

An Investigation of the Impacts of Energy Export on Economic Growth

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Abstract:

Energy exports as the main source of national income in OPEC countries and globalization as one of the most controversial issues of today's world economy can affect those countries economic growth, significantly. This study examined the effects of globalization and energy exports on economic growth using GMM over the period 1980-2016 in 12 OPEC countries. The results show that, the energy exports and globalization in all aspects have respectively a positive and negative significant effect and on economic growth. Moreover, the combined exports of energy and globalization variables in all aspects have a significant positive effect on economic growth. Furthermore, fertility rate, life expectancy, government consumption expenditure, money, quasi-money, and gross fixed capital formation have a significant and negative effect on economic growth in these countries. Also, it was noticeable that the negative impacts of political and social globalization had respectively stronger and weaker effects on economic growth relative to other aspects of globalization.

Key words: Political globalization, Social globalization, Economic globalization, Economic Growth, Panel Data.

1. Introduction

Kacowicz(2008) determined globalization as increase in cultural, social, and political relationships beyond national boundaries. Barro and Gordon (1983) believed that globalization is a process which national boundaries are getting merged, national economics, cultures, technologies, and governments become integrated, and sophisticated reciprocal relationships are made. Globalization has economics, social, and political aspects but uprisings made by globalization has been occurred more in economic field. The most important features of globalization influencing economics is globalization of economic behavior, using global business as an economic development motivator, centralization, and competition. International monetary fund determines globalization more extensive and deeper. In other words, it knows globalization as growth of reciprocal dependency of counties economics all over the world by volume increase and varieties of good transactions, services, and capital stream beyond boundaries and also more extensive and vaster distribution of technology. Social globalization merges cultural boundaries. Immigrations and tourisms industry, globalization life patterns, and global mutual values are all symbols of social globalization. Generally, policies of each country is drawn in internal policy systems and national governments undertake final responsibilities to protect economics security and amenity inside their boundaries. Political globalization leads to increase international institutions role on general policies of countries and equalizing policies inside countries. In addition, energy is one of the most important production institutions in all industries and all countries' productions are dependent on it. It has significant effects on economic growth of all countries in the world. OPEC countries are dependent economics on oil for their huge energy resources. Moreover, globalization is a phenomenon which has great impact on countries economics. Energy export and globalization dependent on countries economic structures

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can have positive or negative effects on economic growth. In other words, if energy exporter countries can manage their export incomes properly, they can use it for their economic growth. In addition, globalization in general and its aspects can influence differently on economic growth in OPEC member countries according to their structures. Therefore, the present study explores energy export effect and economic, social, and political globalization on economic growth of OPEC member countries (Saudi Arabia, Iraq, Iran, Aljazeera, Algeria, United Arabic Emirates, Libya, Ecuador, Qatar, Venezuela, Angola, and Nigeria) in 1980-2016. The purpose of this article is answering to this question whether energy export and economic, political, and social globalization have positive or negative effects on OPEC member countries. Organizing this article is as following: part 2 is related to research theoretical bases. Part 3 is related to research background. Part 4 is research results, and part 5 is model estimation and final part is conclusion.

2. Theoretical Bases

2.1. Globalization

One of the most significant evolutions in recent years is convergence and combination of national economics in global economics which has gone along with technological and information technology progresses in liberalization policies conditions (Islam, T & Meade, N). Globalization includes political, social and economic aspects and actually it should be known similar to a new social system that can have different performances in various aspects. It can be claimed that it is all behaviors setter and even confrontations and challenges in relationships among societies and governments. Globalization according to international monetary fund (1997) includes countries daily dependency on each other for increase and varieties of good and services transactions among countries, capital global flows simultaneously with technology fast development. The most important features of globalization which influences economics is economic behaviors globalization, using global business as economic development motivator, centralization, and competition. Generally, globalization has positive and negative effects on economic growth according to countries economic structure, development degree, and how to manage it.

