The Influences of FDI, GFCF, OPEN on Vietnamese Economic Growth

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ABSTRACT

The aim of the study is to research the influences of foreign direct investment (FDI), gross fixed capital formation (GFCF), and trade openness of the economy (OPEN) on Vietnamese economic growth. This study uses the annual data for the period 1986 to 2019, obtained from World Bank and Vietnam General Statistics Office. The study shows that FDI, GFCF, and OPEN together influenced Vietnamese economic growth in the period 1986 – 2019 at significant level of 5%, in which the FDI and GFCF determinants have influenced greatly. In the short run, the results indicate that there are bidirectional causality relationships running between FDI and GDP, OPEN and GFCF, and there are unidirectional causality relationships running from GDP to GFCF, from GFCF to FDI, from FDI to OPEN. The study's results confirm that FDI is a more reliable and less violate source of capital and can extend Vietnamese economic growth. According to the study's results, the authors suggest some recommendations to increase Vietnamese economic growth.

KEYWORDS

Economic Growth, FDI, GFCF, Influences, OPEN, Vietnam

INTRODUCTION

There were the previous researches that confirmed the linkage between foreign direct investment (FDI), capital formation (GFCF), trade openness (OPEN) and economic growth (GDP) tends to be positive. Some reasons of assertions are:

First, FDI supplies long-term capital with new technologies, managerial know-how and marketing capabilities which, in turn, increase economic growth by diffusing technologies, operating employments, augmentting managerial skills, and fostering innovations (Asiedu, 2002). FDI pushes economic growth in a host countries by increasing volume as well as efficiency of investment (Romer, 1986; Lucas, 1988; Baro & Salai-I-Martin, 1995).

Second, the level of GFCF is likely to influence FDI and economic growth as well. Neo-classical growth model opine that in a capital shortage economy, the marginal productivity of investment is

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increased in the short-run when additional capital is injected in the form of long-term investment like FDI, and this increased productivity influences economic growth in the long-run (Romer, 1986).

Third, the level of OPEN is likely to affect the flows of foreign capital in terms of risk-return relationship. Countries that reform institution and eliminate tariff and non-tariff barriers will create the advantages for business activities of foreign investors (Coase 1937, Williamson 1975). Liberal trade regime is likely to provide an appropriate environment conducive to learning that must go along with the human capital and new technology infused by FDI (Balasubramanyam et al., 1996). The endogenous growth theories also emphasize that a more open trade policy framework encourages allocative efficiency of investment by reorienting factors of production to sectors that have comparative advantages in trade; thereby promotes economic growth (Solow, 1956; Balasubramanyam et al., 1996).

From 1986, Vietnam opened her economy to attract foreign invest in order to accelerate economic growth. Vietnam Government also lifted restrictions on capital and profit repatriation gradually and opened up industrial sector for foreigners to participate investment. The government also regulated the preferred policies such as import duty exemptions for export processing industries, tax holiday schemes for undertaking investment in priority sectors and low development areas, etc... Therefore, Vietnam attracted a big amount of foreign invest capital. From 1986 to 2019, Vietnam attracted US\$161.098 billion worth of FDI with the annual growth rate is about 6.9%. About 80 countries and territories invested in Vietnam, with Asian countries accounting for almost 70% of the projects and European countries claiming 20%. FDI at present accounts for 50% of Vietnam's industrial output and 70% of her manufactured export sales. In some industries, the ratio of export revenue of foreign players is as high as 100%. Cell phones set an example of that.

