Determinants of Foreign Direct Investment: Evidence from Vietnam

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Abstract

The paper investigates the determinants of foreign direct investment (FDI) in Vietnam in 2000-2019 period. This study uses difference Generalized Methods of Moments (GMM) and Pooled Mean Group (PMG) to analyse panel data officially provided by General Statistical Office of Vietnam. The results show that market size impacts positively significant on FDI attraction: 1% -1.45% (PMG) and 1% -1.25% (GMM). Besides, some other factors have positive influences as labor force, macroeconomic policy, macroeconomic stability and skilled labor. Meantime, the trade openness negatively affects FDI inflows in the short-term, while not being statistically significant in the long-term. Moreover, economic shocks often have a negative impact on FDI inflows. The findings of this study lead to the following recommendations. First, authorities should pay special attention to encourage economic growth rate in Vietnam to expand market size because this is the first priority of foreign investors. Second, authorities need to continue increasing the rate of skilled labor, especially highly qualified management force, engineers and well-skilled workers. Third, the authorities should adjust trade openness to boost the role of its determinant in attracting FDI inflows. Fourth, macroeconomic stability needs to be governed by international standards in order to secure the belief of foreign investors in the long-term.

Keywords : Inward FDI, Market Size, Infrastructure, Trade Openness, Vietnam.

JEL Classification Code: F15, F21, F43

1. Introduction

Vietnam implemented renovation process to open up the economy to the rest of the world since the year 1986. The first Law of Foreign Investment in Vietnam dated 29th December 1987 and for the first time, the law established a regime for FDI. According to General Statistics of Vietnam

(GSO) and the Ministry of Planning and Investment (MPI), as of 2019, there exist 29,792 valid projects with a total registered capital of nearly 373.25 billion USD in the country. Accumulated disbursed capital of FDI projects is estimated at over 190.35 billion USD (equivalent to nearly 51% of total registered capital). There are 112 countries and territories have invested in Vietnam, of which South Korea is the largest investor with 6,786 active projects with a total registered capital of more than 55.7 billion USD; Japan was the second with 3,596 valid projects, with a total registered capital of more than 42.1 billion USD. So far, FDI has been invested in 63 provinces and cities across the country focusing mainly in key areas.

The average growth rate of Vietnamese economy is roughly 6.5 percent a year during period 2000-2019. This capital source helps increase gross domestic product (GDP) per capita remarkably, transforming Vietnam from one of the world's poorest nation to a low middle-income one. The fact raises the question of what are the main factors affecting the FDI attraction in Vietnam. And what needs to be done to further leverage FDI in the coming years. The paper will attempt to explore answers by employing the most updated data of 43 out of 63 provinces or cities from 2000 to 2019.

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To this end, the paper is structured as follows: Section 2 reviews the papers on the determinants of FDI in developing countries and Vietnam. Section 3 introduces variables, model and methodology. Section 4 shows the results of empirical research, and the main findings will be presented in Section 5. Section 6 makes a conclusion.

2. Literature Review

There are many empirical papers on researching the factors affecting FDI. However, the variables identified as determinants of FDI vary from one to another. Therefore, it is difficult to unify the determinants of FDI especially some explanatory variables that have been attained but are less important over time. All studies try to answer the question of why some countries attract more FDI than others. Although there is no consensus on the determinants of FDI, however, the past studies indicate some factors positively affecting the attractiveness of FDI inflows as market size (Mottaleb and Kalirajan, 2010; Economou et al., 2017; Asongu et al., 2018); low labour cost (Feestra and Hanson, 1997; Dees, 1998); skilled labor (Mody et al., 1999; Fung et al., 2000). Relating to empirical evidence on macroeconomic policy, some authors found that the inflation rate and its unpredictability negatively impact on FDI (Apergis and Katrakilidis, 1998; Asiedu, 2002; Yao and Wei, 2007) while Alfaro et al. (2009) shows that the increase in domestic inflation speeds up foreign investment through changes in consumption patterns over time. Concerning the role of trade liberalization determinant is also different. Hasen and Gianluigi (2009) and Mottaleb and Kalirajan (2010) indicate that more FDI inflows in an economy where there has bigger trade openness while Brainard (1997) conclude that FDI inflow is positively correlated with trade restrictions.