2.2. Economic Globalization

Islam and Maede believe that economic globalization is process of national economics combination in a pervasive global economics that production factors (workforce and capital), technology, and information pass freely from geographical boundaries and products (including goods and services) enter freely in countries. The main features of this process is more dependency on market system, privatization, and releasing in various aspects including business, financial markets, foreign direct investment resealing. The common conception of economic globalization is equivalent to internationalization that mentions international transactions and interactions.

2.2.1. Positive Effects of Economic Globalization

A) Economic Openness

Bhaskara, R & Krishna, CH believe that generally countries with opener economics have higher economics' growth. This issue is originated from business competition efficiency, benefits and advantages of privatization, technology stream, and organizational improvement. In other words, these countries can obtain the best global ideas by least costs and this is a great benefit given to countries from globalization.

B) Technology Transferring

According to exogenous and endogenous models, technology is one of effective factors on economic growth. Economic globalization underlies for technology transferring and followed by economic growth increase in developing countries.

C) Competition Increase

Positive effects of economic globalization is international competition increase. Competition increase leads to economic efficiency increase in internal and international levels, because the most important factor is efficiency increase of a system; efficiency increase in its turn can lead to economic growth.

D) Extension in International Work Division

Globalization provides better conditions for work division and developing countries and be specialized in user goods with a lot of work force. On the other hand, developed countries can increase their specialization in capital-used goods and their workers participate in production with more productivity. Consequently, both groups can use global work division. By occurrence of this phenomenon and deleting business obstacles in capital movement and financial resources fields, international work division will increase and help to productivity growth.

E) Intentional Business

According to classic economists' theories, there is more amenity after business than before it. According to comparative advantage of Ricardo, companies can improve their amenities by importing a good with less absolute advantage and exporting a good with more absolute advantage. By increase in globalization, international business increases and consequently economic growth increases, too.

Stieglitz (2004) emphasizes on economics as one positive aspects of globalization. By business releasing and economic globalization, unemployment rate reduces and employment increases which are positive aspects of globalization. Of course, business and economic globalization has significant effect on unemployment rate and employment.

F) Foreign direct Investment (FDI)

Foreign direct investment is a potential resource to make employment and economic growth. Based on new theories such as endogenous growth, foreign direct investment is one of effective factors in economic growth. Human capital transfer is one of emphasized matter by FDI (ILO, 1999). By attracting foreign investment, we can produce new technologies and utilize them for economic growth.

G) Financial Liberalization

One of globalization effect is financial liberalization. Based on economic theories on competition and efficiency models of market, it can be claimed that financial liberalization lead to faster economic growth and economic development. Economist such as Bekaert et al. (2005) and Henry (2000) believe that financial liberalization causes foreign investment to enter, capital market progress, increase in internal investment, and consequently economic growth. McKinnon Shaw (1973) emphasizes on limitation in financial market and states financial liberalization causes capital efficiency increase and increase depositories interest rates and saving increase and consequently increase resources for investment so increase economic growth.

H) Privatization

Privatization is one effect of globalization. Based on economic theoretical bases, privatization by 2 infrastructural deduction can influence of economic growth: first, by indirect channels and micro economics aspect and efficiency effect and agency organization can increase economic growth. For example, more centralized ownership and better supervision by managers on private sectors lead to significant improvement in agency productivity and has significant role in economic growth; second, privatization by direct channel and influence on macroeconomics variables such as governmental and foreign direct investments known as institutions for economic growth can influence on economic growth.

2.2.2. Negative Aspects of Economic Globalization

Stieglitz (2004) believes that identity crisis or cultural crisis, dependency, habits or previous life procedures changes, freedom restraining of people, dominance reduction of national governments following reduction in importance of political, geographical, and cultural boundaries, increase poverty and unbalanced incomes

distributions, instability of cultural system, and more limitation of authorities and power of national governments in the third world countries, occurrence of global problems such as environment pollution, warming earth, AIDS, terrorism, international trafficking, and other problems are negative effects of globalization.