But, there are the weaknesses that the Government and the economy should admit such as:

- Investment in transport infrastructure in Vietnam does not match the pace of industrial development and urbanization. The urban transport system relies heavily on roads but they are frequently congested, especially in industrial zones and ports. Meanwhile, airways and waterways are lack of connection and aren't really developed. Therefore, the logistic fee in Vietnam is the highest in the world, equivalent to nearly 21% of the GDP. In this respect, Vietnam has lower competiveness against other countries in the region.
- The second bottleneck is supporting industries. In the beginning, Vietnam did not pay due attention to supporting industries development but rushed to heavy industries. As a result, the country only contributes to assembly, the phase with the lowest added value in the value chain of FDI enterprises. Vietnam don't have enough to be able to join the global supply chain. The rate of local suppliers of input materials for FDI enterprises is small and tends to decline. As case of Samsung, though Samsung contributes a large share to Vietnam's GDP, the income of Vietnam gains from the group's smartphone production is very low. The smartphone are made completely in Vietnam, but Vietnam only supplies cases and connection cables together labor while the remaining parts are provided by other FDI enterprises.

With the above – mentioned reasons, that is the necessary problem to research the influences of FDI, GFCF, OPEN on Vietnam economic growth over the annual period 1986-2019 and proposes the recommendations for stimulating Vietnam economic growth.

LITERATURE

FDI – led economic growth hypothesis of a country can build on foundation of the neoclassical and endogenous growth models. The neoclassical growth theories state that FDI can channel required funds to the productive sectors of capital shortage countries, and it helps these countries to fulfil their investment - savings gap which, in turn, help increase the economic growth rate by increasing the

marginal productivity of capital (Adam, 2009). The neoclassical economists also recognize FDI as more reliable and less volatile source of capital for host countries that can extend economic growth (Lipsey, 1999; Moosa, 2002; Moosa & Cardak, 2006). According to the endogenous growth theories, the long – run growth of a country isn't only influenced by the volume of physical investment but also depend on the efficiency of implementing investment. On the other hand, in the endogenous growth model, the long – run economic growth is viewed as a function of technological progress deriving from technology transfer and knowledge promulgation (Rome, 1994; Nair –Reichert and Weinhold, 2001).

There also are some empirical researches support the FDI -led growth hypothesis. UNCTAD (1992) examines the FDI – led growth hypothesis in developing economies and this study reports that FDI creates a positive effect on employment, skills and international trade, beside the economic growth rate, for Taiwan and China. Zhang (2001) finds that FDI tends to raise economic growth in the Asian economics than in Latin Americas and Zhang (2001) further opines that FDI is likely to raise economic growth when a host country conducts liberalized trade policies, improves education and maintains macroeconomic stability. Caves (1986) states that the reasons for attracting more FDI is formed on the fact that FDI impacts positively on economic growth of host economies. FDI gets significant influence on economic growth in developing economies than in the developed economies (McLean & Shrestha, 2002). But, there also are empirical evidences that reveal negative association between FDI and economic growth. These studies contest that dependence on foreign investment tends to create a negative impact on economic growth and income distribution. Jadhav. P., (2012) studied determinants of FDI in BRICS economies. The study's results showed that Trade openness, Market Size, Voice and accountability, Nature Resource availability are statistically significant. Coefficients of Trade Openness, Inflation rate are positive which implies that theses variables have positive impact on total inward FDI. The research model has R-squared is 86% and probability of F statistics is 0.0000, which mean that the model explain 86% variation in FDI inflow and the null of hypothesis of the independent variables having no effect on FDI inflow is rejected. Most of the FDI literature used share of trade in GDP as a proxy of openness (Bhavan et al., 2011); The dependency theories also argue that foreign grant investors can create negative effect on the growth and development of a host country in the long-run as they have large volume of capital, higher market access, advanced marketing networks, superior technologies, and better managerial and human relation skills (Marksun & Venables 1997; Agosin & Mayer, 2000; Kumar & Pradhan, 2002). Amin (1974) who agrees the dependency theory state that an economy controlled by foreigners does not develop organically rather grows in a dis-calculated manner.

