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The Effect of Openness on Economic Growth in Selected Countries in the MENA Area

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Abstract: The basic objective of growth theories is to explain the factor of determinants of growth rates in one country and investigation of the reasons for differences in growth rates and per capita incomes among the countries. One of the factors that affect the economic growth of some developing countries is openness and the size of their foreign trade. In general, in the path of economic growth in Third World countries, due to the high dependence of these countries on export earnings and on the other hand, the dependence on importing materials needed for planning industrial structure, the openness of the economy plays a critical and essential and at the same time sensitive role. The present study discusses on the relationship between openness of the economy and economic growth in selected countries in the MENA area during 1960-2007 using dynamic panel data model and generalized public moment (GMM). The results of estimating indicate the significant and positive effect of openness on economic growth and also the effect of investment and inflation variables have been estimated positive, negative and significant, respectively.

Keywords: Openness Of The Economy, Economic Growth, Panel Data, Generalized Public Moments.

Introduction

Achieving economic growth and development is an important objective of macroeconomic governments and this aim has always been of interest to planners and policy makers. For a better understanding of the variable, the factors affecting should be understood and various strategies for achieving economic growth and scientifically should be examined so that the best strategies are selected to achieve this aim. In addition, to achieve high and sustainable rates of real economic growth, creating and maintaining a stable macroeconomic environment are very important. Such an environment is known as a prerequisite for economic growth.

In developing countries, especially countries in MENA, the policies resulting in the growth have important and importance position according to the circumstances and the type of their economy. However, in today's world which developing countries have understood the gap between their economies and developed economies have created a huge movement in the Third World countries to eliminate the economic gap. But to achieve the growth and development, many factors are influential that should be enough attention to them so that a long-term growth and balanced can be created. Also, there are different ways of achieving the economic growth which the strengths and weaknesses and areas needed must be studied for each of them to select one of them as a development strategy so that a policy is taken that most coordination have discussed with the economic terms. One of these policies is the policy of the openness of the economy in which increasing the trade volume can cause the economic growth (Rahimi boroujerdi, 2005).

With increasing convergence in the global economy in recent decades, many economists have emphasized the effects of the openness of the economy on various aspects of the economy of the countries such as the economic growth. However, studying this issue whether the openness of the economy leads to increasing the economic growth of the countries or not, and if the answer is positive, what the reason is, is very important. In principle, the openness of the economy results in the transfer of technology through the imports of advanced capital goods. These capital goods imports through high-tech also lead to promoting the growth of export receipts and increasing foreign capital inflows (Rahimi Boroujerdi, 2005).

Several studies have been conducted in this area. Hazrati and Karimi Hasinjeh (2009) showed that trade liberalization means reducing barriers and tariffs which have had a positive impact on the economic growth and as a result, trade restrictions will result in becoming slow the economic growth. Farhadi (2005) concludes that the openness of the economy has a positive impact on the growth of GDP per capita in Iran. Marelli and Signorelli (2011) concluded that variables of the openness of the economy and integration had a significant and positive impact on the economic growth. Chang et al (2009) concluded that the openness of the economy can effectively and significantly improve the economic growth if the right complementary policies. Das and Paul (2011) showed that the openness of the economy had significant and positive effects on the economic growth. Din et al (2003) discussed on the investigation of the relationship between the openness of the economy and the economic growth using time series data from of Pakistan in the period 1960-2001 and utilizing the VAR method. The results of this study indicate the existence of a long-term causal relationship. In other words, the variables in the long-term reinforce the effects of each other, while the business cycles are a result of lack of causality in the short term due to fluctuations.

On the dynamic aspects of trade, Haberler (1990) considers one of the indirect benefits or on his saying, dynamic benefits of international trade in providing the necessary financial tools such as capital goods, machinery, raw materials and intermediate goods and hence technology transference. Technology transference from abroad leads to a reduction in excess capital relative to the product. As far as the growth rate depends on capital accumulation and productivity of investment, small amounts of additional capital lead to accelerate the growth rate of the product (quoted by Gachrati, 2008).

