, lower middle-income countries and low-income countries. Country classifications according to income levels are given in Appendix 1.

Economic globalization (*EG*) index mainly depends on actual flows such as trade, foreign direct investment, stocks, portfolio investment, income payments to foreign nationals and restrictions such as hidden import barriers, mean tariff rate, taxes on international trade and capital account restrictions. Figure 1 shows the trends of *EG* after 1980's for countries that are classified according to income levels. Among these trends, at early 1980's the performances of the high income countries (both OECD and non-OECD) are considerably close to each other. However, through 1980's *EG* of the non-OECD countries followed a constant trend. Also, at the beginning of 1990's the sharp fall in their index value caused a significant gap between high income country groups. Although the *EG* is increasing for both OECD and non-OECD high income countries, this gap is maintained until early 2000's. The recent economic crises slowed the *EG* trend of the high income OECD countries, which reduces the gap between high income country groups. Upper and lower middle income countries display similar trends between 1980 and 2008. However after 2008, similar to high income country groups, the *EG* in upper middle income countries decreased due to the crises and this converged the trend of upper middle income countries to lower middle income countries. From the Figure 1 it is observed that within 30 years of time, the *EG* index value of both middle income country groups barely approached to the 1980 values of high income country groups. When the performances of the low income countries is evaluated, the Figure 1 clarifies the fact that the upward *EG* trend of these countries solely bring their 2010 index value to the 1980 values of upper middle income countries. According to the Figure 1, the *EG* indices of the countries become more sensitive to crises as the level of income increases.

The social globalization (*SG*) trends for different country classifications are shown in Figure 2. This index includes data on personal contacts, information flows and the cultural proximity. Over 30 years the Figure 2 shows that high income OECD countries performs better than the other countries. Unlike high income OECD countries, other country groups maintain their *SG* levels until 1993. Post-1993 period, the general increasing trend is observed for all groups of countries. However, this upward trend is limited in high income non-OECD countries as they fail to improve the *SG* indicators since 1996. Comparison of 1980 and 2010 *SG* values of the countries shows that the gap between high income OECD countries and the others, steadily rises.

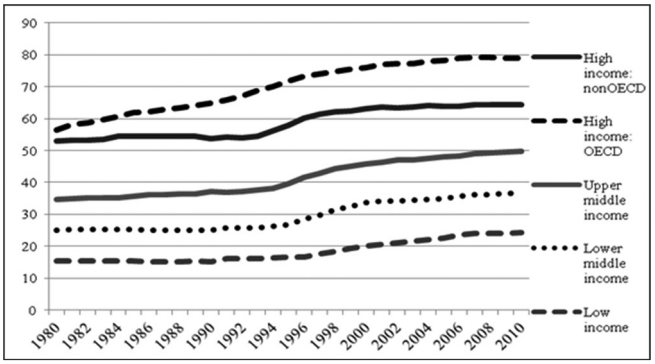
The political globalization (*PG*) index, which includes membership to international organizations, participation in the United Nations Security Council Missions, international agreements and embassies in the country, is shown by Figure 3. According to the Figure 3, the poorest performance in *PG* index is carried out by the high income non-OECD countries. As of the

Figure 1: Economic globalization, 1980-2010



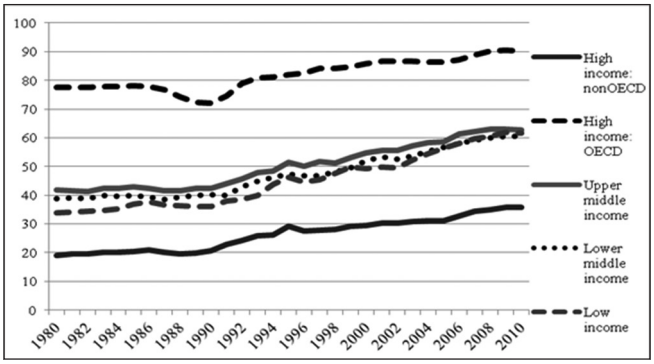
Source: ETH Zurich (2015)

Figure 2: Social globalization, 1980-2010



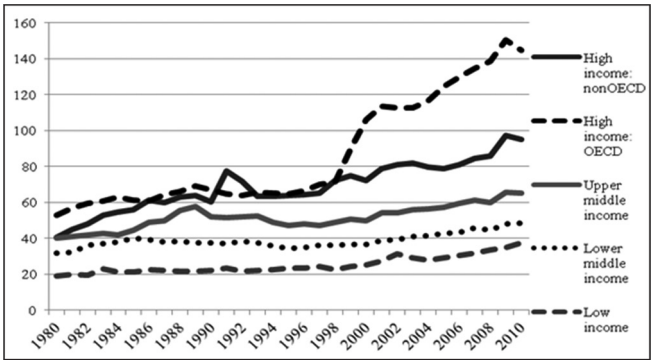
Source: ETH Zurich (2015)

Figure 3: Political globalization, 1980-2010



Source: ETH Zurich (2015)

Figure 4: Domestic credit to private sector as percentage of gross domestic product, 1980-2010



Source: World Bank (2015)

year 2010, these countries just succeded to reach the 1980 level of low income countries. Countries that belong to middle and lower income classifications converges each other by similar trends. In 2010 they all reached the same *PG* level. The increasing trend of the *PG* in high income-OECD countries is significantly disturbed by late 1980's and after 1990's the index value smoothly rises.