The positive link between trade openness and economic growth can be found in empirical literature. A country with a higher degree of openness has a greater proficiency to arise technological developments and grows more rapidly than a country with a lower degree of openness (Grossman & Helpman, 1991; Barro & Sala - I- Martin, 1995). Trade openness can create a bigger size for technological progress and efficiency in allocating inputs by eliminating trade protect regime which, in turn, stimulates economic growth. Researching East Asian countries for the period 1960 – 1989, World Bank (1983) finds that trade openness has a statistically positive impact on the total factor productivity growth and economic growth. In contrast, Rodrik (1992) states that economic openness can increase inflation, depreciate exchange rates and create macroeconomic instability. Jadhav. P., (2012) studied determinants of FDI in BRICS economies. The study's results showed that Trade openness, Market Size, Voice and accountability, Nature Resource availability are statistically significant. Coefficients of Trade Openness, Inflation rate are positive which implies thar theses variables have positive impact on total inward FDI. The research model has R-squared is 86% and probability of F statistics is 0.0000, which mean that the model explain 86% variation in FDI inflow and the null of hypothesis of the independent variables having no effect on FDI inflow is rejected. Most of the FDI literature used share of trade in GDP as a proxy of openness (Bhavan et al., 2011; Leitao et al., 2010; Jadhay, 2012) and trade openness is positively related to FDI in host country but the impact of openness on FDI depends on whether the investment is market seeking or export- oriented Hussin, F. et al., (2013) wth

the research about determinants of economic growth in Malaysia 1970 -2010. Their analysis shows that GFCF (Gross Fixed Capital Formation) has a statistically significant positive effect on economic growth and GFCF has a important role in stimulating economic growth in Malaysia. Melnyk, Kubatko and Pysarenko (2014) researched the impact of FDI on economic growth in post-communism transition economies. The study's results found out that FDI significantly influences on economic growth of host countries and FDI can be a important source of valuable technology and know-how while fostering linkages with local firms, which can help to jumpstart an economy. They recommended that transition economies should make more attention to the business climate and positive institutional changes. In the study about determinants of foreign capital flows in Sub- Saharan African Countries, William et al., (2014) opined that FDI inflows point to direct investment in making productive assets by entities or firms, non -FDI inflows consists of external debt and portfolio investment inflows. The study's results also confirm the hypothesis that relaxation of restrictions on foreigners' participation in domestic equity market will create conditions for attracting greater inflows and impact on both non-FDI and FDI inflows. In other side, the elimination of multiple exchange rate practices is important for the attract both FDI and non-FDI flows Both the classical and neo - classical growth model postulate that capital is nucleus to economic growth. Capital accumulation helps increase investment, expands new productive capacity, creates employment and gets a lower production cost through greater economy of scale as well as standardization of products. In empirical analysis, many authors conclude that the rate of physical capital formation affects the rate of country's economic growth (Kormendi & Meguire, 1985; Barro, 1991; Levine and Renelt, 1992). With the different opinion, Blomstorm et al., (1996) debate that changes in capital formation rate don't have any significant influence economic growth. On the other hand, in research on G-7 countries, Ghali & Al- Mutawa (1999) report that the causality between capital formation and economic growth is country specific and may run in both directions.

METHODOLOGY AND EMPIRICAL DESIGN

Variables Description

This study uses the annual data for the period 1986 to 2019, obtained from World Bank and Vietnam General Statistics Office. The data are defined thus: (a) The Gross Domestic Product (GDP - in billion US Dollars): This is employed to indicate economic growth. A large-economic size is as a factor attracting foreign investors and a means of measuring the impact of FDI in the host countries. (b) Foreign Direct Investment (FDI – in billion US Dollars): Capital investment made to acquire a long term controlling interest in a firm operating in another country other than that of investors' country. (c) Trade openness of the economy (OPEN - in billion US Dollars): This is value of imports plus value of exports; it is one of the factors that influence to economic growth (d) Gross fixed capital formation (GFCF - in billion US Dollars): To indicate fixed asset size used in economic activities.

