

THE EFFECT OF FOREIGN DIRECT INVESTMENT ON INCOME INEQUALITY IN VIETNAM

Nam Hoai Trinh

PhD Candidate, Graduate School of Global Studies, Doshisha University, Kyoto, Japan

hoainamkttc@gmail.com

Abstract

Income inequality has widened in both developed and developing countries over the past three decades of deepening globalization. It is open to debate, however, whether foreign direct investment (FDI) as one of the driving forces of globalization has contributed to larger income gaps. This study analyses the impact of FDI inflows on income inequality using panel data across Vietnam's provinces during the period 2002-2012. By applying the panel data analyses including the pooled OLS model and fixed effects model, at provincial level, inward FDI in Vietnam tends to reduce income gaps by employing predominantly low-skilled workers. Similarly, secondary education and trade openness are likely to promote the equality of income distribution with the negative and statistically significant coefficients. By contrast, inflation rate, GDP per capita, and population by province tend to exacerbate the income gaps in the case of Vietnam. Domestic investment, on the other hand, has an insignificant effect on income inequality.

Keywords: Foreign direct investment, income inequality, panel data, fixed effects, Vietnam

INTRODUCTION

Along with the trend of increasing economic globalization taking place in the last three decades, an extensive body of theoretical and empirical literature has been devoted to studying the different effects of FDI on host economies. As some authors point out, however, most studies have traditionally focused mainly on the efficiency outcomes of FDI such as economic growth and productivity, leaving their distributional effects largely neglected (Figini and Görg, 2011). Therefore, studies concerning the impact of FDI on income inequality are still relatively new, scarce and ambiguous, which calls for further research on this topic. In addition, there are

increasing public concerns about the socio-economic consequences of high income inequality especially in the aftermath of the recent global economic crisis, making this issue figure prominently in current political and academic dialogue (Mihaylova, 2015).

There are two competing arguments on the impact of FDI on income inequality. On the one hand, FDI helps to reduce income inequality when capitals are invested in the sector that employs abundant low-income unskilled workers (Farhan et al., 2014). On the other hand, inward FDI may deteriorate income distribution because of wage spillovers as *multinational corporations* (MNCs) normally pay higher wages than their local counterparts (Zulfu-Alili, 2014). As they need more employees to work with new technologies, they will use their advantage on capital surplus to offer higher wages in order to attract more skilled as well as unskilled labors to work with them. It is also possible that the MNCs presence would reduce the market share of domestic enterprises. As the profit is decreasing, local firms are forced to reduce its cost by lowering the wage level and number of workers they could hire to remain in the market.

Using the panel data set on FDI and inequality at the provincial level in Vietnam over the period of 2002-2012, the objective of this paper is to empirically examine the effect of FDI on income inequality in the case of Vietnam. The rest of the paper is organized as follows. Section 2 reviews the literature on the impact of FDI on income inequality. Section 3 discusses the methodology and describes the data used. Section 4 presents empirical estimation and interpretation of results. Section 5 concludes the study and proposes policy recommendations.

LITERATURE REVIEW ON THE IMPACT OF FDI ON INCOME INEQUALITY

The first group of studies, which reveal that FDI deepens inequality, is the most extensive. In a panel data analysis on 88 countries in the period 1967-1994, Alderson and Nielsen (1999) found a positive relationship between FDI and income inequality. Using panel data for 65 countries in the period 1980-1995, Beer and Boswell (2002) suggested that the dependence on FDI might turn problematic for countries that are committed to the problem of income inequality. They also pointed out the important role of education in improving human capital, which contributes to a more even income distribution without negative effects on growth.

Pernicious distributional impact of FDI is also found in the study of Reuveny and Li (2003), which used data on 69 countries in the period 1960-1996. A similar conclusion was reached by Choi (2006), whose study was based on 119 countries in the period 1993-2002 and revealed that the rise of FDI stock as a percentage of *gross domestic product* (GDP) was associated with higher income inequality in the host country. Especially, outward FDI rather than inward FDI had more detrimental effect on income distribution. In a panel data study on 119 developing countries in the period 1970-1999, Basu and Guariglia (2007) found that FDI

fostered growth but also led to an increase in income inequality in the host countries. In addition, FDI tended to reduce the share of agriculture to GDP in the recipient country. For FDI to manifest positive distributional effects, the authors suggested policies aimed at improving poor people's access to education. Educational subsidies could help the poor to achieve the minimum amount of capital necessary for them to become entrepreneurs. In the long-term, such policies could allow the poor to catch-up with the rich. At this stage, instead of widening the gap between the rich and the poor, FDI-borne technologies would become welfare improving.

Asteriou et al. (2014) stated that while trade openness exerted an equalizing effect, financial globalization through FDI, capital account openness and stock market capitalization has been the driving force of inequality in the EU-27 during the period from 1995 to 2009. The highest contribution to inequality stemmed from FDI. Although the trade impact remains robust, disparities were observed in the financial globalization effects within a certain group or among country groups.

