IMPACT OF GLOBALIZATION ON ECONOMIC GROWTH: A STUDY OF COUNTRIES BY LEVEL OF DEVELOPMENT

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ABSTRACT

This study aims to investigate the impact of globalization on economic growth in countries by different level of development. The study is conducted with 143 countries including developed, developing and least developed countries as classified by the United Nations in the period from 1990 to 2018. The KOF Globalization Index published by the Swiss Economic Institute is used covering the overall level of globalization as well as its dimensional level comprised of economic, social and political globalization. Applying the two-step system GMM estimation for a dynamic panel data model, the finding reveals that globalization has a positive impact on economic growth in all countries. The magnitude of the growth effect of globalization rises as the country's level of development increases, however, at the decreasing rate. At the dimensional level of globalization, economic globalization has a mixed sign effect on economic growth among different groups of countries while social and political globalization show to be growth stimulus factors in all countries.

Keywords: Developed, Developing and Least Developed Countries, Economic growth, Globalization

1. Introduction

In a world of fast growing globalization, economic growth performance in each nation would be affected. According to UNDP (1999, p. 25), 'Globalization, a dominant force in the 20th century's last decade, is shaping a new era of interaction among nations, economies and people. It is increasing the contacts between people across national boundaries in economy, in technology, in culture and in governance'. Globalization is well known as a complex process by which the world is becoming a highly interconnected world through economic, social, political and cultural contacts.

From a theoretical point of view, globalization affects economic growth through4 channels: international trade, international capital flows, international labor flows and technological change (Husain, 2000). Free trade allows countries to specialize in producing goods where they have comparative advantage. Economies of scale is realized when production is highly specialized. Globalization has enabled increased levels of investment when countries found it easier to attract short-term and long-term investment. Greater movement of labor gives advantages to both workers and recipient countries. While workers can find better employment opportunities, increased labor migration helps countries with labor shortages fill important posts. There is also the potential for skills to be transferred among countries. Globalization gives chance to the dissemination and adaptation of superior technologies which improves efficiency in resource use and plays as a major driven force of economic growth. Dreher (2006) added another channel which is political cooperation. Political integration enables governments in different countries to make cooperative policies in favor of economic growth in their countries.

The growth effect of globalization works both in developing and developed countries though in different ways. Developing countries often face with the shortages of capital and advanced technologies which are needed for their economic development. Globalization opens access to the world capital market which enables investors from well developed countries to invest in developing countries. The extent of foreign capital inflows would supplement the domestic investment leading to the increase in capital formation in the host countries. Multinational companies by investing in installing plants in other countries not only provide employment opportunity for the people but also provide an effective channel for sharing technology. Besides, domestic firms by observation or hiring workers who were previously employed by foreign firms can learn about managerial know-how, organization and management skills practiced by foreign firms operating in the local markets. More advanced technologies and management methods involved in the developing countries could directly accelerate the local economic growth. Globalization also contributes to the development of health and education systems in the developing countries. Because globalization creates jobs that require higher skills set, this demand encouragespeople to gain higher education and training (Hamdi, 2013). In addition, globalization creates greater opportunities for local business firms in developing countries to get accessto the world product market and become part of international production networks and supply chains.

For developed countries, as well argued in Grossman and Helpman (2015), globalization affects economic growth in at least three ways: specialization in innovation, international knowledge spillovers and scale effect. Firstly, globalization leads countries to specialize in the activities in

which they have comparative advantage. Endowed with high-skilled labor, developed countries tend to specialize in innovation activities. With globalization, developed countries are able to shift labor-intensive and heavy industry to developing countries and themselves focus on knowledge-intensive industry with continuous innovation in high-tech researches and production of new high-tech products (Narula and Dunning, 2000). As rapid rates of high technology industrialization, MNCs from developed countries demand for more high-skilled labor. Globalization creates more conditions for international flow of high-skilled labor, so developed countries can attract a large number of foreign talents to immigrate in and make important contributions to their economic growth (Skeldon, 2005). Secondly, international knowledge spillovers reduces the cost of further innovation. Countries where the research is carried out can enjoy benefit of knowledge spillovers from abroad since international knowledge spillovers contributes some what to the domestic R&D productivity. International knowledge spillovers can take in different forms. It can be in the form of personal contact when scientists gather in forums to exchange ideas or via publications in international professional networks, or knowledge transmission can be taken place via trade and direct foreign investment. Thirdly, globalization allows innovators in developed countries the opportunity to exploit their new ideas on a larger scale. Once new products are developed and introduced into markets, firms can reap profits not only domestically, but also on sales abroad.