Models Specification

This article is limited to the relationship between FDI, GFCF and OPEN to economic growth of Vietnamese emerging economy for the years 1986 to 2019. The basic estimating equation is determined as follows:

$$GDP = \beta_0 + \beta_1 FDI + \beta_3 GFCF + \beta_4 OPEN$$

where β_i is parameters to be estimated.

Table 1. Descriptive statistics

	GDP	FDI	GFCF	OPEN
Mean	81.49556	4.73811	20.98647	131.17850
Median	38.12600	1.94900	12.05000	45.05000
Maximum	261.92100	16.20000	63.30000	551.00000
Minimum	6.29000	0.03000	1.20000	3.64000
Std. Dev	78.81601	5.00601	19.41960	160.29450
Skewness	0.97947	0.91764	0.67802	1.273255
Kurtosis	2.57491	2.51905	2.07173	3.445765
Jarque- Bera	5.69245	5.09930	3.82579	9.468179
Probability	0.05806	0.07810	0.14765	0.008790
Sun	2770.850	161.090	713.540	4460.070
Sum Sq.Dev	204994.500	826.968	12444.990	847913.000
Observations	34	34	34	34

EMPIRICAL RESULTS

Descriptive Statistics

The variables under study are found not to be normally distributed as shown in Table 1. The mean to median ratio of each variable is very big. The standard deviation of each variable is also high, compared to the mean, while the range of variation between maximum and minimum is big. The variables as GDP, FDI, GFCF and OPEN in Table 1 are available to obtain heteroskedasticity and serial correlation, because it is necessary to select the optional method in order to estimate and test.

Figure 1 shows the graph of GDP, FDI, GFCF and OPEN for the period 1986-2019; in them all four variables get the increasing trend over the time.

Stationary Results

To determine whether it is stationary or its order of integration, the Augmented Dickey-Fuller (Dickey, D.A., & Fuller, W.A.1981) and the Phillips – Perron (Philips, P.C.B., & Perron P., 1988) are applied. The results of Augmented Dickey-Fuller (ADF) and the Phillips – Perron (PP) are presented in Table 2 and Table 3.

The results from ADF test and Phillips - Perron test give that GDP, FDI and OPEN are stationary at lag 1, GFCF is stationary at lag 2.

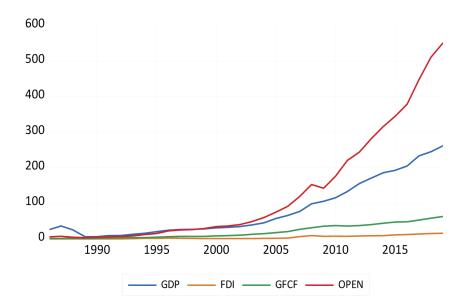
Cointegration Test

Johansen's cointegration test is made to identify cointegration relationship among the variables. The Johansen approach to cointegration test based on two test statistics, viz, the Trace test statistics and the Max eigenvalue test statistics (Johansen, S., 1988) Table 4 presents the result of Johansen cointegration test with tests of Trace Statistic and Max-Eigen Statistic. Accordingly, the Eigen value statistics and likelihood ratio detect three co integrating relationship at 5% level of significance.

The Akaie Information Criterion (AIC), the Likelihod Ratio (LR) and Final prediction error (FPE) test are used to select the number of lags required in the cointegration test. The number of selected lag is 2.

Conducting regression of the research Model. To investigate whether there is homoscedasticity or not, Breusch-Pagan-Godfrey test is made and F_{qs} =1.98 < $F_{0.05}$ (3, 30) =2.92, therefore Null hypothesis

Figure 1. Graph of GDP, FDI, GFCF and OPEN



is rejected and the research Model has heteroskedasticity (Table 6). Similarly, Breusch-Godfrey Serial Correlation LM Test is used to examine the research Model whether there is serial correlation or not, the result gives that $F_{obser} > F_{0.05}$ (2, 28) =3.34 and Prob. F(2,28) < 5%, the research Model has serial correlation at up to 2 lag (Table 7). With above-mentioned reasons, the methods like Ordinary Least Square, Vector Error Correction Model can't be used, etc...