In developing countries, a set of variables as market sizes, infrastructure, labor costs and the trade openness is affirmed to affect FDI attraction (Khachoo and Khan, 2012; Fayyaz and Constance, 2012; Kumari and Sharma, 2017). While other researchers investigate the FDI inflows on country-level and industry-level, then Choi and Yüce (2016) explain the outward FDI of Korean multinational corporations in the context of their financial performance. They found that the shareholders were able to earn significant positive returns due to the announcement of outward FDI activities. Most recently, Prince and Vijay (2019) explore the determinants of FDI inflows in ten sub-Saharan economies for the period of 1990-2017. They arrive at conclusion that higher inflows of FDI, over time, in relation to GDP appear to be and lower income levels, with higher openness and depreciation in the exchange rate, though the coefficients of the last two variables are not significant. And Camarero et al. (2019) examine the FDI determinants in case of Spain. They point out the following allocation patterns: FDI locational strategies in the

Spanish regions are determined significantly by the economic potential, competitiveness and agglomeration effects of the regions, and to a lesser extent, by the productive capacity.

In case of Vietnam, Christian and Richard (2012) analyze the determinants of FDI in the context of the transition to a market economy and there exists fierce competition among countries in FDI attraction by investigating the time series data for the period 1986-2009 and the Ordinary Least Square (OLS) estimation method. As a result, variables as GDP and labor cost impact positively significant on FDI, while the depreciation of the domestic currency creates negative effect.

Hoang and Goujon (2014) explore the determinants of the distribution of FDI inflows among Vietnamese provinces in the period after the Asian crisis. They found a dominance of the form of regional trade platform FDI, and of regional agglomeration effects. National and provincial economic policies are also found to be important factors for attracting FDI. Nguyen (2016) studies the FDI determinants in Vietnam for the period 2008-2012 by using fixed effect and random effect method. The empirical evidence confirms the significant impact of market potential, labour cost, labour quality, infrastructure, provincial policy effectiveness, and the previous year's FDI concentration on FDI allocation between provinces and cities in Vietnam. Also, market potential and wage rate are statistically shown to affect the size of FDI projects. Ngo et al. (2018) investigate the factors that determine FDI inflows in Vietnam for the period 2008-2013. The empirical results show that market size, infrastructure, labour quality, institutions and policies, and agglomeration are major determinants of FDI inflows.

As such, the review of the empirical studies of FDI determinants shows the inconsistent feature to a certain extent. Furthermore, all relevant variables are not considered as a single model and not all factors are found relevant for each country or region. These empirical studies reveal the diversity from data to methods. And the results depend on the objective, time frame and method used. Therefore it can hardly be the norm for all countries or regions and this is a challenge for researchers to unify the factors affecting current FDI inflows.

3. Variables, Model and Methodology

3.1. Variables and Data

The paper uses the most updated panel data derived officially from GSO for the period 2000-2019. There are 8 variables in the model in which foreign direct investment plays a role as a dependent variable and all the remaining are independent variables (see Table 1). The correlation coefficient between variables are presented in Table 2. The results are almost statistically significant at 1% and 5%

Table 1: Variables and interpretation

Variables	Label	Interpretation
Foreign direct investment	FDI	Logarithm of the disbursed FDI (million USD)
Market size	GDP	Logarithm of the real GDP per capita (billion domestic currency at based-year 2000)
Labour force	LF	A number of people in the labour force
Skilled labor	SL	The ratio of graduated students from universities or colleges divided by the population
Macroeconomic policy	MP	The ratio of net budget balance divided by the real GDP
Infrastructure	TELE	Logarithm of the number of fixed and cellphone post-paid
Trade openness	OPEN	Percentage of total export and import divided by the real GDP
Macroeconomic stability	CPI	Logarithm of consumer price index