However, the growth effect of globalization comes with two sides. Beside the positive effect, globalization has potential negative effect on economic growth. Freedom in international trade can raise the level of competition in domestic markets and put pressure on domestic firms when they strive for market shares in their home yards. Freedom in capital flows allows foreign firms to establish their physical presence in the host countries. Large MNCs backed with huge capital resource and superior technologies can outweigh the large number of small indigenous local firms and in worst situation can force them out of business. Moreover, greater mobility of capital does not only result in capital inflow but also capital outflow when domestic capital seeks higher rates of return overseas. Greater movement of labor can aggravate the brain-drain problem when high-skilled workers leaving the country to search for better employment abroad. Loosing of capital and high-skilled labor creates a harm to economic growth of the country. In addition, stronger globalization means a higher degree of interdependence between the country and the rest of the world, so that any negative shock from overseas can have an exaggerate and deep impact on the country's economic performance.

How globalization affects economic growth performance has captured great attention of researchers. However, the majority of the studies focused on the issue at the individual country

level, group of countries by region or group of developing or developed countries in separation. There is lack of studies investigating the difference in the effect of globalization on economic growth between developed and developing countries. The extent to which globalization has its impact on economic growth may differ in countries by different level of development. The aim of this study is to fill this gap. The paper seeks to address the following questions. First, does the magnitude of globalization impact on economic growth depends on the country's level of development? Second, how growth effect of globalization worksin developing and developed countries?

The rest of the paper is organized as follows. The next section provides a brief literature review on the impact of globalization on economic growth. Model specification, data and methodology are then presented. Results and discussion come in the following section and finally is the conclusion.

2. Literature Review

There are several efforts to quantify globalization and among the various indices, the KOF Index of Globalization published by the Swiss Economic Institute is considered as the most popular measure of globalization (Kılıçarslan and Dumrul, 2018). The index was developed based on the work of Dreher (2006) covering the overall globalization index and its three dimensions which are economic, social and political globalization. Economic globalization dimension is measured by the actual flows of trade, foreign direct investment and portfolio investment, as well as the restrictions applying to these flows. Social globalization dimension is expressed as the spread of ideas, information, images and people. It consists of three sub-indexes which are personal contact, information flows and cultural proximity. Political globalization is characterized by the degree of political cooperation. It is measured by the number of embassies, membership of international organizations, participation in United Nations Security Council missions, and number of international treaties signed. The introduction of KOF Globalization Index has opened upa considerable number of empirical studies to investigate the relation between globalization and economic growth. Researches have been done at the overall level of globalization as well as at its dimensional level.

At the overall level of globalization, there is a common agreement in the sign effect of globalization on economic growth when most studies found a positive number. Among them are Dreher (2006), Chang and Lee (2010), Rao and Vadlamannati (2011), Changet al. (2013), Gurgul and Lach (2014), Maqbool-ur-Rahman (2015), Suci et al. (2016), Olimpia and Stela (2017), Hasan (2019), Santiagoet al. (2020) and Xu et al. (2021). At the dimensional level, the

impact of a single component of globalization on economic growth shows rather mixed results, depending on specific country or group of countries.

At the individual country level, Ullahet al. (2013) used autoregressive distributive lag (ARDL) model to study the impact of globalization on economic growth of Pakistan in 1980-2009 which found that economic globalization has a positive growth effect and social globalization has a negative growth effect while political globalization shows no relationship with economic growth. The study by Olimpia and Stela (2017) for Romania in the period 1990-2013 showed that while economic and political globalization have a positive effect on economic growth, the social dimension of globalization has a negative effect. For Turkey in the period from 1980 to 2015, using the fully modified ordinary least squares (FMOLS) cointegration test, Kılıçarslan and Dumrul (2018)concluded that economic and social globalization increase economic growth while the growth effect of political globalization is negative.