In this study, Generalized Method of Moment (GMM) is suggested to use. GMM estimation typically accounts for heteroskedasticity and/or serial correlation and GMM specification is based on an orthogonality condition between a (possibly nonlinear) function and instruments. The results of GMM in Table 8.

The results from GMM found out that in significant level of 5%, FDI, GFCF and OPEN affect to economic growth of Vietnam in the period 1986-2019.

Table 2. ADF Test

Variables	ADF Statistic	Critical Value	Prob ⁸	Decision
D(GDP)	-6.0109	At 1% level = -4.2732 At 5% level = -3.5577 At 10% level = -3.2123	0.0001	Reject Null Hypothesis of no unit root
D(FDI)	-4.8793	At 1% level = -4.2732 At 5% level = -3.5577 At 10% level = -3.2123	0.0023	Reject Null Hypothesis of no unit root
D(GFCF,2)	-6.2004	At 1% level = -4.2845 At 5% level = -3.5628 At 10% level = -3.2152	0.0001	Reject Null Hypothesis of no unit root
D(OPEN)	-4.7520	At 1% level = -4.2732 At 5% level = -3.5577 At 10% level = -3.2123	0.0031	Reject Null Hypothesis of no unit root

^{*}MacKinnon (1996) one-sided p-values

Table 3. Phillips - Perron Test

Variables	Phillips -Perron Statistic	Critical Value	Prob ⁸	Decision
D(GDP)	-6.0065	At 1% level = -4.2732 At 5% level = -3.5577 At 10% level = -3.2123	0.0001	Reject Null Hypothesis of no unit root
D(FDI)	-4.8436	At 1% level = -4.2732 At 5% level = -3.5577 At 10% level = -3.2123	0.0023	Reject Null Hypothesis of no unit root
D(OPEN)	-4.7082	At 1% level = -4.2732 At 5% level = -3.5577 At 10% level = -3.2123	0.0035	Reject Null Hypothesis of no unit root
D(GFCF,2)	-13.7229	At 1% level = -4.2845 At 5% level = -3.5628 At 10% level = -3.2152	0.0000	Reject Null Hypothesis of no unit root

^{*}MacKinnon (1996) one-sided p-values

Table 4. Johansen Cointegration Test

Hypothesized	Eigenvalue	Trace Test Statistic			Max – Eigen Test Statistic			
No. of CE(s)		Trace Statistic	0.05 Critical Value	Prob.**	Max – Eigen Statistic	0.05 Critical Value	Prob.**	
None *	0.8845	116.1978	47.8561	0.0000	66.9376	27.5843	0.0000	
At most 1 *	0.6577	48.2602	29.7970	0.0001	33.2420	21.1316	0.0006	
At most 2 *	0.3948	16.0181	15.4947	0.0417	15.5690	14.2646	0.0309	
At most 3	0.0143	0.4491	3.8414	0.5027	0.4491	3.8114	0.5027	

Trace test indicates 2 cointegrating eqn(s) at the 0.05 level

Table 5. VAR Lag Order Selection Criteria

Lag	LogL	LR	FPE	AIC	SC	HQ
0	-452.8733	NA	29596088	28.5545	28.7378	28.6153
1	-301.1809	255.9809	6201.962	20.0738	20.9898*	20.3774*
2	-275.4184	37.0364*	3548.6680*	19.4635*	21.1124	20.0101

^{*} indicates lag order selected by the criterion

 $^{^{\}star}$ denotes rejection of the hypothesis at the 0.05 level *

^{*}MacKinnon-Haug-Michelis (1999) p-values

LR: sequential modified LR test statistic (each test at 5% level)

FPE: Final prediction error. AIC: Akaike information criterion

SC: Schwarz information criterion. HQ: Hannan-Quinn information criterion

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Table 6. Heteroskedasticity Test: Breusch-Pagan-Godfrey

