

The Impacts of Human Resources and Foreign Direct Investments to Vietnam's Economic Growth

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Abstract

Research on human resources, foreign direct investment and economic development are important issues in assessing the effectiveness of employment as well as attracting foreign direct investment (FDI) in the economy. In this study, the author analyzes the impact of human resource factors and FDI on economic growth in Vietnam from 1990 to 2017. By regression analysis based on the ARDL model, the result shows FDI has only a positive effect on economic growth in the short term but has the opposite effect in the long term. At the same time, unemployment rates have the opposite effect on economic growth in the short term. Average life expectancy does not affect economic growth in both the short and long term. From this result, the author also offers some suggestions for economic development in both the short and long term.

Keywords: human capital, life expectancy, unemployment, economic growth

1. Introduction

Foreign direct investment (FDI) has a positive impact on the economic growth of the invested country. FDI will help solve the problems of employment and technology transfer to the host countries (Gui-Diby, 2016). As of April 2017, Vietnam's FDI inflows were 3.2% higher than in the same period of 2016. FDI not only helped to build up the buffer for foreign exchange but also helped push the economy toward production. Value added items are higher. After 30 years of attracting FDI, the proportion of FDI in total social investment accounts for about 25%, contributes over 20% to GDP, and also accounts for the high proportion of the state budget. Total budget revenue (VEPR, 2017).

Human resources are the source of all development in society, even everyday services that are providing us, such as education, health, are also made by human resources, and the purpose of these services are also an important way of improving the quality of human resources for society to serve a common goal of socio-economic development.

There have been many researchers examining the impact of FDI on economic growth, and the results have also shown the positive effects of FDI on economic growth (Sunde, 2017; Adams, 2009; Meyer & Nguyen, 2005). At the same time, there are studies that show that human capital has a positive effect on economic growth (Grossman, 1972; Shultz, 1961). Vietnam is in the process of attracting strong FDI in recent years, so the increase of FDI or human resources will help find the direction of FDI attraction or focus on developing human resources for economic development of the province further. Therefore, the author has implemented the topic "The impact of FDI and human capital on Vietnam's economic development".

2. Literature Review and Research Method

2.1 Literature Review

Nowadays the role of human resources is increasingly recognized as an important factor besides capital and technology for all growth. Besides, one of the requirements to integrate into the regional economy as well as the world is to have the human resources to meet the requirements of the development level of the region and the world. Human resources are all employees are able to participate in the process and the next generation will

serve the society. Human resource as a factor of socio-economic development is the ability of the society to work in a narrower sense, including the working population in the working age.

Human resources can also be understood as the aggregation of individuals but specific people involved in the labor process, which is the totality of the physical and mental factors that are mobilized into the labor process. Under this understanding, workers include people below the age limit of employment. Human resources are the sum of the potentials, capacities, and abilities of each individual, of each community and of society as a whole, creating the development of society represented by factors such as education, subjects, work skills, living standards, health, and emotional thoughts. Among these factors, the two most important and widespread factors are employment and health.

Foreign Direct Investment (FDI) is a form of long-term investment of an individual or company in another country by setting up a business or production base. That individual or company will be in charge of managing this business.

The World Trade Organization provides the following definition of FDI: Foreign direct investment (FDI) occurs when an investor from a country (investor country) acquires an asset in another country (the country attracts investment) along with the right to manage the property. The management aspect is to distinguish FDI from other financial instruments. In most cases, both the investor and the property he or she manages overseas are business establishments. In those cases, the investor is often referred to as the "parent company" and the assets are called "subsidiary" or "branch." In this study, the author defines direct investment Foreign Direct Investment (FDI) is the movement of capital, technology or any assets from foreign countries to invest in the host country to establish or control an enterprise for the purpose of profitable business.