At the group of countries level, researchers favor studying groups of countries by region. Using the Pedroni's panel cointegration technique for the study of 23 OECD countries from 1970 to 2006, Chang and Lee (2010) found a positive relation between economic and social globalization and economic growth while the growth effect of political globalization is insignificant. Changet al. (2013) estimated the impact of globalization on economic growth using the bias-corrected least square dummy variable (LSDVC) model for 5 South Caucasus countries over the period of 1990–2009. Their finding showed positive relations between three dimensions of globalization and economic growth. Setting in the framework of the Solow growth model, Gurgul and Lach (2014) found strong and robust evidence of growth-stimulating effect of social and economic dimensions of globalization in ten CEE economies in transition. However, the role of political globalization was found to be statistically insignificant. Yinget al.(2014) studied the relationship between globalization and economic growth of ASEAN countries between 1970 and 2008. Applying the fully modified least squares (FMOLS) method, they claimed that economic globalization has a significantly positive influence on economic growth while social globalization and political globalization have a negative effect. In another study, Suciet al. (2016) looked into the impact of globalization on economic growth in 6 developing countries in ASEAN from 2006 to 2012 and found that economic and political globalization have a positive growth effect whereas social globalization shows no effect. Titalessy (2018) analyzed the effect of globalizationon economic growth for20 countries in Asia-Pacific in 2000-2014 using the fixed effect model (FEM). The result showed that economic and political globalization have significantly positive influences on economic growth. Meanwhile, social globalization shows a negative and significant influence. Employing the pooled mean group (PMG) panel cointegration

model, Hasan (2019) investigated the impact of globalization on economic growth of 5 South Asian countries over the period from 1971 to 2014. The study found that while economic and political globalization accelerate economic growth, social globalization has no growth effect.

Several studies placed the interest in the impact of globalization on economic growth in groups of developing countries. In his study for 74 developing countries in the 1981-2011 period, using fixed effects least squares method and Granger causality test, Kilic (2015) found that economic and political globalization have a positive effect on economic growth level while the effect of social globalization is negative. Majidi (2017) investigated the effect of dimensions of globalization on economic growth in 100 developing countries in the period from 1970 to 2014. The author found that in upper middle-income countries the impact of political globalization on economic growth is negative while economic and social globalization have no effect on economic growth. In lower middle-income countries, the effect of political globalization on economic growth is positive but economic and social globalization have no growth effect. Performing the fixed effect and Driscoll and Kraay analysis for panel data regression, the study by Siddiqa et al. (2018) for a group of developing countries in the period of 2003-2013 found robust evidence for a positive relationship between economic, social and political globalization and economic growth. In the work of Santiagoet al. (2020) for 24 developing countries from Latin America and the Caribbean from 1995 to 2015, the authors applied the autoregressive distributive lag (ARDL) model and found a positive growth effect of economic and social globalization while political globalization has no effect on economic growth.

Previous researches mostly focus their interest in individual countries or group of countries by region or group of developing countries. To the best of our knowledge, there is no effort to study the impact of globalization on economic growth in groups of countries by different level of development. The United Nations classifies countries into 4 main groups by level of development including developed countries, developing countries, least developed countries and countries with economies in transition. The size effect of globalization on economic growth may differ depending on the country's level of development. Besides, dimensions of globalization may work differently in groups of countries by different level of development. This study aims to fill this gap. Comparison in growth effect of globalization among different groups of countries by their level of development is of our interest.

3. Model Specification, Data and Methodology

The study is set up in the framework of the Solow growth model where economic growth relies on the accumulation of capital and labor. The choice of the Solow growth model to perform the

research is motivated by its popularity and the reason that there is no convincing evidence that endogenous growth models perform better in practical applications than the Solow's one (see Jones 1995, Parente 2001; Rao and Vadlamannati 2011 and Gurgul and Lach 2014). The production function is assumed to take the Cobb-Douglas form as

$$Y = F(K, L, G) = K^\alpha L^\beta G^\theta \qquad (1)$$

where Y is total output, K is stock of physical capital, L is quantity of labor and G isthe degree of globalization. The inclusion of globalization status into the production function would allow us to quantify the effect of globalization on output growth.