Table 2: Correlation coefficients matrix

	FDI	GDP	LF	SL	MP	TELE	OPEN
FDI	1						
GDP	0.6493**	1					
LF	0.1062**	0.0890**	1				
SL	0.3457**	0.3933**	-0.154***	1			
MP	0.5809**	0.6016**	-0.206**	0.3219**	1		
TELE	0.5489**	0.7282**	0.3026**	0.4856**	0.3464**	1	
OPEN	0.5429***	0.4524**	0.1497**	0.2298**	0.4346**	0.4094**	1
CPI	0.1599**	0.2805***	0.3577**	0.0912**	-0.057	0.3860**	0.1156**

Note: The asterisk **, *** denotes the statistical significance at the 5 and 1 percent level, respectively.

levels, except the case of CPI and MP variables. According to Evans (1996), the scale of correlation in these values is moderate and acceptable for financial data. Therefore, the paper puts all the variables selected initially in the empirical model. The paper will be conducted as follows. First, it tests the stationarity of all variables; second, the difference GMM regression is done; third, the residual is tested, and fourth, the result of the PMG regression is analyzed.

3.2. Model

From the theoretical framework as well as the empirical researches on FDI attraction factors, the paper proposes the experimental model according to the equation:

$$Y_{it} = \beta_0 + \beta_1 Y_{it-1} + \beta_2 X_{it} + \varepsilon_{it} \quad (\text{Eq.1})$$

In which:

i is a province or city;

t is the time from 2000 to 2019;

Y is disbursed FDI;

X_{it} is a set of explanatory variables, including:

Market size: Many FDI theories confirm that market size has an important and powerful impact on attracting FDI. Empirical studies continue to reconfirm that role as indicated by Anwar and Nguyen (2010, 2011), Nguyen and Zhang (2012) and Kumari and Sharma (2017). Market size can be measured by GDP per capita or rate of economic growth. A number of empirical studies have shown that the increase in GDP per capita in relation to FDI inflows in host country. The increase in income levels is a good signal of the expansion in market size and purchasing power. Thus, the paper uses real GDP per capita as a derivative for market size variable in assessing FDI attraction in Vietnam.

Labour force: The FDI inflow is mainly from industrialized countries to developing economies, so the labour force factor in host country is very crucial. Foreign investors tend to exploit cheap input factors to maximize their profit. Labour costs are often considered as important determinant especially in manufacturing labor-intensive industries.

Trade openness: Trade openness facilitates interaction with the world economy including FDI flows. The level of openness is an indicator reflecting the entry into the market; a higher level

of openness is often associated with larger markets. Numerous empirical studies are based on total exports and imports of goods and services divided by GDP to measure trade openness. This calculation is supported by Khachu and Khan (2012), Erum et al. (2016), Prince and Vijay (2019).

Infrastructure: Infrastructure is a significant factor contributing to FDI attraction as well as to the flow of capital in the recipient country. There are many ways to measure this control variable as per capita energy use, telephone lines, railroad density, air freight, etc. Based on the practice, the paper selects post-paid mobile and fixed-line subscribers to present as a proxy for infrastructure.

Skilled labor: The paper is concerned with the quality of human resource proxied by skilled labor variable in the model besides the human resources quantity affecting FDI attractiveness in host countries. There are many ways to measure skilled labor variable as the number of years to school, enrollment in training institutions, number of graduated students. Based on the realities, the paper uses the number of students graduated from universities and colleges to represent skilled labor. This variable is also used in the latest study (Le et al., 2019).

Macroeconomic policy: FDI tends to maximize its profit abroad, therefore, the profit must be estimated prior to the investment decision. In order to control effectively business plan, the macroeconomic policy in the host country is very important. There are many ways to assess the macroeconomic status of a government such as on a provincial competitive index (PCI) or budget deficit. The paper derives budget deficit as the control variable representing for macroeconomic policy. This view is supported by Fayyaz and Constance (2012).