In addition, Astarly and others (1997) believe that globalization can increase risk and following reduces economic growth. Without considering exchange rate regime, intensive capital interring and then its intensive exit causes heavy costs on country. Actually, agencies ask for risk reward against high changes in price of inputs and outputs that put negative effect on investment and growth.

2.3. Political Aspect of Globalization

According to political view, globalization has significant effects on political relations and culture in global level. Promoting cosmopolitan in international and family relationships level, promoting democracy and political culture growth on global level, changing traditional power of societies to a competitive and systematic power, citizenship rights growth and extension, awareness growth and reinforcement of society in civilized society framework, evolution in political visions, change in attitude toward political life, beliefs, thoughts, and values in macro and international levels, selection of freedom in framework of political development models and information transferring are significant parts of globalization in political era in the world level. The idea of global citizenship that is pivotal conception of cosmopolitan, evokes global responsibility sense to cope with ecology problems and eradicate global poverty, remove philosophy of many international existence by weakening ethical, religious, and national existence such as international war that capital making and investment in war period doesn't usually have significant prosperity, because as a war result, future landscape is vague and sometimes dark. So for reduction in investment, growth reduces, because investment is one of growth element in economic systems.

2.4. Social-Cultural Aspect of Globalization

It can be claimed about social-cultural aspect that ecological movements, peace movements and so on cooperate in global aspect but the possibility of these transactions and awareness depends to transnational development. This fact not only leads various news of world people and groups awareness about problems of other places and their reciprocal connection all over the world, but also facilitates mutual cooperation among local sectors of a movement and reinforces transnational connections inside them. Another importance note is that immigrants to western industrial countries keep their relationships with friends and families that can be an important factor in political, religious, and national struggles in those countries which is effective on their economic growth. In addition, it can be claimed about social globalization that social globalization can be trigger of citizenship rights development and growth. Although, activities re individually, but their resultant help toward social condition progress that is effective on countries economic growth.

One of important effects of globalization is no culture field in a way boundaries and limited spaces collapse leads to culture confrontation and making global culture which are integrated by impacting with other cultures. Some others have rough and struggling view about invader culture. Number of cultures yield to peaceful coexistence and some others know cultural interaction and conversation inevitable. It is right on the other hand that globalization process leads to integration, coherence and removing diversities, but it makes another types of coexistence, connections, mixtures make differences.

2.5. Social-Political Aspect Effects of Globalization on Economic Growth

Generally, globalization from social-political aspect leads to effectiveness of beneficiaries groups on governments. Consequently, amount of government concentration reduces on economic activities and this fact is effective on economic growth. To explain this fact, we can use Army curve in reverse U shape. This curve shows the reverse relationship between government and GDP growth.

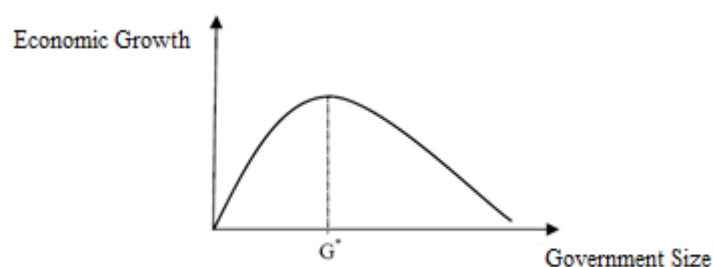


Figure 1. Curves logo

Government can have positive effect on economic growth to a certain limitation, without it, government size increase is harmful. Therefore, there is an optimum size for government and consequently if government size decreases and also when there is a correct combination of governmental and private decision makings about resources attribution, production increases. This feature can be imagined when government is small; therefore, the initial steps of government expenses growth is with income level increase and economic growth positive rates, but by increase in government size, descendent return law starts, taxes and tariffs increase to provide governments financials will have reverse effects on economic structures. Simultaneously, governments transferring payments increases and this increase have changed into non-motivator effects. By cost increase, government attracts a lot amounts of national income and reduces national production.

