

## **EXAMINING THE RELATIONSHIP BETWEEN TRADE LIBERALIZATION AND FDI ON ECONOMIC GROWTH IN SELECTED DEVELOPING OIL-EXPORTING COUNTRIES**

**\* Naser Ali Yadollahzadeh Tabari<sup>1</sup>, Mohaddese Soltantooyeh<sup>2</sup>**

<sup>1</sup> *Department of Economics, Babol Branch, Islamic Azad University, Babol, Iran*

<sup>2</sup> *Department of Economics, Babol Branch, Islamic Azad University, Babol, Iran*

*\*Author for Correspondence*

### **ABSTRACT**

One of the main causes of underdevelopment in developing countries rests on the lack of sufficient domestic savings in these countries to achieve the desired level of investment. Recent years have witnessed an increase level of engrossing foreign direct investment as a mechanism in these countries to settle down the problem especially in the East and South-East Asian countries. Foreign direct investment, in addition to repairing savings- investment gap, facilitates the process of economic growth in developing countries through technology transfer and creating spillover and external consequences effects. Increasing the openness degree and reduced trade restrictions on goods and services imports will boost the impact of FDI on the economic growth of the host country. By applying the endogenous growth model, this study seeks to examine the synchronous relationship between trade liberalization and FDI on economic growth in some selected Developing oil-exporting Countries (Algeria, Brazil, Malaysia, India, Iran, Iraq, Kazakhstan, Kuwait, Nigeria, Saudi Arabia, Qatar) from 2006 to 2012. The results indicate a significantly positive relationship between synchronous index and economic growth. Therefore, implementing policies in the given countries to promote export and reduce tariff and establishing policies that are synchronous with trade openness are recommended to spur the foreign direct investment

**Keywords:** *Trade Liberalization, Economic Growth, Developing Countries, Panel Data*

### **INTRODUCTION**

Trade openness or the link of any country to the global economy over time has globally been the issue of interest to economists, planners and policy makers. Some economists and policymakers argue that trade openness (lower trade constraints) improved macroeconomic performance and leads to a faster economic growth. On the other hand, a group of economists casts doubts on the positive impact of more open trade policy on economic growth and believes that existing empirical studies are encountered with methodological problems. As the results of these studies are not consistent on their model specification, sampling and their time span. Consequently, their results at their best are weak and misleading at their worst. The positive linkage of trade openness and economic growth have brought a good motivation for unprecedented unilateral trade reforms over the last twenty years, subsequently, 100 countries have committed to some sort of trade liberalization (Greenaway et al., 2002). The General Agreement on Tariffs and Trade (GATT) in 1947 served as the foundation for the worldwide penchant (leaning) toward trade liberalization and finalized now by the World Trade Organization that replaced GATT in 1955. The conducted studies on evaluating the liberalization change trend specify that movement towards freedom (openness) of trade in developing and developed countries is increasing. (Andria amananjara, 1993) Considering the key role of trade in directing the economic development programs and helping the process of economy globalization, therefore, it seems necessary to evaluate and examine the international trade impact on the investment and economic growth .

In recent decades, regarding the various theories about the impact of foreign trade on economic growth and economic growth on foreign trade and also the economic situation the countries, developing countries have taken different commercial policies. Those countries that measured the relationship between foreign

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trade and economic growth as something infertile for their benefit sought importing substitution strategies and the countries that envisaged such relation between the foreign trade and economic growth as a fruitful opportunity adopted the export development strategy. Whether these two strategies have superiority over each other will remarkably depend on the economic conditions of countries in terms of economic growth resources. The literature on international trade with different assumptions on the resources have brought about different impacts of foreign trade on economic growth and the impact of economic growth on foreign trade (Baldwin, 2003)

Based on the above-mentioned points, it will not be sufficient to review the literature on the international trade to evaluate the relationship between trade liberalization and economic growth in developing countries' economies and correct trade policy adoption, but rather, to examine the relationship between foreign trade and economic growth in developing countries, it is imperative to use the econometric tools. To conduct this, the paper provides a brief review of the literature and offers an analysis of various trade policies then focuses on the econometric models to analyze data and present results in compliance with selected developing countries and finally manages to make conclusion and recommendations .

### **EMPERICAL STUDIES**

Soderbom and Teal (2003), conducted a study on examining the role of foreign trade and human capital on the economic growth in 93 developed and developing countries over the period 1970-2003 through using panel data approach. They concluded that the increase in exports had a positive and significant impact on economic growth; in fact, the expansion of foreign trade increases the productivity leading to economic growth, however, the human capital index, failed to cause any significant effect on economic growth.

Yao (2006), studied the effect of exports and FDI on China's economic performance. The results shed light on the fact that exports and FDI had a positive impact on economic growth in China that was achieved through a policy of export promotion and adoption of modern technology and business practices.

Baltagi et al, (2008) in an article on "Financial Development and Openness: estimates from panel data" assessed the degree of trade and financial openness on financial development in developing and developed countries in the period of 1980-2003. They used development index of banking sector among the indices of financial development as the financial development for the study and model fitting was performed by using panel data analysis. The results served as the witness that for both developed and developing countries, the openness development benefited financial development, in particular, the degree of financial openness is well suited for low-income countries.