Macroeconomic stability: FDI projects tend to approach economies with high macroeconomic stability so as to ensure its business efficiency. There are many ways to measure macroeconomic stability. The paper applies the consumer price index (CPI) as a proxy for macroeconomic stability variable in Vietnam, which is consistent with Kumari and Sharma (2017).

The independent variables in the empirical model of FDI attraction factors are constructed on the base of FDI theory and the results of previous empirical studies and have expected marks shown in Table 3.

3.3. Methodology

The paper applies the GMM method to estimate equation (1) by using the fixed effects (FE). However, when adding lag variables, the FE estimation will be biased when the model has a panel data of small time (T) (Judson and Owen, 1996). Kiviet (1995) explains that the regression coefficients will not be biased as T approaches infinity. That means the FE estimation is only good when the T is large. In other words,

there are some problems that arise when estimating equation (1) as: firstly, the presence of lag variable (Y_{it-1}) will lead to autocorrelation disease; secondly, panel data in the study is short time (T = 20) and large number (N = 43).

In order to resolve these problems, the paper takes the first-order differentiation of variables and transform equation (1) to equation (2) and runs GMM regression, so called the difference GMM.

$$\Delta Y_t = \beta_1 \Delta Y_{t-1} + \beta_2 \Delta X_{it} + \Delta u_{it} \quad (\text{Eq.2})$$

According to Judson and Owen (1996) and Roodman (2006), the Arellano-Bond difference GMM estimation is designed to be suitable for panel data with small T and large N. However, it should be noted that when T is small, Arellano-Bond autocorrelation test may become unreliable. Whereas, if the panel data has a large T then a shock to the fixed effect is reflected in the difference will decrease over time; at the same time, the correlation of the lag dependent variable with the error is not significant (Roodman, 2006).

The diagnostic of the model is tested by the Sargan and Arellano-Bond (AR) statistics. The Sargan test determines the suitability of the tool variables in the GMM model. This is an over-identifying restrictions test of the model. The Sargan test the null hypothesis (H_0) that the tool variable is exogenous meaning it does not correlate with the error of the model. Therefore, the p value of Sargan statistics is as large as possible. Arellano-Bond testing is proposed by Arellano-Bond (1991) to test the autocorrelation in the GMM model in the form of the first order differentiation. Consequently, the sequence implicitly correlates at the first order, AR (1), so the test result is omitted. The second order correlation, AR (2), is tested on the difference to detect the autocorrelation of the AR (1).

However, the GMM method also has limitations: (i) the coefficients vary with each panel unit; (ii) it does not exhibit dynamics characteristics and long-term cointegration. To overcome these shortcomings, the Pooled Mean Group (PMG) method is used because of the following reasons: firstly, according to Pesaran and Smith (1995), the PMG estimation method provides the parameters with a consistent mean value. Pirotte (1999) also argues that the PMG method yields efficiency estimates in the long-term with large sample sizes; secondly, Pesaran et al. (1999) proposes the PMG estimation method, which allows short-term parameters to differentiate among groups while forcing long-term parameters to be unified. So, the advantage of the PMG method is that it can allow dynamic characteristics in the short-term to vary while restricting the same long-term coefficients. As such, the PMG method allows: (i) estimate long-term elasticities; (ii) determine the speed of correction to long-term equilibrium, and (iii) check the robustness of the GMM estimation.