Several studies on a single country also indicated that FDI led to higher inequality. Worth mentioning are the studies of Lipsey and Sjöholm (2001) on Indonesia, Mah (2002) on South Korea, Zhang and Zhang (2003) on China, and Nunnenkamp et al. (2007) on Bolivia.

A second group of empirical studies, although less extensive than the previous one, found that FDI decreased income inequality in the host country. An example is the study of Jensen and Rosas (2007), which found that FDI in Mexico during the period from 1990 to 2000 led to a reduction in income inequality at the state level. Bhandari (2006) assessed FDI in the U.S. and suggested that it had a beneficial distributional impact, but with substantial variation across regions and time. A similar conclusion was reached by Chintrakarn et al. (2010), who revealed that FDI in the U.S. decreased inequality but this effect was again heterogeneous across states.

Mugeni (2015) by employing a panel dataset of 153 developing and developed countries from 1995 to 2010 suggested that inward FDI along with democracy level reduced income inequality. In addition, robust and significant results were consistent with the assumption that FDI inflows alleviated income inequality in countries with higher level of democracy.

A third group of studies, which failed to find statistically significant relationship between FDI and income inequality, added to the ambiguity of the empirical literature on this topic. Milanovic (2002) used panel data on 88 countries in the period 1985-1998 and found that FDI did not exert any effect on income distribution. In a study on 29 developing countries in the period 1970-1989, Sylwester (2005) also failed to find evidence of a distributional impact of FDI.

Faustino and Vali (2011) analyzed the correlation between income inequality in the OECD countries and economic globalization, measured by trade openness and FDI, for the

period 1995-2007. Their key findings were that trade openness decreases income inequality while FDI impact on inequality was not significant.

METHODOLOGY

Description of the Variables

In the following headlines, some of the key elements that might impact on the income distribution will be discussed in the light of previous studies (Cornia, 2015; Mihaylova, 2015; Kratou and Goaid, 2016). They also exhibit the variables used in the econometric analysis of this study in more detail.

➤ **Gini Coefficient**

Gini coefficient has been used as the dependent variable of the model. Gini coefficient (also known as Gini index) measures the inequality of income among recipients of income. It is a widely used indicator of income inequality. The numeric value of Gini coefficient lies between 0 and 1. In percentage form, it lies between 0 % and 100 %. If the value of Gini coefficient is 0, it shows that income is equally divided among all people which means that all people have equal income (Mushtaq et al., 2014). It shows perfect equality of income distribution. On the other hand, if value of Gini coefficient is 1, this shows that one person has all income. It is perfect inequality of income distribution. The value of Gini coefficient near to 0 shows better distribution of income whereas value near to 1 shows worsening of income distribution. Gini coefficient is mostly used by researchers for the analysis of income distribution (Tian et al., 2008; Georgantopoulos and Tsamis, 2011; Balan et al., 2015).

➤ **Foreign Direct Investment**

The main independent variable of the model is inward FDI. Impact of inward FDI on income inequality may be either positive or negative. Inward FDI may worsen income distribution if it creates less employment due to increased use of capital intensive methods of production. Secondly, if it brings modern technology in the host countries and increases demand for skilled labor more than demand for unskilled labor, it can increase income inequality. On the other hand, inward FDI may improve distribution of income as it fills different gaps in the host economy. It may become a source of more capital formation, can create more jobs and may become a source of betterment of people of the host country. Another channel is that it can increase the economic growth of the host country and then benefits of this economic growth may be shared by the masses leading to better distribution of income (Mushtaq et al., 2014). Therefore, expected sign of coefficient of inward FDI may be either positive or negative depending upon the relative impacts of FDI on income inequality (Chintrakarn et al., 2010; Kurtovic et al., 2016; Kratou and Goaid, 2016).

➤ **Secondary Education**

In order to control for factors of income inequality other than FDI, we include several control variables. In line with previous studies (Tsai, 1995; Mahutga and Bandelj, 2008; Cornia, 2015), we control for the spread of education by including secondary school enrolment per 1000 inhabitants in each province. It is expected to reduce inequality based on the following reasoning. Education increases the overall level of human capital, which results in higher supply of the skilled labor force. This, in turn, contributes to a decrease in skilled wage premium, lowering overall income inequality (Mihaylova, 2015).

➤ **Domestic Investment**

It is total investment in fixed assets divided by provincial GDP. This variable can reflect the level of domestic investment in this area, and adding this variable can avoid that we only consider the impact of foreign investment on income inequality when we regress by this model. An increasing of domestic investment means there are more job opportunities which can narrow income inequality (Yang, 2014).