Null hypothesis: Homoskedasticity						
F-statistic	1.9817	Prob. F(3,30)	0.1379			
Obs*R-squared	5.6235	Prob. Chi-Square(3)	0.1314			
Scaled explained SS	5.2796	Prob. Chi-Square(3)	0.1524			

Table 7. Breusch-Godfrey Serial Correlation LM Test

Null hypothesis: No serial correlation at up to 1 lag							
F-statistics 18.1249 Prob. F(2,28) 0.0000							
Obs*R-squared	Obs*R-squared 19.6308 Prob. Chi – Square (2) 0.0001						

Table 8. Generalized Method of Moment

Estimation weighting matrix: HAC (Bartlett kernel, Newey-West fixed bandwidth = 4.0000)						
Variable	Coefficient	Std. Error	t-Statistic	Prob.		
С	6.1903	1.6009	3.8666	0.0006		
FDI	2.3090	0.1911	12.0807	0.000		
GFCF	1.6996	0.2179	7.7831	0.0000		
OPEN	0.3153	0.0217	14.4863	0.0000		
R-squared Adjusted R-squared S.E. of regression Durbin-Watson stat Instrument rank	0.8752 0.8726 6.9664 1.7082		Mean dependent var S.D. dependent var Sum squared resid J-statistic Prob(J-statistic)	84.6202 80.2473 1358.877 5.5769 0.3495		

Model is written as:

GDP = 6.190 + 2.309 FDI + 1.699 GFCF + 0.315 OPEN

Causality Test

Table 9 show the Pairwise Granger causality test among the variables analyzed.

Table 9. Pairwise granger causality tests

Lags: 2. Sample: 1986 2019					
Null Hypothesis	Obs	F-Statistic	Prob.	Decision	
FDI does not Granger Cause GDP	32	1.2459	0.3037	Reject	
GDP does not Granger Cause FDI		0.3851	0.7672	Reject	
GFCF does not Granger Cause GDP	32	12.5178	0.0001	Accept	
GDP does not Granger Cause GFCF		1.8873	0.1709	Reject	
OPEN does not Granger Cause GDP	32	0.4906	0.6176	Reject	
GDP does not Granger Cause OPEN		0.8012	0.4592	Reject	
GFCF does not Granger Cause FDI	32	5.3398	0.0111	Accept	
FDI does not Granger Cause GFCF		0.5906	0.5610	Reject	
OPEN does not Granger Cause FDI	32	3.7569	0.0363	Accept	
FDI does not Granger Cause OPEN		0.1247	0.8832	Reject	
OPEN does not Granger Cause GFCF	32	1.3138	0.2854	Reject	
GFCF does not Granger Cause OPEN		2.1934	0.1310	Reject	

CONCLUSION

FDI, GFCF and OPEN together influence to Vietnam economic growth in the period 1986 – 2019 at significant level of 5%; in which the FDI and GFCF determinants have influenced greatly. In the short–run, the results indicate that there are bidirectional causality relationships running between FDI and GDP, OPEN and GPCF, and there are undirectional causality relationships running from GDP to GFCF, from GFCF to FDI, from FDI to OPEN.

The study's results confirm that FDI as more reliable and less violate source of capital and can extend the Vietnam economic growth and these results are in line with the results of neoclassical economists as Lipsey, R. E.,(1999) and Moosa, I. A.,(2002), and researches of the endogenous growth models as Cave, R. E.,(1986), Romer, P.M., (1994) and Nair-Reichert, U., & Weinhold, D., (2001) but contrary to the researches of Amin, S.,(1974) and Agosin, M. R., & Mayer, R., (2000).

GFCF positively effects the rate of country's economic growth. The study's results also united with the ideas of Kormendi & Meguire (1985) and Barro (1991).

OPEN can stimulate to change trade and transfer technology, and increase effectively in allocating resources, a country with a higher degree of openness can grow more rapidly than a country with a lower degree of openness (Grossman & Helpman, 1991; Barro & Sala – I- Martin, 1995). This study's results is contrary with the research of Rodrid (1992) when Rodrid (1992) opined that OPEN can increase inflation, create macroeconomic instability and depreciate exchange rates.