As an indicator of financial development, Figure 4 shows domestic credit to private sector as a percentage of gross domestic product (GDP). Throughout the period under consideration, the low income countries do not present any significant financial improvement. In 1980 both upper middle income and high income non-OECD countries have the same level of financial development. Post-1980's the ratio of domestic private sector credits to GDP increases, but then stays relatively constant between 1998 and 2004 in upper middle income countries. In the same period, this ratio is doubled for high income non-OECD countries, which causes a noteworthy gap between high income non-OECD and upper middle income countries. The Figure 4 also shows that having an upward trend, after 1998 the financial development in high income OECD countries sharply increases and triples their 1980 value in 30 years of time.

Figures 1-4 clarifies the fact that not only the degree of globalization, but also financial infrastructure display different trends within the period under consideration. In addition, the variations in the index values prominently sharpened the gaps between country groups. After the Gulf War, direct investments to non-OECD high income countries, most of which are petroleum exporters, effected their economies positively. In addition, direct investments promote more technical staff and foreign population in these countries with higher levels of international communication. Therefore, especially between 1993 and 1996, their economic and *SG* increased. Unlike their rising economic and *SG* levels, *PG* index values of high income non-OECD countries remain relatively low. They have the lowest level of *PG* due to their trade policy. Their trade relations retain these countries from participating United Nations Security Council Missions and they generally limit their international relations with the embassies in their main trade partners. The countries that are in upper middle income category, most of which are industrialized, generally subject to income inequality and some additional structural problems. Among these, former Warsaw Pact members make the infrastructural investments that are necessary for their integration to the EU. Therefore, significant improvements are observed in economic, political and *SG* indices. The accelerated globalization in upper middle income countries is also the result of their search activity for new markets. On the contrary, the low income group, mainly formed by the Middle African countries, have lower levels of economical, political and *SG*. As their economy is based on primative methods, they have political problems and weak financial structure. Because of all these structural factors, according to latest data low income countries even fail to reach the 1980 levels of high income OECD countries with their relatively slow trends in globalization. The discussion above shows that an application of a particular policy may not have the same effects due to heterogenous trends of various country classifications.

3. DATA, MODEL AND ECONOMETRIC METHODOLOGY

3.1. Data and Model

The gross domestic product per capita (*GDPpc*), domestic credit to private sector as percentage of GDP (*DCR*), inflation (*INF*), government expenditure as percentage of GDP (*GER*) data are taken from the World Development Indicators online database of World Bank. The globalization data are obtained from the KOF Index of Globalization[1] for the period 1980-2010, along with the studies of Berggren and Nilsson (2015), Shell and Zheng (2015), Bergh and Nilsson (2014) and Ermini and Santolini (2014). Next, the countries are classified according to latest World Bank classifications released as of July 1, 2013.

The economic literature often suggests the following model of finance-growth nexus as:

$$Y = f(FD, CV) \quad (1)$$

where Y is the economic growth measured by the increase in real *GDPpc*, which is a function of a set of financial development indicators (*FD*) and other control variables (*CV*) believed to be linked to economic growth as stated in Levine (1997). According to Calderon and Liu (2003) the financial development can be defined as "improvement in quantity, quality and efficiency of financial intermediary services." In literature several indicators are employed to measure the financial system development (*FD*). Commonly used proxy for financial development is the financial intermediation ratio. Financial intermediation ratio, which indicates the extent to which funds are channelled into private sector, is measured by the credit provided by financial intermediaries to the private sector as a percentage of GDP. Consistent with the previous studies of Andersen (2003), Kemal et al. (2007), King and Levine (1993) and Levine (1997), *DCR* is expected to have positive relationship with economic growth.

In the study since the aim is to clarify the relationship between globalization, financial development and economic growth, a complete model that includes financial intermediation ratio as a proxy for financial development is constructed. In addition, the model contains some other factors associated with economic growth, which is denoted as *CV* in Equation 1. Therefore, in the analysis index of *EG*, index of *PG*, index of *SG* and two control variables are included. These control variables are inflation rate (*INF*), and government expenditure as percentage of GDP (*GER*).

To analyze the relationship between financial development, globalization and economic growth, an individual model for each income group of countries will be employed based on the following model:

$$GDPpc_t = a_0 + a_1 DCR_t + a_2 GER_t + a_3 INF_t + a_4 EG_t + a_5 SG_t + a_6 PG_t + \varepsilon_t \quad (2)$$

1 A database prepared by Swiss Federal Institute of Technology Zurich.

3.2. Econometric Methods and Findings

3.2.1. Panel unit root tests

Before introducing cointegration techniques, we have to verify that all variables are integrated to the same order. In doing so, we have used tests of panel unit root due to Levin-Lin ve Chu (2002) (LLC), Breitung (2000) assuming a parameter common across cross-sections and Im-Pesaran ve Shin (2003) (IPS), Fisher augmented Dickey-Fuller (ADF), Fisher Philips-Peron (PP) that allow the persistence parameter to vary freely across cross-sections. Tables A.2.1-A.2.5 in the appendix part reports the outcome for the global sample of panel unit root tests. The test results show that the null hypothesis assuming the existence of the unit root processes cannot be rejected when the level values of panel series are evaluated for all country groups, some exceptions are Breitung t-statistics and IPS W-statistics. However, this hypothesis is rejected when series are in first differences. These results strongly indicate that the series in level are non-stationary and stationary in first-differences. Therefore, we can apply a test for panel cointegration.