Corden (1971), with designing a pattern based on driving supply for the growth, knows observable five impacts after the doors of one country are opened on the World Trade Center. According to the effect or impact, static interests causing trade result in increasing the current income. In this case, the second effect may be the accumulation of capital. The increase in capital accumulation occurs when some parts of fixed interest are invested. In other words, the amount of real income from the present to the future, rather than an increase in current consumption can be transported. The third effect may be the effect of the succession, which will probably result in the possible reduction in the relative price of capital goods to consumer goods. If the capital goods are based on imports, this subject leads to an increase in the ratio of investment to consumption and an increase in the growth rate. The fourth effect is the effect of income distribution. Income distribution will be in the direction of the factors of the production are heavily used in the production of exports. If the desire for savings will vary between sectors or factors of production, this will affect savings and also the effects of the capital accumulation. Finally, the effect of the weight is the factors that the relative productivity of capital and labor are considered and reflect this fact which if the weighted average of the product growth is affected the rates of the growth of the capital and labor (with a total function of constant returns to scale), so if the exports increase and also the exports use the production factors which have the fastest growth, the export growth increases faster. All of these effects reinforce each other and increase in real income over time, thereby opening the doors of a country on foreign trade will be intensified. In other words, foreign trade through increasing the production leads to investment and economic growth (quoted by Heler, 1992).

With regard to the issues raised, the following questions were designed:

- *Will the openness of the economy lead to the economic growth in selected countries in the MENA area?*
- *What has the effect of the openness have on the economic growth in the countries discussed during the time period?*

Materials and Methods

The present study is an applied research in terms of purpose. The model used in this study is based on the model of the panel. Collecting data and information has been performed using a library and documentation method. Noting that the required data have been extracted from the International Statistical and reliable sources of pwt and WDI (2010), in the analysis, the methods of descriptive and inferential statistics are used. Software used to estimate and analyze data is OxMetrics5 and Eviews 6.

The population of this research is economic variables for the countries of MENA and because the intended purpose of the study is to investigate the effect of the openness on the economic growth in the country, therefore, due to lack of access to data of all countries in the period 1960- 2007, 19 countries were selected having statistical data and information more complete than other the countries including eleven Asian countries (Iran, Jordan, United Arabic Emirates, Bahrain, Syria, Iraq, Saudi Arabia, Oman, Qatar, Lebanon and Kuwait) and eight African countries (Algeria, Tunisia, Djibouti, Libya, Malta, Egypt, Morocco and Yemen).

In this study, the opinion of Nazrul Islam (1995) is used to analyze the relation. The model can be formulized as follows:

$$y_{i,t} = \gamma y_{i,t-1} + \sum_{i=1}^{K} \beta_j x_{i,t}^{j} + \eta_t + \mu_i + \upsilon_{i,t}$$

$y_{i,t}$: The economic growth of the country I in the period of t;

x_{it}^{j} : a vector of the independent variables for the country of I in the period of t which has an effect on the economic growth such as the initial per capita income, capital accumulation (K), inflation (ρ) and trade freedom index (OPEN);

η_t : Time effect;

μ_i : Cross effect;

υ_{it} : This indicates the sentence of disruption including all economic effects not observed.

Results

In the present study, the relationship between openness of the economy and economic growth in selected countries in the MENA area during 1960-2007 using dynamic panel data model and generalized public moment (GMM) has been discussed.

Before estimating the model of the research, it is necessary that the stability of all the variables used be tested in the estimation based on the unit root so that non-faking of the regression model can be assured and this is not a false pattern. Based on the values of probability (probe), all variables are static. The dependent variable is also static with a difference.