Take the natural logarithm both sides of the production function, one can derive the growth equation as follow

$$LnY_t = \alpha LnK_t + \beta LnL_t + \theta LnG_t \qquad (2)$$

The equation shows how growth in total output is determined by growth in stock of physical capital, quantity of labor and the degree of globalization. Coefficients α, β and θ can be interpreted as the elasticity of output with respect to capital, labor and globalization which measure how much percentage increase in total output as a result from 1 percentage increase in the corresponding factor. While the signs of α and β are expected to be positive, the sign of θ reveals the relation between globalization and total output. When θ takes a positive (negative) value, globalization shows a positive (negative) effect on total output. In the case of θ equal to zero, globalization has no effect on total output.

The study consists of143 countries divided into three groups including developed countries (36 countries), developing countries (69 countries) and least developed countries (38 countries) and covers the period from 1990 to 2018.The chosen period of study is motivated by the fact that since 1990 the world has experienced an increasingly high growth rate of globalization. According to the available data provided by the KOF Globalization Index, in the 1970-1989 period, the world globalization grew at the average annual rate of 0.62% and in the period from 1990 to 2018 this growth rate was more than double and reached at 1.26%.The study is conducted at both overall level and dimensional level of globalization. Based on the theoretical equation (2) the regression equations for the 2 models are written as:

Model 1:

$$GDP_{i,t} = c + \beta_1 GDP_{i,t-1} + \beta_2 CAP_{i,t} + \beta_3 LAB_{i,t} + \beta_4 GI_{i,t} + \alpha_i + \mu_t + e_{i,t} (3)$$

Model 2:

$$GDP_{i,t} = c + \beta_1 GDP_{i,t-1} + \beta_2 CAP_{i,t} + \beta_3 LAB_{i,t} + \beta_4 EGI_{i,t} + \beta_5 SGI_{i,t} + \beta_6 PGI_{i,t}$$
$$+\alpha_i + \mu_t + e_{i,t} \qquad (4)$$

where subscript *i* denotes country and *t* denotes time in year.

The independent variable *GDP* is the natural logarithm of GDP. For the explanatory variables, GDP_{-1} is the natural logarithm of GDP in the previous year, *CAP* is the natural logarithm of stock of physical capital, *LAB* is the natural logarithm of quantity of labor and *GI* is the natural logarithm of scores for overall globalization. The three sub-dimensions of globalization are economic globalization (*EGI*), social globalization (*SGI*) and political globalization (*PGI*). Each measured as the natural logarithm of scores for the corresponding dimension of globalization. μ_t is a time specific effect, α_i is an unobserved country-specific fixed effect and $e_{i,t}$ is the error term.

To consider the impact of globalization on economic growth by different level of development in groups of countries, dummy variables are included in each model. Dummy variables are defined to distinguish between developed, developing and least developed countries.

There are two sets of data used in the study. The first dataset is collected from the Penn World Table (Feenstra et al., 2015). This dataset provides data for GDP, physical capital stock and labor. A noteworthy point is that capital used in the study is in terms of stock, not in terms of flow as investment. We would argue that the use of capital in terms of stock is more relevant in the setting of the Solow growth model where output produced depends on the economy's stock of capital. To adjust for the effect of inflation, GDP and physical capital stock are measured at a constant price level (in 2011 USD). The quantity of labor is measured by the number of employed people who are engaged in production activities. The second dataset is taken from the KOF Globalization Index (Dreher, 2006) which provides data for globalization index at both overall and dimensional level. Globalization index has the maximum score of 100 and a higher score means a higher degree of globalization. Data for all countries is collected in the same time period that provides a strongly balanced panel data. There exists endogeneity problem in the model. First, economic growth of last year may have its lag effect on the growth of this year or growth in current period depends on its own lag. A lagged dependent variable is thus incorporated into the model to capture the persistence of this behavior. The inclusion of the predetermined lagged dependent variable within regressors makes the model become a type of dynamic. Second, stocks of physical capital and labor may not be strictly exogenous variables

since they may be potential endogenous. While current stocks of capital and labor determine the current level of output, themselves may be influenced by the last period's output. Thatis, the level of output in the last period decides the last period's investment level which in turns determines the current stock of capital. Similarly, how much labor employed depends on the needed output produced. It is useful for the employment decision to be made at the beginning of the period based on the last period's output level. With the presence of endogeneity in a dynamic panel data model, the use of Generalized Method of Moments (GMM) estimation is appropriate. Two-step system GMM produces effective results for a sample when the T = period is less than the N = number of identities. For this study, N = 143countries and T = 29 years. This study applied the xtabond2 package in Stata programme developed by Roodman (2009) to conduct the two-step system GMM estimation. In the estimation model, lagged dependent variable and stocks of capital and labor are treated as endogenous while other variables are considered as exogenous.