3.2.2. Panel cointegration tests

After defining the order of stationary, we conduct panel cointegration test of Pedroni (1999). This test by taking heterogeneity in account constitutes an advantage. In the test, Pedroni (1999) has used specific parameters which are allowed to vary across individual members of the sample and has given seven different statistics about panel data cointegration via Monte Carlo simulations. The null hypothesis in all these tests is the absence of cointegration.

Table 1 shows the results of Pedroni cointegration tests between the variables under question in the model. As stated before four within-group tests and three between-group tests are constructed to check whether the panel data are cointegrated. In Table 1 Panel v-statistic, Panel rho-statistic, Panel PP-statistic and Panel ADF-statistic contain the computed value of the statistics based on estimators that pool the coefficient across different countries. Group rho-Statistic, Group PP-statistic and Group ADF-statistic show the computed value of the statistics based on individual estimators of coefficients for each country. In addition, the results of Kao ADF-Statistics is given which considers a homogenous cointegrating vector, unlike Pedroni (1999). Except High Income Non-OECD countries, the results show that the null hypothesis of no cointegration can not be rejected at the 1% significant level for most of the test results namely, Panel PP-statistic, Panel ADF-statistic, Group PP-statistic, Group ADF-statistic and Kao ADF-statistic for all income group of countries. For high income non-OECD countries the results of the within-group test and the between-group tests show that the null hypothesis can not be rejected at the 1% significant level; but the Panel v-statistic and Group-rho-statistic tests. Therefore, most of the test results assure that the variables within the model are cointegrated for the panels of country groups.

3.2.3. DOLS estimations

Then, we estimate the cointegrating vector using dynamic OLS (DOLS)[2] estimator that is used to describe the long-run relationship

2 The DOLS estimation depends on the study of Stock and Watson (1993).

Table 1: Pedroni panel cointegration test results, 1980-2010

Panel cointegration tests	High income Non-OECD	High income OECD	Upper middle income	Lower middle income	Low income
Panel v-statistic	−0.22 (0.58)	−5.15 (1.00)	−2.86 (0.99)	−1.63 (0.95)	−4.28 (1.00)
Panel rho-statistic	−2.40 (0.008)	−0.07 (0.47)	1.49 (0.93)	0.95 (0.83)	−0.23 (0.41)
Panel PP-statistic	−9.57 (0.00)	−4.48 (0.00)	−3.73 (0.00)	−6.91 (0.00)	−6.83 (0.00)
Panel ADF-statistic	−8.59 (0.00)	−4.26 (0.00)	−3.79 (0.00)	−6.35 (0.00)	−6.37 (0.00)
Group rho-statistic	−1.49 (0.06)	1.77 (0.96)	3.63 (0.99)	2.78 (0.99)	1.48 (0.93)
Group PP-statistic	−10.83 (0.00)	−4.10 (0.00)	−2.89 (0.00)	−6.35 (0.00)	−7.08 (0.00)
Group ADF-statistic	−9.35 (0.00)	−3.83 (0.00)	−2.95 (0.00)	−5.72 (0.00)	−6.51 (0.00)
Kao ADF-statistic	−5.11 (0.00)	−6.67 (0.00)	2.16 (0.01)	−2.20 (0.01)	−2.44 (0.01)

The null hypothesis is that there is no cointegration. Under the null all the statistics are distributed as standard normal distributions. The values in parenthesis show probabilities, PP: Philips-Peron, ADF: Augmented Dickey-Fuller, OECD: Organisation for Economic Co-operation and Development

Table 2: Dynamic OLS panel cointegration estimation

Regressor	Dependent variable GDP per capita				
	High income non-OECD	High income OECD	Upper middle income	Lower middle income	Low income
DCR	1.30***	2.31***	0.14***	0.07***	−0.06***
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
INF	1.13***	−2.78***	0.05***	−0.03***	−0.37***
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
GER	−2.54***	1.52***	−0.16***	−0.86***	0.07***
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
EG	2.41E-14	−0.32**	−0.03***	0.89***	0.09***
	(0.93)	(0.01)	(0.00)	(0.00)	(0.00)
PG	−1.47***	2.37***	0.63***	0.68***	−0.17***
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
SG	4.59***	−0.54***	0.21***	−0.08***	1.59***
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
R^2	0.99	0.99	0.99	0.99	0.99

The values in parenthesis show probabilities and *.**.***denote significance at 10, 5 and 1% levels, GDP: Gross domestic product, SG: Social globalization, PG: Political globalization, EG: Economic globalization, OECD: Organisation for Economic Co-operation and Development, OLS: Ordinary least squares

for non-stationary panels (Kao and Chiang, 2000). Table 2 shows the coefficients obtained with these estimators.

According to test results the financial development is positively related with economic growth in all country groups as expected, except low income countries. In low income countries since the financial system is relatively small and undiversified, the financial development is maternalized on behalf of lower economic growth rates. Inflation contributes to economic growth in high income non-OECD countries and upper middle income countries, however the rest of the country groups are negatively effected. Increase in government expenditure decrease the economic growth levels in high income non-OECD countries, upper middle income countries and lower income countries, whereas increases the economic growth levels in high income OECD countries as well as low income countries. Considering globalization different results are observed. *EG* leads to lower economic growth rates for the countries that have higher levels of income and contributes to economic growth in lower income country groups. *PG* leads to higher levels of growth for high income OECD countries, upper middle income countries and lower middle income countries. However, increase in *PG* decreases the economic growth rates of high income non-OECD countries and low income countries. *SG* mainly contribute to the economies of the high income non-OECD countries, low income countries and upper middle income countries but decrease the growth rates in high income OECD countries and lower middle income countries.