➤ **Trade Openness**

The fourth independent variable used in the model is trade openness. It is measured by the sum of exports and imports of goods and services as a share of GDP. The trade-to-GDP ratio is a fundamental indicator of trade openness and economic integration. It shows the dependence of exports and imports of the domestic country relative to the country's GDP. Some of the studies that used trade openness measured by the share of sum of exports and imports to GDP are Kai and Hamori (2009); Faustino and Vali (2011); and Esiyok and Ugur(2015).

➤ **Annual Inflation Rate**

The fifth independent variable of the model is annual inflation rate taken as provincial CPI. Impact of inflation on income inequality may be either positive or negative. Positive impact of inflation may be due to two reasons. Firstly, increase in the inflation rate affects the poor more than the rich as purchasing power of the poor decreases more than that of the rich. Secondly, number of poor may also increase as a result of inflation in the country (Mushtaq et al., 2014). Due to this, income inequality may increase.

On the other hand, inflation may improve income distribution because higher inflation leads to increase in investment from production side. It may lead to high economic growth and increase in employment creation. Due to this, demand for and returns to labor may increase resulting in better distribution of income. Therefore, it is expected that the sign of coefficient of inflation may be either positive or negative. This variable has been used by Kai and Hamori (2009); Faustino and Vali (2011); and Satti et al. (2015).

➤ **GDP Per Capita**

The next independent variable of the model is GDP per capita. It has been used as a proxy for economic growth. It is introduced in order to control for the possibility that within-country income inequality can be affected by the stage of economic development, as for instance theorized by Kuznets (1955). This variable has been used by Choi (2006); Kai and Hamori (2009); and Alege et al. (2015).

➤ **Population Size**

Population growth is hypothesized to increase income inequality in developing countries (Lundqvist, 2014). The microeconomic household theory of fertility provides a possible explanation of the process. The theory uses neoclassical consumer behavior assumptions and utility optimization principles as an explanation of how households determine the number of children to have. Children are seen as a consumption good (or investment), whose demand is determined by the cost of having a child, household income, and demand for other goods (Todaro and Smith, 2012).

The Data

This study uses a panel dataset across 63 provinces of Vietnam over the period 2002-2012. In order to evaluate the living standards for policy and socio-economic plan making, the GSO has conducted many household living standards surveys. From 2002 to 2012 particularly, the Vietnam Household Living Standards Survey (VHLSS) is conducted every 2 years by the GSO in the years end with even numbers in order to monitor systematically living standards of Vietnam population's groups; monitor and assess the implementation of the Comprehensive Poverty Reduction and Growth Strategy; making contribution to evaluating results of realization of the Millennium Development Goals and Vietnam Development Goals. VHLSS collects information to be used as the basis for assessment of living standard, including poverty and the gap between the rich and the poor serving for policy making, planning and national targeted programs of the party and the State in order to continuously improve the living standard of population across the country, in all regions and localities. As a result, the Gini coefficient data are calculated every two years. Thus, in order to harmonize with the dependent variable, all the independent variables are computed on a two-year average basis.

Econometric Approach

Pooled OLS

Consistent with the idea of Kashin (2010), the pooled OLS regressions are firstly employed on data by province for the period 2002-2012 with heteroskedasticity-robust errors. In line with

previous studies that have identified the important factors in explaining the behavior of income inequality of the host country as well as by relying on the assumption that there is no cross-sectional dependence or autocorrelation of residuals, the model for this study is specified as follows:

$$\begin{aligned} \ln(GIN_{it}) = & \beta_0 + \beta_1 \ln(FDI_{it}) + \beta_2 \ln(SEC_{it}) + \beta_3 \ln(DOI_{it}) + \beta_4 \ln(TO_{it}) + \beta_5 \ln(INF_{it}) + \beta_6 \ln(PGPC_{it}) \\ & + \beta_7 \ln(POP_{it}) + \varepsilon_{it} \end{aligned} \quad (1)$$

Where,

i indicates province, *t* denotes time and remainder ε_{it} is the error term which is assumed to be white noised and varies over both province and time.

Table 1: Variable Definitions

Variable	Variable Definition	Source
GIN	Gini coefficient by province	GSO
FDI	FDI inflows in Vietnam by province	GSO, MPI
SEC	Secondary education, general pupils (as a share of population) by province	GSO
DOI	Domestic investment by province	GSO, MPI
TO	Trade openness (sum of Exports and Imports as a percentage of PGDP) by province	GSO
INF	Inflation rate by province	GSO
PGPC	Provincial gross domestic product (PGDP) per capita	GSO
POP	Population by province	GSO

Source: General Statistics Office (GSO) of Vietnam,
Ministry of Planning and Investment (MPI) of Vietnam.