2.2 Research Method

2.2.1 Research Model

The author uses Sunde's reference model (2017) to assess the impact of FDI on economic growth. In this paper, the author uses time series data to evaluate the impact of sudden changes as well as fluctuations in late stages (Duy, Kien, & Tuyen, 2013). In order to solve the research objectives, the authors refer to the empirical studies and model the following research variables:

The author's model is as follows:

$$GDP = \beta_0 + \beta_1 * UEM + \beta_2 * LE + \beta_3 * FDI + \varepsilon$$

Dependent variable:

GDP: economic growth

Independent variables:

UEM: Unemployee

LE: Average life expectancy

FDI: Foreign direct investment

β_0 : constant

β_1 ; β_2 ; β_3 : Unknown parameters of the model.

ε : white noise

2.2.2 Data

The author collects data on the World Bank database for indicators from 1990 to 2017. Vietnamese variables are collected and processed into the time series data to be input. Since the data is time series, Eviews software is considered suitable for analysis.

2.2.3 Data Analysis

For research purposes, the ARDL (AutoRegressive Distributed Lag) model is used for analysis based on EViews software

In fact, the ARDL model has been shown to be especially useful for describing the behavior of economic, financial and forecasting time series (Aydin, 2000). Based on this feature, the use of the ARDL model to study the impact of independent variables on dependent variables is appropriate (Hashem & Yongcheol, 1997; Chen, 2007; Pasaran & Shin, 1997).

ARDL model:

$$Y_t = m + \alpha_1 Y_{t-1} + \alpha_2 Y_{t-2} + \dots + \alpha_n Y_{t-n} + \beta_0 X_t + \beta_1 X_{t-1} + \dots + \beta_n X_{t-n} + ecm_{t-1} + ut$$

Study variables when running ARDL regression should be sure to stop. The stopping time series is the average, variance, covariance constant at all times (Gurajati, 2003). To test the continuity of the time series, the author uses Unit Root Test based on the extended ADF method (Gurajati, 2003).

The optimal delay is the latency at which the variables are modeled through the delay and other variables and the same latency for the best result. The optimum latency determination based on the selected indicators is supported in the EViews software.

The model has reliability or consistency when ensuring the following criteria: Model does not exist multi-collinear; no autocorrelation and no heterodasticity.

3. Result

3.1 Stationary Test

Table 1. Test results of stationary of data series

	ADF-stats	p-value
GGDP	-2.37318	0.1586
FDI	-2.20001	0.2109
UNEM	-3.94928	0.0059
LE	-2.76442	0.0790
Sai phân bậc nhất		
GGDP	-4.32206	0.0025
FDI	-3.77284	0.0089
LE	-3.72243	0.0107

The test result indicates that the UNEM variable is a stationary variable (the p-value of the ADF test is less than 0.05). The GGDP, FDI and LE are stationary at the first difference. With stop variables, the author proceeds to determine the optimal lag.

3.2 Determine the Optimal Lag

Table 2. Results of determine the optimal lag

Lag	LogL	LR	FPE	AIC	SC	HQ
0	5.992259	NA	9.88E-06	-0.17324	0.024237	-0.12358
1	53.73274	74.72423	6.43E-07	-2.93328	-1.9459	-2.68496
2	92.27414	46.91997*	1.05e-07*	-4.8934	-3.116108*	-4.44642
3	111.7697	16.95268	1.19E-07	-5.197367*	-2.63016	-4.551723*

Indicators choose 3 as the optimal lag. Therefore, the author uses lag 3 for regression analysis.

3.3 The Cointegration Test

With the long-term relationship that may occur between the study variables, the author proceeds to use the Johansen test with unconfined variables. The results are as follows.

Table 3. The result of Johansen test

Hypothesized		Trace	0.05	
No. of CE(s)	Eigenvalue	Statistic	Critical Value	p-value
None *	0.794627	71.67712	47.85613	0.0001
At most 1 *	0.631277	33.68686	29.79707	0.017
At most 2	0.328992	9.74182	15.49471	0.3011
At most 3	0.006911	0.166439	3.841466	0.6833

The results indicate that there is a long-term relationship between research variables. Thus, the author uses the ARDL model for regression analysis.