The table clarifies the fact that financial development and globalization effects on the country groups varies, as these countries display different characteristics related with their income level classifications. Accordingly, the policies for promoting economic growth in these countries must be different. For example, in the long run low income countries can attain the economic growth by ensuring *SG*, *EG* and increasing the government expenditure. For lower middle income countries the major tools of economic growth are financial development, economic and *PG*. The economic growth in upper middle income countries can be maternalized by the policies that promote financial development, inflation, political and *SG*. For high income countries financial development is an important factor that stimulate economic growth. However, OECD countries and non-OECD countries present contradictory responses when rest of the variables are considered. Inflation promote economic growth in high income non-OECD countries whereas delay the economic growth processes of high income OECD countries. Increase in government expenditure serves in favour of growth for high income OECD countries whereas disturbs the economic growth in high income non-OECD countries. Furthermore, *PG* is the key factor of the

This estimator is used for obtaining an unbiased estimator of the long-run parameters.

economic growth of high income OECD countries. In contrast, for high income non-OECD countries, economic growth can be achieved by promoting the *SG*.

4. CONCLUSION

Within the process of globalization, the fact that some countries have significant gains, whereas others become more sensitive to the financial crises is verified by the country experiences. Therefore, in the literature a considerable attention is paid to investigate the relationship between financial development and economic growth. However, empirical studies put aside some important determinants of this relation, which may illustrate a guide for the policy recommendations. Taking these into account, the examination of the sole relationship between globalization and economic growth would be insufficient.

In the study, first of all, the general characteristics of the country groups are described by their globalization and financial development performances from 1980 to 2010. Since the country groups display different trends, the gap between the country groups are deepened by the accelerating globalization and financial development performances of high income OECD countries. Furthermore, the poor performances of low middle income and low income countries are also validated, as they fail to reach the initial levels of high income OECD countries within 30 years of time. Under these circumstances, for stimulating economic growth there is necessity of organizing various policy recommendations for each of the country groups. Accordingly, the study includes several relevant variables for a wide examination of the relationship between financial development and economic growth. After implication of unit root and cointegration tests, the DOLS method is applied seperately for the countries classified in different income levels. The long term relations, represented by the results of DOLS method, show that financial development has positive effects on developed countries, as expected. In addition, the driving force of economic growth in terms of globalization is structured mainly by social dimensions for low income and non OECD high income countries; political dimensions for high income OECD and upper middle income economies; and economic dimensions for lower middle income countries.

Today, many countries are connected to each other through financial channels. However, the anticipated outcomes of the proposed policy applications are restrained by structural, social and political differences between countries. For instance, lower income countries fail in global factor and goods markets due to asymmetric information which restricts their competitiveness. These countries also suffer from governing policies that limits the capital inflows. They have imperfect financial structure and the study also reveals the fact that financial development have negative effects on economic growth. To overcome their structural problems that prevent their economic growth, several repressive measures must be taken. These include attracting direct capital and improving the components of *SG* by the modification of their governing system. Another example is lower middle income countries case. Since the financial system in these countries are immature, to a great extend their economy is dependent on the short term capital flows. As they fail to provide financial deepness, these economies are more fragile to crises. Settling this matter is directly linked to improvement of the competitiveness of their financial structure which would guide their integration to the global stock markets. As a result, country specific policies must be designed in order to foster the economic activities and ensure the sustainable economic growth.

REFERENCES

Acaravci, S., Ozturk, I., Acaravci, A. (2009), Financial development and economic growth: Literature survey and empirical evidence from sub-saharan African Countries. South African Journal of Economic and Management Sciences, 12(1), 11-27.

Aka, B. (2006), Openness, globalization and economic growth: Empirical evidence from cote divoire. International Journal Applied Econometrics and Quantitative Studies, 3(2), 67-86.

Akinboade, O.A. (1998), Financial development and economic growth in Botswana: A test for causality. Savings and Development, 22, 331-348.

Al-Yousif, Y.K. (2002), Financial development and economic growth: Another look at the evidence from developing countries. Review of Financial Economics, 11, 131-150.

Bagehot, W. (1873), Lombard Street. London: H.S. King.

Beck, T., Levine, R., Loayza, N. (2000), Finance and the sources of growth. Journal of Financial Economics, 58(1-2), 261-300.

Berggren, N., Nilsson, T. (2015), Globalization and the transmission of social values: The case of tolerance. Journal of Comparative Economics, 43(2), 371-389.

Bergh, A., Nilsson, T. (2014), Is globalization reducing absolute poverty?. World Development, 26, 42-61.

Breitung, J. (2000), The local power of some unit root tests for panel data B. In: Baltagi, B., editor. Nonstationary Panels, Panel Cointegration, and Dynamic Panels, Advances in Econometrics. Vol. 15. Amsterdam: JAI. p161-178.

Buch, C.M., Monti, P. (2008), Openness and ıncome disparities: Does trade explain the “mezzogiorno” effect?. Institut für Angewandte Wirtschaftsforschung. Discussion Paper, 41, 1-39.