4. Result and Discussion

The overall effect of globalization on economic growth for groups of countries by different level of development is reported in Table 1. As can be seen from this table, all explanatory variables have a statistically significant impact on the growth of output at 1% statistical level of significance. Lagged total output, stock of capital and quantity of labor all show an expected sign on total output. More importantly, with a positive value of coefficient, globalization shows to have a positive effect on economic growth for all groups of countries. This result is in accordance with the findings of previous studies. A positive growth effect of globalization is found in developed countries (Chang and Lee (2010) for 23 OECD countries, Gurgul and Lach (2014) for 10 EU member countries and Olimpia and Stela (2017) for Romania) and in developing and least developed countries (Rao and Vadlamannati (2011) for 21 low income African countries, Suciet al. (2016)) for ASEAN countries, Hasan (2019) for 5 South Asian countries, Santiagoet al. (2020) for 24 Latin America and the Caribbean countries, Xu et al. (2021) for 45 Asian countries).

Table 1. Overall effect of globalization on economic growth in groups of countries by level of development

Independent variable: GDP

Explanatory variables	Coefficient	Standard error
GDP_{-1}: Lagged GDP	0.913	0.009***
CAP: Stock of capital	0.595	0.062***
LAB: Stock of labor	1.21	0.078***
GI: Degree of globalization	0.169	0.027***
DUMY-GI: Dummy-globalization		
Developed countries	0.042	0.004***
Developing countries	0.029	0.003***
Year dummies	Yes	
AR(1) test (p-value)	0.000	
AR(2) test (p-value)	0.066	
Hansen test (p-value)	0.115	
Number of instruments	115	
Observations	4000	

*** $p < 0.01$, ** $p < 0.05$.

The highlight of this study's result rests in the difference in the size of growth effect of globalization among the country groups. With the highest coefficient value ($\beta = 0.211$)developed countries show to be the group mostly affected from globalization: 1% increase in the degree of

globalization leads to 0.211% increase in output. The group of developing countries follows next with β = 0.198and finally is the least developed countries (β = 0.169). A clear tendency of the growth effect of globalization implies that the country's level of development does matter to the magnitude of globalization impact on economic growth. As the country's level of development rises, the growth effect of globalization increases and make globalization become more important growth stimulus factor. Deeper globalization results in greater international flows of goods, capital and labor as well as the rate of technology transfer. How much globalization realizes its effect on economic growth, however, depends on the country's absorptive and competitive capacity. Absorptive capacity refers the ability of the country to adopt and implement existing or to invent new technologies. Competitive capacity refers to the ability of the country to compete for inputs (capital and labor) in the world factor market and for exportation of output in the world product market. At the low level of development, countries may have inadequate levels of infrastructure, obsolescent technologies and poor skilled labor forces which place them in a low absorptive and competitive capacity. Besides, low income countries may suffer the brain-drain problem when they lose skilled workers who leave the countries to seek for better employment overseas. As the level of development increases, with more sufficient levels of infrastructure and better skilled labor forces, countries are ready to adopt new advanced technologies transferred from abroad, are in better position to attract efficiency-seeking FDI and also the problem of brain-drain may be reduced. At the high level of development, countries are at the advantage of attracting talented foreign workers, have high opportunities for invention of new technologies and may be in better position in international institutions and supranational organizations in shaping decisions in favor of their economic growth.

A close look at the rate of change in the size of growth effect of globalization reveals that moving from the least developed to developing country group, the size of the effect increases by 0.029 which is higher than the increase in size by 0.013 as moving from the developing to developed group. This implies that the relation between the growth effect of globalization and the country's level of development displays a concave curve, that is, the growth effect of globalization increases at the decreasing rate along the rise in the country's level of development. The rate of change in the size of growth effect of globalization is higher for countries in the early stages of development and therefore those countries would experience faster change in the impact of globalization on economic growth.