2.6. Globalization Index

In this research, KOF index is used for globalization. KOF was introduced for the first time in 2002 and updated and its details were provided by Dreher, A., Gaston, N, and Martens, P in 2008. KOF index include economic, social, and political aspects. The role of social KOF is 36%, social KOF is 37%, and political KOF is 26% that economic KOF includes 50% of real stream and 50% limitation that real stream includes 21% business, 28% foreign investment, 24% portfolio investment, and 27% payment to foreign citizens. Limitation includes 24% hidden obstacles of export, 27% average tariff rate, 26% taxes on international business, 23% limitation capital account. Social KOF includes 34% related information to person includes 35% data related to information stream and 31% information related to cultures adjacency that related information to person includes 25% telephone traffic, 3% transportation and transferring as a percentage of (GDP), 26% international tourism, 21% foreign population (percentage of total population), and 24% is international letters (capitation). Related data to information stream includes 33% of internet users (in per 1000 persons), 36% is television (in per 1000 persons), and 31% is business in newspapers (percentage of GDP).related information to cultural adjacency includes 45%McDonald restaurants (capitation), 45% number of Ikea stores, and 10% business in book (GDP percentage). Political KOF includes 25% embassies in state, 28% membership for economic organization in international organizations, 22% is for participation in emissions of U.N Security Council, and 26% international contracts. Generally, economic globalization reduces goods, capital, services, and also information turning distance. Political globalization indicates government policies publication. Social globalization indicates ideas, information, images and people extension. All indexes of globalization are in range 0 to 1. (Higher amounts show more globalization).

2.7. Economic Growth

Economic growth includes increase in national income or gross domestic production (GDP) of a society in certain period that is usually measured as percentage in increase national gross production or national gross income (Basu, 1997). It can be stated that related studies to economic growth includes 3 classes that each one is different according to history and methodology. The first stream is classic one formed in 18th century by David Hume and Adam Amith and finished in the middle of 19th century by Stuart Mill and Carl Marz. The second classic stream was explored after World War II by new statistical method. They considered technology advance as a production growth endogenous factor. The third the newest stream is endogenous stream that rejects classic and neoclassic assumptions by ideal markets and descendant return of factors especially capital.

Endogenous growth emphasizes on this notion that economic growth is economic system result not interring forces from out on it and activities based on innovation are considered as a main engine for technological advances and economic growth(Solow.1956).

Generally, endogenous growth model are mainly divided into 2 main classes: the first class is R&D emphasizing on research and development, knowledge production and its effects on goods and services production can know Roomer as its precursor. The second class is human capital models emphasizing on role of human force quality and related indexes that Lucas had a great role in this model expansion.

3. Research Background

Dollar and Keraay (2001) explored globalization effects on economic growth of developing countries using panel data. Result have shown that countries with higher globalization index has higher economic growth. (Dollar and Keraay, 2001: 6-24)

Lakaster (2004) explored the relationship between globalization and regionalism in small economics. In this research, effective factors on economic growth are explored in these types of countries and factors such as social capital, economics openness, social cohesion, social power, and political power have been emphasized. Research results indicate positive and significant relationship with economic growth. (Lakaster, 2004: 92-101)

Stieglitz (2004) explored the relationship between economic growth and globalization in new-arrival economics. Findings show that in non-optimum management, globalization will have negative effect on economic growth in developing countries.