Calderon, C., Liu, L. (2003), The direction of causality between financial development and economic growth. Journal of Development Economics, 72, 321-334.

Dee, P.S. (1986), Financial Markets and Economic Development: The Economics and Politics of Korean Financial Reforms. Germany: Kieler Studies, Universität Kiel, Institut für Weltwirtshaft.

Demetriades, P.O., Hussein, K.A. (1996), Does financial development cause economic growth? Time-series evidence from 16 countries. Journal of Development Economics, 51(2), 387-341.

Dreher, A. (2006), Does globalization affect growth? Evidence from a new ındex of globalization. Applied Econometrics, 38(10), 1091-1110.

Ermini, B., Santolini, R. (2014), Does globalization matter on fiscal decentralization? New evidence from the OECD. Global Economic Review: Perspectives on East Asian Economies and Industries, 43(2), 153-183.

Fritz, R.G. (1984), Time series evidence on the casual relationship between financial deepening and economic development. Journal of Economic Development, 9, 91-112.

Greenwood, J., Jovanovic, B. (1990), Financial development, growth, and the distribution of ıncome. Journal of Political Economy, 98, 1076-1107.

Greenwood, J., Smith, B.D. (1997), Financial markets in development and the development of financial markets. Journal of Economic Dynamics and Control, 21, 145-181.

Goldsmith, R.W. (1969), Financial Structure and Development. New Haven, CT: Yale University Press.
Im, K.S., Pesaran, M.H., Shin, Y.C. (2003), Testing for units roots in heterogeneous panels. Journal of Econometrics, 115, 53-74.
IMF. (2009), World Economic Outlook April 2009 Crisis and Recovery. Washington, DC: International Monetary Fund.
Ireland, P.N. (1994), Money and growth: An alternative approach. American Economic Review, 84, 47-65.
Jung, W.S. (1986), Financial development and economic growth: International evidence. Economic Development and Cultural Change, 34: 333-346.
Kao, C., Chiang, M.H. (2000), On the estimation and inference of a cointegrated regression in panel data. İn: Baltagi, B., editor. Advances in Econometrics: Nonstationary Panels, Panel Cointegration and Dynamic Panels. Vol. 15. Amsterdam: Elsevier Science. p179-222.
Kemal, A.R., Qayyum, A., Hanif, M.N. (2007), Financial development and economic growth: Evidence from a heterogeneous panel of high ıncome countries. The Lahore Journal of Economics, 12, 1-34.
King, R.G., Levine, R. (1993), Finance and growth: Schumpeter might be right. Quarterly Journal of Economics, 108, ss.717-737.
Koç, A., Ata, A.Y., Çirkin, Z. (2013), Empirical ınvestigation on globalization and social polarization: Cross country analysis. International Journal of Economics and Financial Issues, 3(1), 206-213.
Köse, M.A., Prasad, E., Rogoff, K., Wei, S.J. (2010), Financial globalization and economic policies. İn: Rodrik, D., Rosenzweig, M., editors. Handbook of Development Economics. Vol. 5. The Netherlands, North-Holland: Elsevier. p4283-4362.
Lee, H.Y., Ricci, L., Rigobon, R. (2004), Once again, is openness good for growth?. IMF Working Paper, Research Department, WP/04/135. p1-30.
Leong, C.K. (2007), A Tale of Two Countries: Openness and Growth in China and India. Dynamics, Economic Growth and International Trade (DEGIT), Conference Paper, 1-26.
Levin, A., Lin, C., Chu, C. (2002), Unit root test in panel data: Asymptotic and finite sample properties. Journal of Econometrics, 108(1), 1-24.
Levine, R. (1997), Financial development and economic growth: Views and agenda. Journal of Economic Literature, 35, 688-726.
Levine, R., Zervos, S. (1998), Stock markets, banks, and economic growth. The American Economic Review, 88(3), 537-558.
Lucas, R.E., Jr. (1988), On the mechanics of economic development. Journal Monetary Economics, 22, 3-42.
Luintel, K.B., Khan, M. (1999), A quantitative reassessment of the finance - growth nexus: Evidence from a multivariate VAR. Journal of Development Economics, 60, 381-405.
McKinnon, R. (1973), Money and Capital in Economic Development. Washington, DC; Brookings Institutions.
Ozturk, I. (2008), Financial development and economic growth: Empirical evidence from Turkey. Applied Econometrics and International Development, 8(1), 85-98.
Patrick, H.T. (1966), Financial development and economic growth in underdeveloped countries. Economic Development and Cultural Change, 14, 174-189.
Pedroni, P. (1999), Fully Modified OLS for Heterogeneous Cointegrated Panels. Working Paper, Indiana University, December. p1-40.
Prasad, E.S, Rogoff, K., Wei, S.J., Köse, M.A. (2007), In: Harrison, A., editor. Financial Globalization, Growth and Volatility in Developing Countries. Globalization and Poverty. Chicago: University of Chicago Press.
Roubini, N., Sala-i-Martin, X., (1995), A growth model of ináation, tax evasion, and financial repression. Journal of Monetary Economics, 39, 275-301.
Schumpeter, J.A. (1912), The Theory of Economic Development. Cambridge, MA: Harvard University Press.
Shaw, E.S. (1973), Financial Deepening in Economic Development. New York: Oxford University Press.
Shell, H.G., Zheng, L. (2015), The ınteraction effects of globalization and ınstitutions on ınternational capital flows. International Journal of Economics and Finance, 7(4), 12-22.
Stiglitz, J. (2002), Globalization and its Discontents. New York, London: W. W. Norton.
Stiglitz, J. (2003), Globalization and growth in emerging markets and the new economy. Journal of Policy Modelling, 25, 505-524.
World Bank. (2015), World Development Indicators Database. Available from: http://www.data.worldbank.org/data-catalog/world-development-indicators. [Last accessed on 2015 Aug 08].
Yıldırım, S., Özdemir, B.K., Doğan, B. (2013), Financial development and economic growth nexus in emerging European economies: New evidence from asymmetric causality. International Journal of Economics and Financial Issues, 3(3), 710-722.
Zhuang, R., Koo, W. (2007), Economic Growth under Globalization: Evidence from Panel Data Analysis. American Agricultural Economics Association Annual Meeting, Portland, July 29 - August, 1. p1-22.