Table 3: Expected marks of the variables

Independent variables	Label	Expected marks
Market size	GDP	+
Labour force	LF	+
Skilled labor	SL	+
Macroeconomic policy	MP	+
Infrastructure	TELE	+
Trade openness	OPEN	+
Macroeconomic stability	CPI	+/-

Table 4: Unit root tests

Variable	Augmented Dickey Fuller		Phillips – Perron	
	No trend	With trend	No trend	With trend
FDI	0.3361	0.0000***	0.0002***	0.0000***
GDP	1.0000	0.8620	1.0000	0.1276
LF	0.9314	0.0001***	1.0000	0.0000***
SL	1.0000	0.9276	1.0000	0.8065
MP	0.0015***	0.1456	0.0000***	0.0000***
TELE	0.0093***	1.0000	0.0000***	1.0000
OPEN	0.0000***	0.0000***	0.0000***	0.0069***
CPI	1.0000	0.9978	0.0000***	0.0000***
Δ GDP	0.0317**	0.7304	0.0000***	0.0000***
Δ SL	0.0000***	0.0000***	0.0000***	0.0000***

Note: The asterisks ** and *** denote the statistical significance at the 5 and 1 percent levels, respectively.

4. Empirical Results

4.1. Unit Root Tests

According to the methodology discussed earlier, the paper applies Augmented Dickey Fuller (ADF) and Phillips-Perron (PP) tests to verify the stationarity of the panel data with and without trend and at lag 2. The results are reported in Table 4. As demonstrated, almost all variables are stationary in level form at a 1% statistical significance except market size and skilled labour variables. Thus, the paper continues to test the stationarity of the first difference of the two. The results of these first differences are stationarity at statistically significant level of 1% and the first-order integrated, I(1).

4.2. Regression Results

The Arellano-Bond GMM regression model has other advantages in comparison with the PMG regression because it takes into account the exogenous characteristics among variables in the model and the autocorrelation of the sequences through the residual terms. Some endogenous

variables when running GMM estimation are FDI, market size, infrastructure, macroeconomic policy. Other variables are exogenous as macroeconomic stability, labour force, trade openness and skilled labour.

In order to evaluate the robustness of the model, the paper runs initial regression for six variables (FDI at lag 1, market size, labour force, budget deficit, infrastructure and CPI). Then the paper continues to add the trade openness variable in model 2, consecutively adding skilled labour variable in model 3. Some insights could be drawn from the regression results are: firstly, the second-order Arellano-Bond test, AR(2), affirms that there has no autocorrelation in the model; secondly, Sargan test asserts that the instrument variables are weakly exogenous, meaning these are not correlated with the residuals in the model; thirdly, on the partial impact of each independent variable on dependent variable (FDI) as following: FDI at lag 1 is statistically significant at a 1% level, some variables as market size and macroeconomic policy are statistically significant at 5% level, macroeconomic stability is statistically significant at 10% level and all the remaining variables are not statistically significant (see Table 5).

Table 5: Regression results by the difference GMM

Variables	Model 1		Model 2		Model 3	
	Coeff.	Prob.	Coeff.	Prob.	Coeff.	Prob.
FDI (-1)	0.445599	0.000***	0.438543	0.000***	0.437690	0.000***
GDP	1.150805	0.027**	1.161164	0.031**	1.257565	0.023**
LF	1.562452	0.574	1.602345	0.565	1.249556	0.661
SL					-7.158091	0.566
MP	2.144431	0.016**	2.018437	0.035**	1.980956	0.037**
TELE	-0.016981	0.920	-0.001123	0.995	0.019519	0.910
OPEN			-0.054187	0.768	-0.037123	0.844
CPI	-1.282795	0.080*	-1.309977	0.077*	-1.379614	0.065*
Obs.	756		756		756	
Sargan test	0.195		0.154		0.151	
AR(2)	0.422		0.409		0.464	

Note: The asterisks *, ** and *** denote the statistical significance at the 10, 5 and 1 percent levels, respectively.

Table 6: Residual tests (ϵ_{it})

Tests	Criteria	t-Statistics	p-Value
Fisher	No trend	227.9670	0.0000***
	With trend	228.1485	0.0000***
Im Pesaran Shin (IPS)	No trend	-5.8216	0.0000***
	With trend	7.6624	0.0000***

Note: The asterisk*** denotes the statistical significance at 1 percent level.