At the dimensional level, globalization index comprises of economic globalization index (EGI), social globalization index (SGI) and political globalization index (PGI). Table 2 provides the

regression outcome of dimensional effect of globalization on economic growth in groups of countries by level of development. There is a clear distinction between the developed country group and the developing and least developed country groups. In the developed country group, political globalization has the largest positive effect on economic growth(β = 0.143), followed by social globalization (β = 0.077)while the growth effect of economic globalization is negative(β = -0.034). These results partially confirmed other studies' findings. Chang and Lee (2010) and Gurgul and Lach (2014) found a positive relation between social globalization and economic growth while the growth-stimulating effect of political globalization is evidence in the study by Olimpia and Stela (2017).

In the developing and least developed country groups, all three dimensions of globalization show to be growth stimulus factors. Social globalization shows the largest growth effect (β = 0.077),then comes the growth effect of economic globalization(β = 0.051) and finally is the growth effect of political globalization (β = 0.039). The finding of a positive relation between economic globalization and economic growth is inline with other studies including Ying, Chang and Lee (2014), Titalessy (2018) and Siddiqa et al. (2018).A positive growth effect of political globalization is evidence in several studies such as Kilic (2015), Suciet al. (2016), Majidi (2017), Titalessy (2018) and Hasan (2019).Studies by Siddiqa et al. (2018) and Santiagoet al. (2020) concluded that social globalization has a positive effect on economic growth.

Table 2. Dimensional effect of globalization on economic growth in groups of countries by level of development

Independent variable: GDP

Explanatory variables	Coefficient	Standard error
GDP_{-1}: Lagged GDP	0.946	0.01***
CAP: Stock of capital	0.503	0.054***
LAB: Stock of labor	1.02	0.071***
EGI: Degree of economic globalization	0.051	0.015***
SGI: Degree of social globalization	0.077	0.010***

PGI: Degree of political globalization	0.039	0.018**
DUMY-EGI: Dummy - economic globalization		
Developed countries	-0.085	0.034**
Developing countries	0.001	0.021
DUMY-SGI: Dummy - social globalization		
Developed countries	0.01	0.041
Developing countries	0.008	0.017
DUMY-PGI: Dummy - political globalization		
Developed countries	0.104	0.030***
Developing countries	0.013	0.017

Year dummies	Yes
AR(1) test (p-value)	0.000
AR(2) test (p-value)	0.062
Hansen test (p-value)	0.095
Number of instruments	121
Observations	4000

*** $p < 0.01$, ** $p < 0.05$.

Among the three dimensions of globalization, economic globalization shows a mixed sign growth effect among groups of countries. A negative growth effect is found in developed countries while for the rest the growth effect is positive. Economic globalization frees up

international trade and investment which allows larger flows of goods and capital among countries. Many countries have made effort to stimulate their economic growth via following outward-oriented policies. Deeper economic globalization opens more access for the countries to reach a higher world capital stock and a bigger global market for exporting their products. Foreign investment augments domestic capital investment leading to a larger capital formation in the countries. In the low income least developed country group, foreign investment may favor exploitation of natural resource or primary industries that require low level of technologies and skilled labor, and contribute significantly to the expansion of the countries' exports. In the middle income developing countries, efficiency-seeking FDI is attracted to the countries due to their good levels of infrastructure and high skilled labor forces. However, the free up of capital flows works in two ways, that is, inflows of foreign capital and outflows of domestic capital. Countries have to face with the fact that higher economic globalization may result in greater outflows of their capital to seek for higher rate of returns on investment overseas. Besides, the countries while having more access to the world product market, they also have to struggle with foreign business in their home markets. Free trade would flush foreign goods to domestic countries and override local business firms causing a loss to the domestic business community in their home yard. These create a harm to economic growth. When the benefits of freedom in international trade and investment is outweighed by the costs of it, a negative impact on economic growth is the result. In the case of the developed country group, the cause of a negative growth effect may be the loss of domestic production due to the outflows of capital to seek for higher rates of return on investment overseas.