APPENDIX

APPENDIX 1

Appendix 1: Country classifications according to income levels

High income: OECD countries: Australia; Austria; Belgium; Canada; Chile; Czech Republic; Denmark; Estonia; Finland; France; Germany; Greece; Iceland; Ireland; Israel; Italy; Japan; Luxembourg; New Zealand; Norway; Poland; Portugal; Slovak Republic; Slovenia; South Korea; Spain; Sweden; Switzerland; The Netherlands; United Kingdom; United States.

High income: Non-OECD countries: United Arab Emirates; Antigua and Barbuda; Bahrain; The Bahamas; Bermuda; Barbados; Brunei Darussalam; Channel Islands; Cayman Islands; Cyprus; Faeroe Islands; Equatorial Guinea; Greenland; Guam; Croatia; Isle of Man; St. Kitts and Nevis; Kuwait; Liechtenstein; Lithuania; Latvia; Macao SAR (China); Monaco; Malta; Northern Mariana Islands; New Caledonia; Oman; Puerto Rico; French Polynesia; Qatar; Russian Federation; Saudi Arabia; Singapore; San Marino; Trinidad and Tobago; Uruguay; Virgin Islands (U.S.).

Upper middle income countries: Albania; Algeria; Argentina; American Samoa; Azerbaijan; Bulgaria; Bosnia and Herzegovina; Belarus; Belize; Brazil; Botswana; China; Colombia; Costa Rica; Cuba; Dominica; Dominican Republic; Ecuador; Fiji; Gabon; Grenada; Hungary; Iran; Iraq; Jamaica; Jordan; Kazakhstan; Lebanon; Libya; St. Lucia; Maldives; Mexico; Marshall Islands; Macedonia; Montenegro; Mauritius; Malaysia; Namibia; Panama; Peru; Palau; Romania; Serbia; Suriname; Seychelles; Thailand; Turkmenistan; Tonga; Tunisia; Turkey; St. Vincent and the Grenadines; Venezuela; South Africa.

Lower middle income countries: Armenia; Bolivia; Bhutan; Cote d'Ivoire; Cameroon; Rep. Congo; Cape Verde; Djibouti; Egypt; Micronesia; Georgia; Ghana; Guatemala; Guyana; Honduras; Indonesia; India; Kiribati; Lao PDR; Sri Lanka; Lesotho; Morocco; Moldova; Mongolia; Mauritania; Nigeria; Nicaragua; Pakistan; Philippines; Papua New Guinea; Paraguay; Sudan; Senegal; Solomon Islands; El Salvador; Sao Tome and Principe; Swaziland; Syrian Arab Republic; Timor-Leste; Ukraine; Uzbekistan; Vietnam; Vanuatu; West Bank and Gaza; Samoa; Yemen; Zambia.

Low income countries: Afghanistan; Burundi; Benin; Burkina Faso; Bangladesh; Central African Republic; Comoros; Eritrea; Ethiopia; Guinea; Gambia; Guinea-Bissau; Haiti; Kenya; Kyrgyz Republic; Cambodia; Liberia; Madagascar; Mali; Myanmar; Mozambique; Malawi; Niger; Nepal; Dem. Rep.Korea; Rwanda; Sierra Leone; Somalia; Chad; Togo; Tajikistan; Tanzania; Uganda; Dem. Rep. Congo; Zimbabwe.

APPENDIX 2

Appendix 2: Panel unit root results for country classifications

Table A2.1: Panel unit root for growth, 1980-2010 (high income Non-OECD countries)