4.3. Residuals Test

Based on the suggestion of McCoskey & Kao (1998) and Larsson et al. (2001) for the case of short T-panel data, the paper tests the cointegration of FDI from the regression equation with the following fixed effects:

$$Y = \alpha_i + \mu_i + \varepsilon_{it} \quad (\text{Eq.3})$$

In which: Y is FDI and X is a set of independent variables; α_i is a intercept for each province or city; μ_i is the vector of variables that does not change over time and ε_{it} is the error term. The criteria for confirming cointegration is as ε_{it} are stationary at the root order, I (0).

The residual test results (ε_{it}) are presented in Table 6. It shows that the residual variable is stationary at the root order, I (0), at a 1% statistical significance level as applying Fisher

and Im Pesaran Shin (IPS) tests in the case of with and without trend. This result demonstrates the existence of cointegration between FDI inflows and independent variables in the model.

4.4. Long-term Regression by PMG Method

As the cointegration established, the paper runs the PMG regression and the results are presented in Table 7. In the long-term, some variables are statistically significant at a 1% level as market size, labour force, macroeconomic policy, macroeconomic stability, skilled labor and both are along with expected marks. In the short-term, only the trade openness variable is statistically significant at 10% level, but the impact is not as expected; all the remaining variables are not statistically significant. The coefficient of adjustment is statistically significant at 1% level. With the value of 0.62, it indicates the instability feature in the short-term and the

Table 7: Regression results by PMG method

Dependent variable: FDI			
Panel A: Long-term coefficients			
Independent variables	Coeff.	Std.	Prob.
GDP	1.453936	0.220091	0.000***
LF	5.099824	1.012918	0.000***
OPEN	-0.044798	0.040585	0.270
MP	2.754427	0.405631	0.000***
CPI	-1.450879	0.495635	0.003***
SL	23.77202	6.732618	0.000***
Panel B: Short-term coefficients			
Error Correction	0.623203	0.086853	0.000**
Δ GDP	2.356842	1.667423	0.158
Δ LF	-1.319373	6.392653	0.836
Δ OPEN	-2.004006	1.204909	0.096*
MP	-0.857009	1.611750	0.595
CPI	-1.132462	1.142699	0.322
SL	-95.60725	96.76602	0.323
Cons.	138.6954	541.2258	0.798
Observations	756		
Log Likelihood	-3269.513		

Note: The asterisks *, ** and *** denote the statistical significance at the 10, 5 and 1 percent levels, respectively.

speed of adjustment is rather high when there has a shock making FDI slip from the long-term equilibrium.

According to the regression results, in the long-term, FDI depends on market size (measured by real GDP per capita), labor force (measured by the ratio of labour on population), macroeconomic policy (measured by the budget deficit on GDP), skilled labor (measured by the number of graduated students). In contrast, FDI inflow is negatively impacted by the trade openness in the short-term and by the macroeconomic stability (measured by CPI) in the long-term.

5. Findings and Discussion

Market size is one of the most important determinants in explaining the inflows of FDI. Market size is defined as the level of economic development, usually measured by GDP per capita. Empirical papers examine this relationship and find out that higher income could attract more FDI inflows into the recipient countries. In the case of Vietnam, the results show a positive effect of market size on FDI attraction. By using the difference GMM method, the

results confirm the positively significant impact of market size on FDI inflows at the 5% significance level. And using the PMG regression, the market size factor affects the FDI in the same direction at the significance level of 1%. Moreover, the correction coefficient is positive then it shows the deviation from equilibrium due to shock. This result demonstrates the importance of market size for FDI attraction, which should be taken into account to create a catalyst for attracting FDI into Vietnam in the near future.