One of the problems in regression models is the correlation between residual or waste sentences. Autocorrelation is a violation of one of the standard assumptions of the regression model. Therefore, it is necessary that the test is performed on the lack of correlation among the residuals. The test of AR (2) is used to study such a problem in this research. Test statistics of AR (2) have been confirmed with the null hypothesis that there is no correlation.

Test of Wald shows that whether the estimated coefficients in the model are significant or not. In other words, the hypothesis of H0 is used to zero test of the joint effect of the explanatory variables. The results of Wald test; the null hypothesis on being zero of all coefficients is rejected in the significant level of one percent. As a result, the validity of the estimated coefficients is confirmed.

According to Table 1, it is observed that the coefficient of per capita income is estimated positive. This means that this emphasizes the theoretical foundations of the model in the economy of the countries studied. Also, the openness coefficient of the economy is also positive and significant at the level of 1%. The coefficients of per capita income ($y_{i,t-1}$) and the openness of the economy (OPEN) are 0.68 and 0.15, respectively. In other words, for one percent of change in the initial per capita income, on average, 0.68 percent of increase in the economic growth will be experienced and for one percent of change in the openness of the economy, on average, 0.15 percent of an increase in the economic growth will be occurred. The coefficient of capital and inflation variable are positive and negative, respectively, but both of them were estimated meaningful coefficients. The mentioned coefficients show that the economic growth in these countries will be faced with an increase of 0.12 and reduction of -0.4, respectively with a percentage change in the variable of capital and inflation.

Table 1. The results of model estimation studied in selected countries in the MENA area.

Variable	Symbol	Coefficient	probe	Std .Error	Result
The per capita income lags	Y_{t-1}	0.68	0.00	0.08	Positive - significant
The openness	open	0.15	0.07	0.08	Positive - significant
Accumulation of capital	k	0.12	0.00	0.03	Positive - significant
Inflation	ρ	-0.04	0.02	0.01	Positive - significant

Accordingly, the main hypothesis of the research which stated that "the relationship between the openness and economic growth in selected countries in the MENA area is positive" was tested and it was shown that the impact of the openness on GDP in the countries studies was positive. Therefore, the hypothesis mentioned is accepted.

Discussion and Conclusion

In this study, the effect of the openness on the economic growth in the selected countries in the MENA area in 1960-2007 is studied using dynamic panel data model and generalized public moment (GMM). The results of estimating the model indicate that the openness of the economy of the countries has a positive effect on the economic growth.

In explaining this conclusion, it can be said that international trade creates the possibility of the use of the potential economic abilities with respect to the relative potential and de facto merits and creates broad areas for investment in profitable and competitive economic projects in the global arena. Also, international trade affects the rate of the economic growth through access to foreign markets and technology resources. Foreign trade results in changing the resource allocation from resources and sectors with low productivity to high productivity and directs the resources towards activities that have the highest efficiency. Business administration and also the economy to explore new economic management, improvement of technology and better production practices are encouraged with the expansion of foreign trade. However, opportunities overlooked in the past are converted into the main sources of the economic growth. In addition, the expansion of foreign trade to domestic industrialists provide multiple input sources at a lower cost which enable them to producing final products which have the power of more competitiveness not only in domestic markets but also in international markets.

With trade liberalization, positive spillover effects resulting from technology development of industrial countries, direct the economy to large scales in the production and this in turn results in increasing the economic growth because an economy with a high degree of trade openness and trade regime with low limits always enjoys more capability to absorb technology orientated from the developed countries. It can be said that that's why the capacity to produce goods and services has increased due to technical modifications and improvements. Increase of productivity with specialized production leads to an increase in the importance of facilitating the exchange of goods and services and technology transfer in the field of domestic and international economy and it results in geographical expansion of global markets. In the last decade, the beginning of the formation was a new economic order for global economy in which centralized economies moved towards a market economy and regional economic blocks were formed along with globalization.

Conflict of interest

The authors declare no conflict of interest

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