In an article entitled as "the relationship between the degree of trade openness, foreign direct investment (FDI) on growth: The Case of Malaysia ,"

Baharom et al. (2008) evaluated the role of trade openness and FDI and their effectiveness on economic growth in Malaysia from 1975 to 2005 using binding test. The result shows that trade openness are positive and statistically significant coefficients on both short-term and long-term growth. They also showed that foreign direct investment (FDI) is positive and significant in the transitional short-term period but prove to be negative in the long run and also pinpointed that trade openness impact on economic growth is remarkably more substantial.

In examining the relationship between FDI, exports and economic growth in Asian countries using panel data, Tiwari and Mutascu (2010) found a non-linear relationship between these variables and the non-linear effects showed that exports compared with FDI was a better option for economic growth in these countries.

Guru-Gharana (2012), using the Autoregressive distributed Lag (ARDL) approach evaluated the relationship between foreign direct investment, exports and economic growth in India from 1971-2008. In his study, he considered the time before and after the trade liberalization and reached the conclusion that the ELG assumption has been established only for the period after trade liberalization. Moreover, the

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evidence shows the existence of long-run relationship between exports, FDI and GDP. The results of error correction model analysis emphasized on the exports as the most important factor in explaining the changes in GDP level. In addition, export was considered as the Granger causality to GDP over short-term and long-term period.

**EXAMINING THE SYNCHRONOUS RELATIONSHIP BETWEEN TRADE OPENNESS AND FOREIGN INVESTMENT BASED ON THE ENDEGENOUS GROWTH MODEL**

Endogenous growth models have established a detailed conceptual framework for analyzing the relationship between trade policies (synchronous relationship between trade openness and FDI) and economic growth. Considering the growth models new approach, the possible long-term relationship between the trade orientation, investment and economic growth has been expressed in various ways. Accordingly, at the outset with trade liberalization the importing is expected to bring the capital goods advanced technology and their technology transfer within the country. Second, the overall development strategy of export orientation is highly desirable when compared with import replacement strategy. Third, FDI leads to exporting technology transfer to developing countries. Fourth, exogenous strategy utilization leads the foreign investment to be applied in economic development without encountering problems like debts (both domestic and foreign ones).Fifth, trade liberalization accelerates the economic growth due to the positive spillover effects resulting from technology development in industrial countries leading the economy to larger economic scales in production. Because an economy with a high degree of trade openness and low limits trade regime has permanently greater ability to absorb oriented technology from developed countries. Although some studies confirmed a positive relationship between economic growth and openness degree, the role of human capital in explaining economic growth is of less interest and attention. In recent years, few studies have described the role of human capital in economic growth in different trade regimes the results of which endorsed modern approach to endogenous growth models. The present study investigated the synchronous relationship between the trade openness and FDI impact and economic growth through applying the human capital and endogenous growth model developed by Lucas (1998).Among the three presented models in the Lucas study, one of the models has highlighted the role of human capital in knowledge acquisition being discussed in various studies. One of the main features of this model locates the two-folded role of human capital in both domestic and foreign trade. On the domestic side, the individual effects of human capital focuses on productivity or the production factor while the foreign division casts light on the effect of human capital on the productivity of other production factors. Suppose that  $L_t$ ,  $q_t$  and  $u$  are related to the labor, the quality of labor and labor hours spent on production, respectively. So that multiplying  $uq_tL_t$  represents the total effective labor force being used to produce  $Y_t$ . In the Lucas model (1988), the  $Y_t$  production is a function of physical capital  $K_t$ , effective labor  $uq_tL_t$  and human capital skills average  $q_a$  as:

$$Y_t = AK_t^b (uq_tL_t)^{1-b} q_a^\gamma$$

in which  $q_a^\gamma$  represents external impacts derived from  $q_t$  average human capital (AHC) and  $A_t$  represents the level of technology which is fixed here. In balance, it is assumed that all labor forces have the same skill level ( $q_t = q_a$ ), thus, Lucas Model can be rewritten as follows:

$$Y_t = AK_t^b (uL_t)^{1-b} q_a^{1+\gamma-b}$$

For the production function, the returns compared with scale are defined as follows:

$$(2 + \gamma - b) > (2 - b) > 1$$

As can be seen in the Lucas model, the ascending return order compared with scale is due to the external effects of human capital serving as the driving force for all sustainable positive economic growth rates. The sustainable growth rate is they index. Also, for simplicity, Lucas (1988) assumes that the labor force devotes parts of his non-leisure time to production ( $u$ ) and the remainder would be allocated to human capital reserve ( $1-u$ ), so we can write:

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$$\frac{\Delta q_i}{q_i} = \delta_i u_i, \quad \delta_i > 0$$

in which  $\delta_i$  is the  $i^{\text{th}}$  labor force skills formation in economy. Regarding the trade liberalization policies, export and industrial sectors in developing countries that enjoy better technology imports and foreign investment may have the possibility to increase the labor force skill levels in these countries. Inspired by Lucas (1998) as well as Dutta and Ahmad (2001) adding the free trade index to Lucas model which was extended for testing, the following production function in order to fulfill the objectives of the study:

$$Y = f ( A, K, L, H, FOP, FDI )$$

Where Y represents GDP per capita and FOP, H, L, K, FDI indicate the synchronization effect, human capital, labor force, capital inputs and foreign direct investment, respectively. A is the capital technical performance index. To determine the degree of openness, a basic index is applied as follows:

$$OP = \frac{IM + EX}{GDP}$$

in which IM and EX and GDP represent the total amount of imports, exports and GDP, respectively.