Empirical results by the PMG regression ascertain that the labor force positively impact on attracting FDI flows at a 1% statistical significance level. It shows that the role of the labor force is another decisive factor in attracting FDI flows in Vietnam. However, using the difference GMM method as well as the PMG regression in the short-term, the impact of the labor force on attracting FDI inflows is not established, being statistically insignificant. This result demonstrates the labor force's effect on attracting FDI inflows into Vietnam is unsustainable.

In addition to the labor force factor, it is of great concern whether skilled labor and knowledge workers have a

positively significant impact on FDI inflows. The results reveal that skilled labor has an impact on attracting FDI inflows into Vietnam; concretely, it positively impacts on FDI attraction at the significance level of 1% using the PMG method. Nonetheless, similar to the labor force, the impact of the skilled labor factor is not established with using both the difference GMM and the PMG methods in the short-term, which suggests that the role of this factor is not solid. Therefore, Vietnam should pay special attention to this phenomenon and timely build some policies to make improvement.

The flow of FDI depends strongly on the policies of the host country, especially those directly affecting the operation of FDI projects of which the macroeconomic policy is one of the interest. Many studies have shown that the rational macroeconomic policies of recipient countries have a significant impact on FDI inflows. In the context of Vietnam, this variable is consistent with the expected mark, reflecting the positive impact on FDI inflows. In particular, macroeconomic policy factor has a positive impact on attracting FDI inflows at the 1% statistically significant level by the PMG method. The paper comes to the same conclusion through the difference GMM regression, but at 5% statistically significant level. These above results strongly demonstrate the consistency of the model in assessing the partial impact of macroeconomic policy factor on attracting FDI inflows into Vietnam.

Empirical results point out that the trade openness also has an impact on attracting FDI inflows, however, the estimated outcome is not as expected. According to the PMG method, the trade openness variable exposes a negative impact on FDI in the short-term and has no effect in the long-term. This conclusion is noteworthy, indicating clearly the imperfect feature of the trade openness in the short-term. In fact, Vietnam has been an opened economy since 1986, but there are many countries including major ones as the United States of America (USA), Japan and some others have not seen Vietnam as a perfect market economy. Therefore, trade openness factor is not really attractive to get FDI flows into Vietnam especially in the short-term. Therefore, it is necessary to carry out appropriate trade openness to boost its positive impacts on FDI from the short-term to long-term.

Most previous studies have shown that the positive effect of trade openness on FDI attraction. However, few studies have also shown that international trade impacts negatively on FDI inflows. The low cost of product movement and the removed barriers will promote international trade rather than FDI projects unless the host countries offer some special advantages, which convince foreign investors come into. That fact leads to the comment that increasing trade openness can overrun FDI inflows especially in developing countries.

The stability of the economy plays an important role in attracting FDI, so economic shocks often show a negative impact on FDI attraction. The results of the study in Vietnam reveal that economic shocks have a negative impact on attracting FDI, meaning that an increase in CPI will create a negative effect to attract FDI in both regression methods. Using the difference GMM method, the negative impact is recorded at 10% level of statistical significance. Besides, the robustness and consistency of the model are ensured. Meanwhile, using the PMG method, the negative effect is recorded at the significance level of 1%. Therefore, the paper arrives at the conclusion that the macroeconomic stability is one of the most important determinant to attract more FDI into Vietnam in the coming time.

The results indicate that there is no overshadow on the flow of FDI over the years. Specifically, FDI projects in the current year are motivated to attract other potential FDI sources in Vietnam in the next year demonstrating the positive interaction among FDI projects in Vietnam. This is in line with the reality as successful investors have positively impacted on other potential investors' decision, particularly large FDI projects from industrialized countries.

In summary, by the difference GMM method, some determinants positively impacts on FDI attraction as market size, macroeconomic policy and macroeconomic stability. Not only that, the model confirms the consistency and robustness reflecting the credibility of the results. By the PMG approach, the analysis shows that the factors of market size, labour force, macroeconomic policy, macroeconomic stability, skilled labour and trade openness are statistically significant. There has a strong correlation between market size and FDI inflows, which is mostly consistent with other previous studies.