RECOMMENDATION

The world will be reshaped following Covid -19 with many changes in all areas, in them there are South-East Asian. This transformation will be up opportunities for countries which have appropriate strategies and policies to respond successfully to the new context. Vietnam has many advantages for economic growth if she can take appropriate measures to minimize disadvantages. The research proposes some recommendations as follows:

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Vietnam should make further institutional reform to support innovation, to get deeper participation in the global channel, rising role and position on the international arena. A more favourable legal corridor will help the country develop services both intensively and extensively.

Especially, Vietnam signed EVFTA (the European Union-Vietnam Free Trade Agreement) that will officially come into effect on August 1, 2020. EVFTA is expected to give Vietnamese companies better access to European markets, as it will erase most tariffs for Vietnamese products. Meanwhile, Vietnamese consumers will be able to access high – grade European products at lower prices and businesses will have access to the EU's advanced technologies, modern machinery and high –quality production inputs. The Ministry of Vietnam Planning and Investment estimated that the EVFTA could boost Vietnam's exports by 42.7% by 2025 and 44.37% by 2030. It would also help the Country's GDP increase by 2.18 – 3.25% between 2020 and 2023, and 7.07%-7.72% between 2029 and 2033. It will also help Vietnam attract investment and modern technology from the EU. Then, it will push Vietnam to complete its legal system and improve the investment and business environment

2. Having the optional plan to attract the international capital flows and seize occasions.

Since the start of the Sino - US trade war and especially under the impact of the Covid -19 pandemic, there are the international capital flows move out China, together the re-arrange of the global supply chain. To lure foreign investors, Asian countries and India have recently poured significant amount of capital into infrastructure, especially industrial parks and logistic systems. Vietnam should have an appropriate strategy and approach in regional coorperation to take advantage of opportunities and ensure national interests.

3. To attract investment capital into improving socio-economic infrastructure.

Infrastructure (ports, expressways and connections key business locations). Vietnam should utilize resources for infrastructure planning and development, clear bottlenecks for growth, and enhance management capacity and policy transparency. To boost disbursement of investment fund, especially for public investment, in addition to accelerating the digitalization process in aftermath of the pandemic

4. To attract multinational corporations in order to be transferred high technology.

From 1986 to now, Vietnam economic has grown mainly in breadth, based on the exploitation of raw resources and predominance of young labor, etc.. Vietnam's export products mostly are semi – processed products and the added value of the products is very low. On the other side, FDI at present accounts for 50% of Vietnam's industrial output and 70% of her manufactured export sales but foreign investors are reluctant to pour money into high-tech industries or transfer modern technology to Vietnam. Only 5% of foreign –invested enterprises adopt high technology, 80% are medium -technology firms. Low technology has not contributed much to industrialization and modernization.

How to get rid of its dependence on processing and assembly in Vietnam's industries? It is important to attract multinational corporations from developed countries and nurture links between foreign-invested enterprises and local firms, as well as those between production and the market. Priority should be given to hi-tech firms and enterprises that can modernize economic sectors, adopt eco-friendly technology and move in tandem with the 4.0 technology revolution. Development efforts that help localities grow together in line with their own attributes and avoid destroying Vietnam's economic space and national security are of paramount importance.

5. Training high-quality human resource.

It is in one necessary to be aware of strategies and demands of high-tech groups. Vietnam should focus on education development, ensure sufficient high-quality manpower for the next phase of development and select investment projects with high knowledge content and technology, as it is seen as the biggest ever opportunity to attract foreign investment, not only from South Korea, Japan and some other countries but also possibly from big US and EU corporations. Skilled workers aside, these groups also need quality engineers and researchers. The contingent of local engineers and researchers play an important role in supervision, inspection and handling of new situations.

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