OP is the freedom or trade openness degree calculated through:

(Total goods exports, imports, and GDP services)

FOP = FDI \* OP: is the overlapping or cumulative effect of FDI and foreign trade.

In order to measure the total FDI effect on the economic growth ( $dY/Y$ ), the above formula will be derived based on the FDI

$$\delta \ln Y / \delta FDI = \beta_3 + \beta_4 OP$$

If the given formula is derived for the OP, then:

$$(\delta \ln Y / \delta FDI) / \delta OP = \beta_4$$

Thus, the  $\beta_4$  indicates how FDI effect changes on economic growth by increasing trade openness. Considering the presented model, a model to study the effects of trade openness impact on the economic growth of developing oil-exporting countries as below:

$$LGDP_{it} = \beta_0 + \beta_1 LK_{it} + \beta_2 LL_{it} + \beta_3 LH_{it} + \beta_4 FOP_{it} + LFDI_{it} + U_{it}$$

LGDP is the natural logarithm of GDP per capita; LK is the logarithm of total capital existing; LL is the logarithm of total employment; LH is the logarithm of total education expenses; FOP is the logarithm of synchronous impact index and LFDI represents the logarithm of foreign direct investment.  $i$  represents countries and  $t$  stands for time. Statistical data related to macroeconomic indicators were obtained from world development indicators (WDI).

In the present study, the countries have been examined based on development index and oil exports amount from 2006 to 2012 in some selected developing oil-exporting countries such as Algeria, Brazil, Malaysia, India, Iran, Iraq, Kazakhstan, Kuwait, Nigeria, Saudi Arabia and Qatar.

**ESTIMATION AND ITS RESULTS**

The results specify that there is a significantly positive relationship between human capital and economic growth, that is, by experiencing a one-percent increase in human capital, the economic growth increases by 0.3 percent.

There is a positive relationship between investment and economic growth in developing countries being significant at the 92% level that with one percent increase in the investment, we would witness an increase of 0.45 percent in economic growth.

There is a negative and statistically significant relationship between the total employed labor force and economic growth showing that a one percent increase in the employed labor force will bring about a reduction of 1.7 percent economic growth in selected developing oil-exporting countries. It can be concluded that the great number of labor force in developing countries not only did not spur economic growth, but also leads to lower economic growth serving as the variable with high coefficient. Therefore, we can conclude that the most important factor in economic growth in developing countries is empowering the resourceful and efficient labor force and increasing productivity in the recruited labor

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force. Because labor force, due to their large number in developing countries, can serve as the most productive force that facilitates the economic growth.

The results also shed lights on a significantly positive relationship between FDI and economic growth in the given countries. A one-percent increase in FDI would put forth an economic growth of about 0.54 percent.

The result of the synchronous relationship states that there is a positive and statistically significant relationship between the synchronous effect and economic growth in developing countries; accordingly, establishing business environment not only attracts increased foreign investment, but also leads to a better use of investments to establish economic growth.

**Table1: The Estimated Result**

variable	coefficient	Std. Error	Prob
LH	0.302024	0.095549	0.0426
LK	0.455918	1.761649	0.0858
LL	-1.706283	-1.964524	0.0564
FOP	0.022036	1.976089	0.0549
LFDI	0.543208	2.358625	0.0233
C	9.134517	5.455096	0.0984
R <sup>2</sup>	0.625056	-	-
F-Statistic	8.288338		0.00000

**CONCLUSION**

The results of the estimated parameters indicate a significantly positive relationship between human capital and investment inputs on economic growth that is consistent with the theories, but the relationship between labor force and economic growth was negative, which is indicative of a lack of adequate labor force training. The results of the relationship between economic growth and synchronous effect represent a significant and positive relationship; consequently, we can use trade and investment opportunities in the global economy and by maintaining the openness of the economy (through accessing the foreign markets, technology and resources), we can establish a significant contribution to economic growth.

Considering the impact of human capital on economic growth, training skilled and professional labor force in various sectors of the economy can be an effective step towards achieving economic growth; therefore, specifying appropriate policies and implementing them seems essential.

The positive effect of trade openness index validated that by implementing policies such as reducing tariffs and promoting exports and establishing policies that are synchronous with trade openness policies, various trade sectors can be strengthened and the high growth is achieved in industry, agriculture and services sectors, which are essential to overall economic growth.

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