Series name	H_0: Unit root				
	Tests assuming a common unit root		Tests assuming individual unit root		
	LLC t*-stat	Breitung t-stat	IPS W-stat	ADF-Fisher χ^2	PP-Fisher χ^2
GDPpc	2.43 (0.99)	5.84 (1.00)	1.40 (0.92)	5.01 (1.00)	0.57 (1.00)
ΔGDPpc	−8.25 (0.00)	−1.82 (0.03)	−2.80 (0.002)	103.61 (0.00)	105.31 (0.00)
DCR	7.19 (1.00)	0.40 (0.65)	1.48 (0.93)	0.50 (1.00)	9.07 (0.99)
ΔDCR	−24.31 (0.00)	−12.07 (0.00)	−22.38 (0.00)	475.25 (0.00)	480.66 (0.00)
INF	7.05 (1.00)	8.08 (1.00)	−4.27 (0.00)	0.57 (1.00)	0.007 (1.00)
ΔINF	−8.48 (0.00)	−5.97 (0.00)		105.39 (0.00)	84.37 (0.00)
GER	−1.33 (0.09)	−5.27 (0.00)	−1.08 (0.14)	17.90 (0.96)	20.90 (0.89)
ΔGER	−24.97 (0.00)		−14.50 (0.00)	494.74 (0.00)	543.33 (0.00)
EG	3.88 (0.99)	−1.08 (0.14)	0.68 (0.75)	2.24 (1.00)	2.32 (1.00)
ΔEG	−14.45 (0.00)	−10.36 (0.00)	−11.67 (0.00)	217.01 (0.00)	226.88 (0.00)
PG	3.11 (0.99)	−16.47 (0.00)	−11.28 (0.00)	3.81 (1.00)	0.002 (1.00)
ΔPG	−32.17 (0.00)			711.81 (0.00)	1141.93 (0.00)
SG	6.51 (1.00)	14.56 (1.00)	−19.67 (0.00)	1.08 (1.00)	11.23 (0.99)
ΔSG	−16.96 (0.00)	12.40 (0.05)		242.60 (0.00)	116.30 (0.00)

SG: Social globalization, PG: Political globalization, EG: Economic globalization, GDP: Gross domestic product, LLC: Levin-Lin ve Chu, IPS: Im-Pesaran ve Shin, PP: Philips-Peron

Table A2.2: Panel unit root for growth, 1980-2010 (high income OECD countries)

Series name	H_0: Unit root				
	Tests assuming a common unit root		Tests assuming individual unit root		
	LLC t*-stat	Breitung t-stat	IPS W-stat	LLC t*-stat	Breitung t-stat
GDPpc	30.17 (1.00)	1.57 (0.94)	−4.82 (0.00)	9.4E-06 (1.00)	8.9E-7 (1.00)
ΔGDPpc	−12.83 (0.00)	−17.74 (0.00)		226.04 (0.00)	226.04 (0.00)
DCR	4.51 (1.00)	0.50 (0.69)	6.37 (1.00)	4.72 (1.00)	6.83 (1.00)
ΔDCR	−17.37 (0.00)	−13.72 (0.00)	−14.27 (0.00)	258.22 (0.00)	418.55 (0.00)
INF	6.85 (1.00)	0.98 (0.83)	−4.23 (0.00)	2.36 (1.00)	0.004 (1.00)
ΔINF	−8.71 (0.00)	−7.13 (0.00)		131.13 (0.00)	137.51 (0.00)
GER	0.32 (0.63)	−9.12 (0.00)	−8.88 (0.00)	59.16 (0.18)	10.14 (1.00)
ΔGER	−16.13 (0.00)			484.97 (0.00)	758.50 (0.00)
EG	16.47 (1.00)	4.01 (1.00)	5.54 (1.00)	0.02 (1.00)	0.02 (1.00)
ΔEG	−20.82 (0.00)	−26.89 (0.00)	−26.01 (0.00)	460.52 (0.00)	464.47 (0.00)
PG	3.59 (0.99)	−8.20 (0.00)	2.46 (0.99)	7.12 (1.00)	7.32 (1.00)
ΔPG	−22.39 (0.00)		−12.11 (0.00)	460.52 (0.00)	553.45 (0.00)
SG	4.43 (1.00)	1.56 (0.94)	5.56 (1.00)	5.56 (1.00)	1.82 (1.00)
ΔSG	−11.74 (0.00)	−10.66 (0.00)	−5.66 (0.00)	199.10 (0.00)	188.67 (0.00)

GDP: Gross domestic product, SG: Social globalization, PG: Political globalization, EG: Economic globalization

Table A2.3: Panel unit root for growth, 1980-2010 (upper middle income countries)

Series name	H_0: Unit root				
	Tests assuming a common unit root		Tests assuming individual unit root		
	LLC t*-stat	Breitung t_stat	IPS W-stat	LLC t*-stat	Breitung t_stat
GDPpc	4.34 (1.00)	7.43 (1.00)	12.08 (1.00)	8.60 (1.00)	8.24 (1.00)
ΔGDPpc	−15.61 (0.00)	−14.50 (0.00)	−6.25 (0.00)	319.08 (0.00)	324.42 (0.00)
DCR	5.82 (1.00)	0.27 (0.61)	8.49 (1.00)	3.98 (1.00)	8.16 (1.00)
ΔDCR	−14.82 (0.00)	−21.82 (0.00)	−15.63 (0.00)	319.18 (0.00)	318.32 (0.00)
INF	2.65 (0.99)	1.26 (0.89)	1.02 (0.84)	13.47 (1.00)	0.27 (1.00)
ΔINF	−7.25 (0.00)	−6.62 (0.00)	3.29 (0.99)	111.90 (0.00)	119.03 (0.00)
GER	−0.77 (0.22)	−4.58 (0.00)	−9.89 (0.00)	29.70 (0.99)	19.68 (1.00)
ΔGER	−23.71 (0.00)			561.70 (0.00)	416.97 (0.00)
EG	1.64 (0.95)	−10.27 (0.00)	4.67 (1.00)	1.64 (0.95)	18.97 (1.00)
ΔEG	−25.35 (0.00)		−18.80 (0.00)	630.59 (0.00)	641.31 (0.00)
PG	8.00 (1.00)	−12.92 (0.00)	−20.52 (0.00)	3.11 (1.00)	2.45 (1.00)
ΔPG	−35.46 (0.00)			924.32 (0.00)	3225.24 (0.00)
SG	8.77 (1.00)	−4.52 (0.00)	−0.99 (0.15)	2.02 (1.00)	0.62 (1.00)
ΔSG	−33.44 (0.00)		−30.24 (0.00)	930.14 (0.00)	930.48 (0.00)