Delfim Gomes Neto (2006) in a research explored financial globalization on economic growth in 23 countries in 1983-2001 using panel data. Research results have shown that financial globalization has positive and significant effect on economic globalization in these countries. (Gomes, 2006: 1-33)

Basu (2006) proposed 2 suggestions referring to problems globalization makes in poverty increase. First, participation of unemployment in this process of dividends and second, formation of an organization with high execution power to fight with poverty eradication policies and cooperation. (Basu, 2006: 3-37)

Vujakovic,P (2008) in a research measured globalization by a new method ccridng t o12 variables of globalization/ explored period was in 1995-2005 and 70 countries were explored. (Vujakovic,P, 2008: 92-101)

Bhaskara, R & Krishna, CH (2011) in a research explored political, social, and economic effects on economic growth. Used method was panel data, statistical population was 21 African low-income countries in 1992-2010. Results show that globalization has significant and positive effect by little on growth. (Bhaskara ,R. & Krishna, CH, 2011: 805-795)

Chang, C.P& Berdiev, A. N &Lee,C.C (2011) explored energy export effect and globalization on economic growth using Least Square Dummy Variable (LSDV) method in a panel from 5 south Caucasus countries (Azerbaijan, Armenia, Georgia, Russia and Turkey) in period 1990-2009 and research results show that energy export, global cohesion and their interactions have positive and significant effects in south Caucasus countries (Chang, C.P& Berdiev, A. N &Lee, C.C, 2013: 333-346)

Gurgul, H& Lach,L (2014) explored various aspects of globalization on economic growth in ten economics of CEE results show that internet, TV, and newspapers (social aspects of globalization) have positive effect on economic development in CEE economics that increase international business, foreign investment growth, reduction import obstacles and tax policies development (economic aspect) (Gurgul,H&Lach,L, 2014: 99-107)

4. Research Model

In this model effect of energy export and globalization was explored using generalized methods of moment (GMM). GMM is one of estimation model for model parameters in dynamic panel data approach that is usable for time, section, and panel data series. This method considers dynamic mediation effects of dependent variable. If dependent variable entered in model with lag, it will lead to correlation interruption between descriptive (regressive) variables and sentences. Consequently using ordinary least square method shows torched and maladapted results. The generalized model of moments can use tool variables to remove this defect. For mathematical and algebraic statement of GMM, we consider the following dynamic model:

$$Y_{it} = \alpha Y_{it-1} + \beta' X_{it} + \eta_t + \phi_t + \varepsilon_{it} \quad (1)$$

In mentioned relation, Y is dependent variable, X is descriptive variable, η indicates individual effect or countries constant, ϕ is time constant effects, ε interruption term, i and t are indicator of country and time period, respectively. It is assumed in model (1) that disruption terms have correlation with people or countries constants effects and lag amounts are not dependent variables. If η has correlation with some descriptive variables, one proper method to delete constant and individual effects is using first order difference, because in using method with constant effect it will lead to torched nasty estimation. It is necessary to get difference from relation (1); therefore, in this condition, relation (1) changed to the following relation:

$$\Delta Y_{it} = \alpha \Delta Y_{it-1} + \beta' \Delta X_{it} + \Delta \phi_t + \Delta \varepsilon_{it} \quad (2)$$

In relation (2), lagged difference of dependent variable (ΔY_{it-1}) by first order difference of disruption terms ($\Delta \varepsilon_{it}$) has correlation and also endogenous problem related to some descriptive variables is not considered in model. Therefore, it is necessary to remove this problem using tool variables inn model. Therefore, moment conditions is true about relation (2):

$$E(Y_{it-s}, \Delta \varepsilon_{it}) = 0 \quad s \geq 2; t = 3, 4, \dots, T \quad (3)$$

$$E(X_{it-s}, \Delta \varepsilon_{it}) = 0 \quad s \geq 1; t = 3, 4, \dots, T \quad (4)$$

To estimate parameters of relation (2), tool variables matrix has been used:

$$z_i = \text{diag}(Y_{i1}, Y_{i2}, \dots, Y_{it-2}, X_{i1}, X_{i2}, \dots, X_{it-2}) \quad (5)$$