Second, social globalization plays as a growth stimulus factor in all countries by different level of development. The impact of social globalization on economic growth is through the spread of ideas, information flows and movement of people. Social globalization increases the rate of technology transfer, knowledge diffusion and ideas exchange via personal contact and cultural proximity. The growth effect of social globalization may work differently among groups of countries. In developing and least developed countries, deeper social globalization enables the countries to get more access to the existing stock of knowledge and available advanced technologies. Domestic firms are able to learn more about managerial know-how, management skills and resource utilization from foreign firms operating in local markets, are ready to adopt advanced technologies transferred by their foreign partners and the labor force are equipped with needed skills to handle that new technologies. Countries enjoy higher economic growth when they can benefit from foreign advanced technologies and local labor training via personal contact with foreigners either at home or abroad. Unlike in the case of developing and least developed countries, in developed countries, social globalization increases the chance of success in the

creation of new technologies. Developed or advanced economy countries tend to major in knowledge-intensive industry that requires constantly improvement in technology and high-skilled labor. Higher degree of social globalization would speed up technological progress and exchange of ideas and information as well as transfer of high-skilled labor that boosts the development of knowledge-intensive industry and thus fosters economic growth.

Third, political globalization shows a positive effect on economic growth in all groups of countries. However, the size of the growth effect varies among groups of countries. Developed countries show to have the highest growth effect of political globalization compared to other groups. Political globalization is characterized by a diffusion of cooperative government policies. High political integration enables governments to cooperate in making policies in favor of economic growth. While political globalization has a high growth effect in developed countries, in other groups of countries, it has a lower effect on economic growth. The reason is that high political integration works in two ways: one is to promote economic growth and the other is to hinder it. As well pointed out by Allison (2000), economic globalization induces countries to specialize in producing goods that they have comparative advantage. But this also means government lose ability to control their citizens. High political integration could serve governments as counterweight to globalized markets. They could cooperate to direct production in the countries in their favors that can go against specialization from comparative advantage. This would bring harm to economic growth. Another reason is that political cooperation provides the country with access to international aid and financial support. However, the functioning of international and supranational organizations may not be democratic in terms of representation and accountability. Big or advanced economy countries can shape decisions in supranational organizations when they likely have their opinions influenced on the actions to be implemented. Besides, the scope of the obligations associated with international agreements and organizations may be high that makes coordination to be difficult and expensive.

5. Conclusion

This study investigated the impact of globalization on economic growth in the framework of Solow growth model for 143 countries grouped by their level of development in the period 1990-2018. At the overall level of globalization, a positive relationship between globalization and economic growth is found in all groups of countries. Besides, the country's level of development does matter for the size effect of globalization. The magnitude of globalization impact on economic growth increases from the least developed to the developing and finally to the developed country group. Stated differently, not all countries benefit equally from globalization. The more development level the country is the higher benefit it can gain from globalization.

Dimensions of globalization show different effects on economic growth among the groups of countries by level of development. In the developed country group, both social and political globalization have a positive effect on economic growth with political globalization having the largest growth effect. Meanwhile, economic globalization acts as a growth hinder. In the developing and least developed country groups, all three dimensions of globalization act as growth stimulus factors. Social globalization has the largest growth effect, followed by economic globalization and finally is political globalization.

The policy implications on how countries (especially developing and least developed) can benefit more from globalization are relatively straightforward. In a world of fast growing globalization, how successfully countries can reap off benefit from globalization depend on their capacity to absorb new technologies, to compete for international capital and skilled workers as well as markets for their output. The imitation and implementation of advanced transferred technologies requires skilled workers. Human resource development policies should be the focus. Education and labor training programs are needed to promote vocational training and provide necessary skills for local workers in order to catch up with the requirement of technological progress. Besides, to cope with the brain-drain problem, governments should seriously consider the implementation of appropriate labor remuneration policies to attract and retain high skilled and talented workers.FDI is still considered as an effective channel for technology transfer, local labor training and capital contribution in the host countries. Measures to attract FDI should create the highlights based on the specificity of each country, among which could be the improvement in the quality of institution. However, FDI should be directed to the fields that use relatively advanced technologies, the fields that are insufficiently invested to avoid pressure on competition with domestic firms, or the fields that foster the development of the domestic supporting industries. Finally, globalization results in a greater competition for international markets for output. There is the need for policies aiming at increasing competitiveness of domestic goods and services in either form of production efficiency or product diversity. On the other hand, official business support services such as trade promotion programs and provision of information are useful to facilitate the access to foreign markets for domestic firms.

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