6. Conclusion and Implications

The results show that the market size factor impacts positively significant to FDI attraction: 1% -1.45% (PMG) and 1% -1.25% (GMM). In addition, some other factors also have a strong impact on FDI attraction as labour force, macroeconomic policy and skilled labour. Simultaneously, the study also demonstrates that Vietnam's opened-door policy in the short-term has not really secured foreign investor's expectations. Besides, economic shocks often have a negative impact on attracting FDI inflows into Vietnam.

The empirical results indicate a positive and significant effect of market size on attracting FDI inflows into Vietnam; being consistent with other previous studies. Therefore, attention should be paid to increase the market size factor. It is necessary to implement policies encouraging GDP

growth in Vietnam in a sustainable and appropriate manner. To this end, it is necessary to implement policies to promote economic growth and create value added from the sectors in Vietnamese economy. In practice, the most popular form of FDI is currently seeking the market especially FDI flows from developed countries to the developing country. Hence, it is a wise option to exploit market size factor to increase FDI attraction in Vietnam in the coming time.

Empirical results show that the role of labor force is very crucial in attracting FDI flows. Therefore, in order to promote FDI volume, Vietnam needs to pay attention to raise labor force in the coming time, taking full advantage of the golden population status. Labor force needs to stabilize over time avoiding factors that cause labour force imbalance over the years. More importantly, special attention should be paid to the quality of labor force, particularly as Vietnam integrates more and more into the regional and global economies.

In the context of Vietnam, the skilled labor makes positively significant impacts on attracting FDI inflows. Thus, Vietnam needs to continue increasing the rate of skilled labor, especially highly qualified management force, engineers and well-skilled workers. To do so, the labor force training needs to be split in two directions: (i) skilled workforce to meet professional requirements; (ii) highly qualified management force that meets international standards.

There is no doubt that the macroeconomic policies of the host country are important for FDI attraction. These policies both contribute to attract FDI flows and ensure conditions for FDI projects to operate after being licensed. Major policies are related to fiscal and monetary policy. Of which fiscal policy should continue to stabilize and improve the efficiency of taxation as well as public investment. And monetary policy should continue to maintain and promote domestic currency stability through inflation and exchange rates. Macroeconomic policies should be oriented towards the reasonable interests of foreign investors and being in harmony with local concerns.

Vietnam has adopted a policy of expanding trade in recent years, manifested in the promulgation of policies to other countries and businesses. However, the practical effect on FDI attraction has not been clearly demonstrated, even the trade openness impacts negatively on attracting FDI inflows in the short-term. Therefore, in the coming time, trade expansion should show the comprehensive effect in many aspects. In addition, trade openness should reflect the perfection of the legal system for investors in general as well as foreign investors in particular, expressing transparency and rationality in all stages relating to FDI projects.

The results of the research indicate that the economic shock has a negative impact on attracting FDI inflows into

Vietnam. Therefore, it is necessary to have appropriate macroeconomic adjustment to promote the FDI's attractiveness especially controlling the cash flow of the economy. Macroeconomic stability needs to be governed by international standards and concurrently in line with the practices in order to secure foreign investors in the long-term.

The reality presents that the impacts of FDI projects by themselves is also different from one to another. There is no connection between existing FDI projects to future ones as well as the positive impact of FDI in this year on next year's impact and negative effect of FDI in current year on potential FDI projects. The study's findings show that there is no congestion of FDI inflows to Vietnam, whereas FDI in Vietnam has a positive impact on potential FDI projects. Therefore, it is necessary to continue to push up FDI inflows particularly from the driving economies as USA, Korea, China, Japan and European Union.

To sum up, the results of the research on the factors affecting FDI inflows in Vietnam indicate that it is necessary to increase the market size, maintain and promote the labor force, continue to enhance the skilled labor, stabilize the macroeconomic policy and adjust the trade openness, while limiting economic shocks by controlling effectively inflation rates.

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