Therefore, GMM dynasties estimation shown by $\hat{\delta}$ is defined as following:

$$\hat{\delta} = (B' z A_N z' B)^{-1} B' z A_N z' Y \quad (6)$$

In the rest after estimation, it is necessary to use Sargan test to explore creditability of defined tools variables in model and extra-clearance of equation. Moreover, self-regression order of disruption terms should be tested, because difference methods of first order to delete constant effects is proper when self-correlation order of disruption term aren't second order. Sargan test (1958) asymptotically has X^2 defined as following:

$$S = \hat{\varepsilon}' z \left(\sum_{i=1}^N z_i' H_i z_i \right)^{-1} z' \hat{\varepsilon} \quad (7)$$

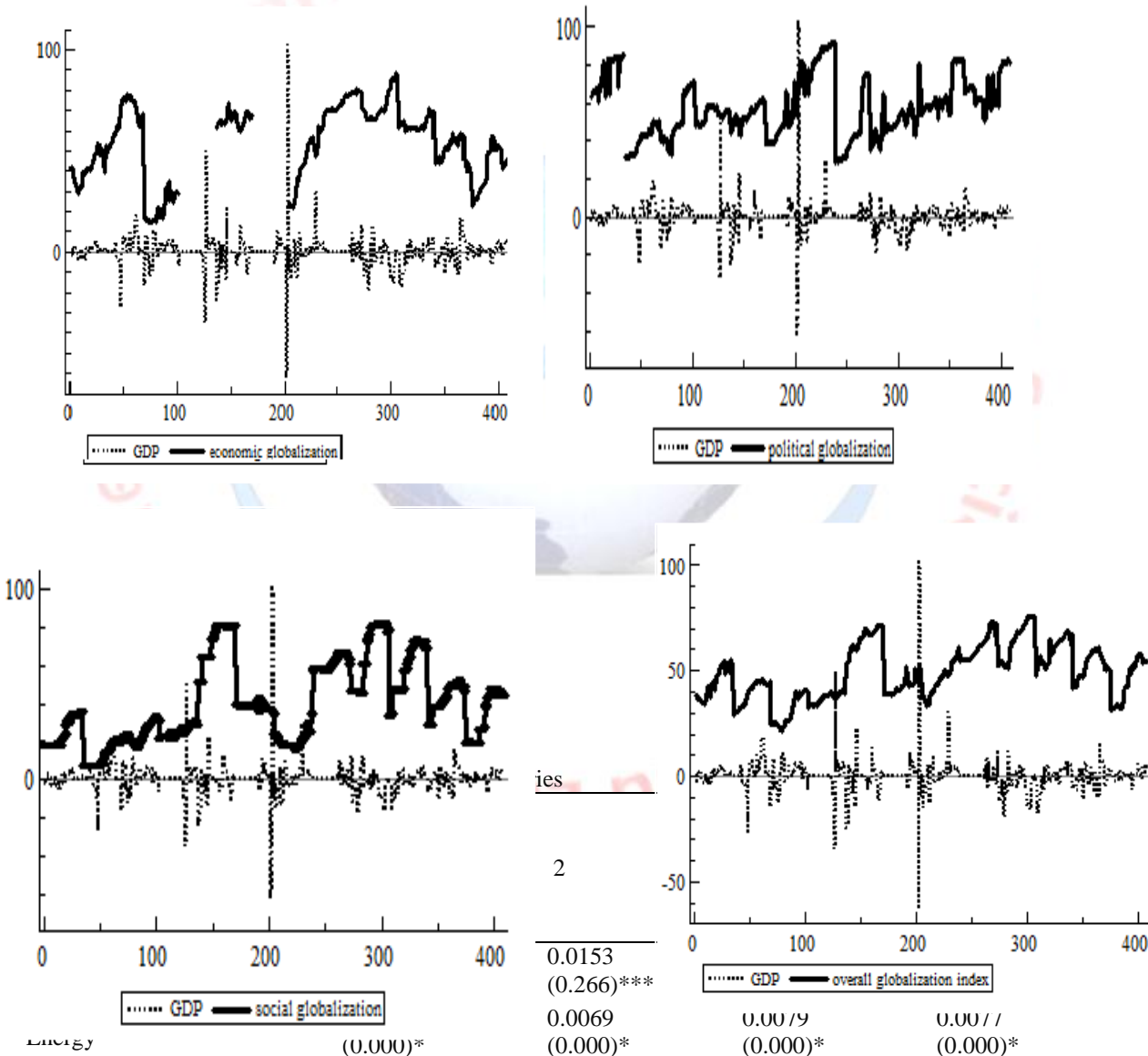
In this test, $Y = X\hat{\delta} + \hat{\varepsilon}$, $\hat{\delta}$ is $k \times 1$ matrix, Z is tool variables matrix, H is square matrix with $(T-q-1)$ dimensions that T is number of observation and q is number of mode descriptive variables. In this test, if H_0 is not rejected, defined tool variables in model will be valid and don't need to more tool variables definition. But if H_0 is rejected, defined tool variable are improper and is insufficient and more proper tool variables should be defined for model. (Baltagi, 2005) to obtain more efficient results, extra descriptive variables are included in model such as government final consumption expenditures a percentage of domestic gross production (government), money and quasi money (M2) as a percentage domestic gross production (money), gross capital making as a percentage of domestic gross production (capital), life expectancy at birth (life), fertility rate (productivity). Based on theoretical bases and literature, and research empirical model of this study have determined the relationship between energy export, economic, social, and political globalization and economic growth explicitly as following:

$$Y_t = C + \beta_1 Y_{t-1} + \beta_2 \text{Energy} + \beta_3 \text{Fertility} + \beta_4 \text{Government} + \beta_5 \text{Capital} + \beta_6 \text{Money} + \beta_7 \text{Life} + U_t \quad (8)$$

That Y_t is grow rate of GDP, Y_{t-1} : annual growth rate of GDP for previous period, Energy: is energy, Fertility: is productivity rate, birth rate, government: is final consumption expenditures of government, capital is gross capital, Money is money and quasi money, Life: is life expectancy at birth. All related data was extracted from global bank.

5. Model Estimation

According to the importance of oil in economic growth and development, OPEC member countries have been explored in this study. Then GMM test in table (1) in time periods 1980-2016 have been used. All data was extracted from global bank.



Fertility	0.0004 (0.000)*	0.0005 (0.000)*	0.0004 (0.000)*	0.0003 (0.000)*
Government	-1.1397 (0.019)*	-2.7022 (0.002)*	-1.8840 (0.029)*	-2.2014 (0.007)*
Capital	1.8284 (0.042)*	3.4357 (0.000)*	2.5142 (0.005)*	2.7551 (0.001)*
Money	-0.7590 (0.027)*	-0.6726 (0.093)**	-0.7909 (0.025)*	-0.6548 (0.064)**
Life	0.0061 (0.000)*	0.0028 (0.000)*	0.0032 (0.001)*	0.0050 (0.001)*
KOFEconomic	-0.0708 (0.000)*			
KOF Social		-0.0251 (0.001)*		
KOF Political			-0.0016 (0.013)*	
KOF Total				-0.0027 (0.058)**
Energi*Kof E	0.0243 (0.038)**			
Energi*Kof S		0.0233 (0.029)*		
Energi*Kof P			0.0381 (0.001)**	
Energi*Kof T				0.0314 (0.005)*
Sargan test (p- value)	32.4538 (0.855)	46.5619 (0.290)	42.671 (0.442)	45.3569 (0.33)
Arellano–Bond test(1) (p- value)	-2.0910 (0.036)	-2.0548 (0.039)	-2.0186 (0.043)	-1.8684 (0.061)
Arellano–Bond test(2) (p- value)	-2.1917 (0.284)	-1.1713 (0.241)	-1.3013 (0.193)	-1.6210 (0.105)

The p-values are presented in brackets. *, ** and *** indicate statistical significance at the 1%, 5% and 10% level, respectively.