3.4 Regression Analysis

After the stationary variables, the author conducts the regression analysis. The results are as follows.

Table 4. The result of regression

Short run				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
FDI	0.240054	0.420555	0.570803	0.5821
FDI _{t-1}	-0.63891	0.58184	-1.09808	0.3007
FDI _{t-2}	0.97668	0.465629	2.09755	0.0654
LE	25.31072	72.18759	0.350624	0.7339
LE _{t-1}	127.1033	228.3755	0.556554	0.5914
LE _{t-2}	-70.9101	84.43637	-0.83981	0.4228
UNEM	0.968241	0.605416	1.599299	0.1442
UNEM _{t-1}	-0.44989	0.47868	-0.93985	0.3718
UNEM _{t-2}	-1.50976	0.525118	-2.87509	0.0183
CointEq(-1)	-0.52156	0.152209	-3.42658	0.0075
Cointeq = GGDP - (-3.4054*LFDI + 1.7963*LE + 6.1701*UNEM -70.1315)				
Long Run				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
LFDI	-3.40541	1.427213	-2.38606	0.0408
LE	1.796302	1.22625	1.464875	0.177
UNEM	6.170136	3.711176	1.662582	0.1308
C	-70.1315	66.97372	-1.04715	0.3223

The regression results for the ARDL model indicate that, in the short run, FDI has a positive impact on economic growth with lag 2 at 10% significance (p-value less than 0.1 and positive beta). The unemployment rate also has an impact on economic growth with lag 2 at 5% significance (p-value less than 0.05 and negative beta coefficient). The change in life expectancy has no impact on economic growth during the author's research period.

Regarding the long-term relationship, there is only a long-term relationship between economic growth and FDI. In particular, FDI has the opposite effect on economic growth at 5% significance (p-value less than 0.05 and negative beta coefficient). The variables of unemployment and life expectancy have no impact on long-term economic growth

4. Discussion and conclusion

FDI has a positive impact on economic growth; this result shows that FDI in Vietnam in the period 1990 to 2017 is economically efficient. FDI into Vietnam has solved the problems that a developing country like Vietnam has been experiencing (unemployment, income for economy, production technology ...). The big FDI enterprises such as Samsung have made great contributions to creating jobs as well as professional working environment and modern equipment. Investments in FDI have no immediate impact on economic growth but only have a positive impact in the short to medium term after the investment is two years.

The factor of unemployment that has the opposite effect on economic growth shows that the increase in the number of unemployed leads to reduced income generating work. This leads to a decline in economic growth. In contrast, the economy that creates more jobs will increase incomes. The increase in spending also increases the contribution of GDP as well. At the same time, the unemployment rate in the year did not cause the state of health of the economy to decline right in that year, and then 2 years after the new economic growth is affected.

The regression analysis using the ARDL model has shown the unemployment rate has the opposite effect on economic growth between 1990 and 2017. Therefore, for more economic growth, policy makers need to focus on reducing the unemployment rate by creating more jobs for people by investing in expanding projects that give people more opportunities to work. At the same time actively attract and facilitate foreign investment enterprises in Vietnam in the coming years when the country is on the rise. This increases the amount of labor needed in the country and at the same time creates qualified human resources and high income by working in foreign businesses.

At the same time, because FDI has a positive impact on economic growth in the short-term, the attraction of FDI in the next 10 years still needs attention. However, in the long run, FDI has the opposite effect on Vietnam's economic growth. As a result, it seems that the FDI enterprises and Vietnam, due to the preferential policies, cheap labor and the transfer of technology, are not paid much attention by FDI enterprises. FDI needs to be changed in relation to technology transfers and new technologies. Capture the new technology and master the technology, the country can develop in the long term when attracting FDI.

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