GDP: Gross domestic product, SG: Social globalization, PG: Political globalization, EG: Economic globalization, LLC: Levin-Lin ve Chu

Table A2.4: Panel unit root for growth, 1980-2010 (lower middle income countries)

Series name	H_0: Unit root				
	Tests assuming a common unit root		Tests assuming individual unit root		
	LLC t*-stat	Breitung t_stat	IPS W-stat	LLC t*-stat	Breitung t_stat
GDPpc	4.13 (1.00)	12.08 (1.00)	12.53 (1.00)	7.63 (1.00)	13.08 (1.00)
ΔGDPpc	−10.65 (0.00)	−12.92 (0.00)	−3.18 (0.00)	180.42 (0.00)	163.80 (0.00)
DCR	4.026 (1.00)	0.32 (0.62)	3.35 (0.99)	8.03 (1.00)	10.19 (1.00)
ΔDCR	−32.18 (0.00)	−28.06 (0.00)	−27.96 (0.00)	855.48 (0.00)	848.44 (0.00)
INF	17.84 (1.00)	2.96 (0.99)	−14.68 (0.00)	0.09 (1.00)	120.04 (0.00)
ΔINF	−11.73 (0.00)	−11.65 (0.00)		207.29 (0.00)	209.32 (0.00)
GER	−0.63 (0.26)	−8.56 (0.00)	−9.94 (0.00)	26.38 (0.99)	25.57 (0.99)
ΔGER	−30.50 (0.00)			728.96 (0.00)	1515.80 (0.00)
EG	7.52 (1.00)	4.73 (1.00)	8.33 (1.00)	2.49 (1.00)	2.83 (1.00)
ΔEG	−23.98 (0.00)	−21.83 (0.00)	−16.46 (0.00)	569.43 (0.00)	566.19 (0.00)
PG	4.42 (1.00)	−8.03 (0.00)	3.45 (0.99)	7.00 (1.00)	0.56 (1.00)
ΔPG	−32.57 (0.00)		−28.66 (0.00)	870.84 (0.00)	898.71 (0.00)
SG	2.36 (0.99)	−5.33 (0.00)	0.57 (0.71)	12.60 (1.00)	13.08 (1.00)
ΔSG	−25.16 (0.00)		−19.28 (0.00)	608.05 (0.00)	608.09 (0.00)

GDP: Gross domestic product, SG: Social globalization, PG: Political globalization, EG: Economic globalization

Table A2.5: Panel unit root for growth, 1980-2010 (low income countries)

Series name	H_0: Unit root				
	Tests assuming a common unit root		Tests assuming individual unit root		
	LLC t*-stat	Breitung t-stat	IPS W-stat	LLC t*-stat	Breitung t-stat
GDPpc	4.29 (1.00)	−1.35 (0.09)	4.22 (1.00)	7.68 (1.00)	30.16 (0.94)
Δ*GDPpc*	−17.45 (0.00)	−6.87 (0.00)	−12.72 (0.00)	215.01 (0.00)	220.77 (0.00)
DCR	3.11 (0.99)	−4.67 (0.00)	2.90 (0.99)	6.82 (1.00)	6.82 (1.00)
Δ*DCR*	−12.91 (0.00)		−16.75 (0.00)	212.46 (0.00)	473.18 (0.00)
INF	35.14 (1.00)	0.67 (0.75)	11.06 (1.00)	1.7E-07 (1.00)	5.6E-6 (1.00)
Δ*INF*	−9.32 (0.00)	−13.06 (0.00)	−12.84 (0.00)	138.28 (0.00)	115.91 (0.00)
GER	5.98 (1.00)	−5.36 (0.00)	4.97 (1.00)	2.38 (1.00)	1.34 (1.00)
Δ*GER*	−24.95 (0.00)		−22.14 (0.00)	551.65 (0.00)	551.65 (0.00)
EG	5.77 (1.00)	0.07 (0.53)	3.90 (1.00)	2.58 (1.00)	0.31 (1.00)
Δ*EG*	−6.53 (0.00)	−6.72 (0.00)	−20.05 (0.00)	78.34 (0.00)	452.34 (0.00)
PG	7.89 (1.00)	5.52 (1.00)	11.21 (1.00)	1.06 (1.00)	1.06 (1.00)
Δ*PG*	−19.46 (0.00)	−11.76 (0.00)	−15.67 (0.00)	405.26 (0.00)	405.26 (0.00)
SG	7.14 (1.00)	−12.91 (0.00)	3.74 (0.99)	1.47 (1.00)	1.1E-5 (1.00)
Δ*SG*	−29.24 (0.00)		−28.47 (0.00)	690.38 (0.00)	709.01 (0.00)

GDP: Gross domestic product, SG: Social globalization, PG: Political globalization, EG: Economic globalization, LLC: Levin-Lin ve Chu