Sargan test has been used to determine any types of tools and errors. There shouldn't be correlation between tools and error terms for tools to be valid. H0 test tools validity to the extent errors aren't first order in difference equation. Non-rn test rejection of H0 can be an evidence for tools property. Here, Sargan test results show non-rejection H0 and validity of defined tool variables; therefore, model doesn't need to any other tools. It is better to say, there is no correlation between defined tools variables and constant or individual effects of countries. In the rest, Arlano and Band test statistics has been used to determine self-correlation of disruption terms. It seems that H0 is not rejected for non-existence of self-correlation in difference disruption terms so Arlando and Band method is a proper method to estimate model parameters and deleting constant effects. In other words, by one order of difference from disruption terms, series correlation was deleted from terms elements and differed disruption terms don't have first and second order of self-correlation.

Lag in dependent variable is positive and significant by assumption of other conditions being constant. It means economic growth is related to previous periods. It means with more growth in previous periods, this growth will continue in future that shows growth dynamic. Energy export variable is positive and significant

by assumption of other conditions being constant. It can be for this reason that energy exports motivator force of most service and productive activities can have a certain status in economic development and growth. Export increase of each energy carriers will be economic growth motivator. If OPEC members' countries manage incomes from oil resource export properly, they can use it for economic growth. Birth rate variable coefficient is negative and significant by assumption of all other conditions be constant, because if population growth is not proper with other factors growth, it will lead to economic growth. Gross capital making coefficient is negative and significant by constant assumption of all other factors, maybe because investment capital in these countries which are mostly governmental leads to reduction in private sector role and reduction in economic growth according to its substantial effect. Money and quasi money coefficient is negative and significant by constant assumption of all other factors maybe because society liquidity increase, if not aligned with domestic gross production, is intensifying factor of inflation, instability and reduction in economic growth. Government consumption coefficient by constant assumption of all other conditions is negative and significant, it maybe because government expenditures misleading to non-productive and non-productive fields. In addition, too much interference of government in economic reduces productivity and people efficiency. Bureaucratic inflexible methods and processes lead to stop creativity and innovation potential.

Economic globalization by constant assumption of other conditions is negative and significant. Globalization can increase risk and reduce economic growth. Without considering exchange rate regime, intensive interring of capital then intensive exit make heavy costs on country. Actually, agencies demands risk against high changes in input and output prices that has negative effect on investment and growth.

Social globalization by constant assumption of other conditions is negative and significant that can origin from identity crisis or cultural crisis, dependency, previous life habits and procedures, reduction national government dominance then reduction of political, geographical, cultural importance, limitation of authorities and power of national governments, poverty, unequal income distribution, instability in cultural system especially in the third world countries.

Political globalization id negative and significant by constant assumption of other conditions. In other words, by constant assumption of other conditions, there is reverse relationship between political KOF and GDP growth rate that can originate from getting under the pressure of multi-national companies followed by government are obliged to scarify benefits from economic growth for their multi-national wills. Total globalization effect on economic growth by constant assumption of other conditions is negative and significant. In addition, combined variables of energy export and economic, social and political globalization and total globalization by constant assumption of other conditions is positive and significant on economic growth. Actually, if globalization is with more energy export, it has positive effect on economic growth.

6. Conclusion

Energy export as the main resource of national income for OPEC countries and globalization as one of the most important issues in the world can influence significantly on economic growth of countries. In this research, energy export and globalization has been explored on OPEC member countries in 1980-2016. This research result show that energy export variable has positive and significant effects and globalization variables include economic, social, political, and total globalization have positive and significant effect on positive and significant effect on economic growth. In addition, combined variables of energy export and globalization in all globalization aspects have positive and significant effect on economic growth. In addition, birth rate, life expectancy, government consumption expenditures, money and quasi money, and making gross constant capital have negative and significant effect on economic growth of countries. In addition, negative effect of political and social globalization on economic growth is stronger and weaker than other aspects of globalization, respectively.

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