Table 2: Summary Statistics

Variable	Obs	Mean	Std. Dev.	Min	Max
LnGIN	378	-0.97	-3.21	-1.56	-0.83
LnFDI	378	-4.90	2.69	-10.19	1.31
LnSEC	378	0.08	0.02	0.03	0.12
LnDOI	378	-1.05	0.58	-3.52	0.72
LnTO	378	-1.28	1.25	-6.91	1.94
LnINF	378	-2.81	-2.99	-3.11	-0.99
LnPGPC	378	1.75	0.65	0.47	4.90
LnPOP	378	7.29	7.16	5.71	8.94

Source: Author's calculation

Additionally, the full description of each variable used in the analysis, as well as their sources is presented in Table 1. On the other hand, the summary statistics for both the dependent and explanatory variables are shown in the Table 2.

Fixed Effects

In addition to the simple OLS, this paper also utilizes a fixed effects estimator to control for unobserved variation across provinces that remains constant over time. Thus, this estimator handles for political factors, cultural factors, and institutional factors, among other omitted variables, that may all have an effect on the relationship between FDI and income inequality and can be considered to remain fairly consistent over time. Moreover, this estimator has the distinct advantage compared to previous specification of absorbing cross-regional variation in initial conditions. The fixed effects model can be rewritten as follows:

$$\begin{aligned} \ln(GIN_{it}) = & \beta_0 + \beta_1 \ln(FDI_{it}) + \beta_2 \ln(SEC_{it}) + \beta_3 \ln(DOI_{it}) + \beta_4 \ln(TO_{it}) + \beta_5 \ln(INF_{it}) + \beta_6 \ln(PGPC_{it}) \\ & + \beta_7 \ln(POP_{it}) + v_i + \varepsilon_{it} \end{aligned} \quad (2)$$

Where,

v_i represents province's unobservable individual effects. In addition, to confirm the applicability of the fixed effects model to data as compared with the random effects model, the Hausman test is employed, which takes as its null hypothesis that the time-invariant residual v_i is not correlated with any of the regressors, allowing for the use of the more efficient random effects model. As for the previous model, the regular fixed effects estimator is robust to heteroskedasticity, but otherwise dependent on the assumption that the errors are independent identically distributed (i.i.d.). In addition, all regressions are performed using the econometric software STATA.

EMPIRICAL RESULTS

Pooled OLS

Table 3 shows the results from the pooled OLS model with heteroskedasticity-robust errors. In the baseline specification where the logarithm of FDI is the only explanatory variable, its coefficient is negative and statistically significant at the 5% level of significance (column 1), indicating that greater FDI inflows likely associated with lower inequality in Vietnam. It suggests that the distributional impact of FDI in a developing host country is similar to that of international trade according to the Heckscher-Ohlin model and the Stolper-Samuelson theorem. Their prediction is that both FDI and trade should take advantage of the abundance of low-skilled workers in developing economies. This leads to increased demand and higher wages for low-skilled labors, thereby reduces wage dispersion and income inequality in the host economy. This result is in line with the findings of Jensen and Rosas (2007), which reveals that FDI in Mexico over the period from 1990 to 2000 leads to a decline in income inequality at the state level. The negative relationship between this variable and the logarithm of the Gini coefficient is robust to a number of sensitivity tests.

First, secondary education and domestic investment are used as control variables (column 2). The coefficients of secondary education are negative and statistically significant, suggesting that education enhances the level of human capital, which results in greater supply of skilled workforce. This, in turn, contributes to a decrease in skilled wage premium, lowering overall income inequality. In contrast, the coefficients of domestic investment are statistically insignificant, which indicates that the impact of domestic investment on income inequality is inconclusive in Vietnam over the period from 2002 to 2012.

Table 3: Impact of FDI Inflows on Income Inequality - Pooled OLS

	Dependent Variable: LnGIN				
	Pooled OLS				
	(1)	(2)	(3)	(4)	(5)
LnFDI	-0.0626** (-2.41)	-0.0711* (-1.81)	-0.0894** (-2.35)	-0.0703** (-2.29)	-0.0521** (-2.39)
LnSEC		-0.0167*** (-3.03)	-0.0097* (-1.81)	-0.0103** (-2.46)	-0.0085** (-2.27)
LnDOI		0.0787 (1.24)	-0.1003 (-0.15)	0.0932 (1.36)	-0.0979 (-0.72)
LnTO			-0.1126*** (-3.66)	-0.0986** (-2.19)	-0.0722*** (-4.17)
LnINF			0.0769** (2.31)	0.0318** (2.34)	0.1231** (2.44)
LnPGPC				0.1439** (2.47)	0.1791*** (4.05)
LnPOP					0.1336** (2.33)
Observations	378	378	378	378	378
R - squared	0.361	0.414	0.533	0.379	0.617
F test	36.63	41.57	42.77	39.26	37.88
Prob>F	0	0	0	0	0

Note: Values in parentheses are t-statistics. *, ** and *** indicate significance at the 10%, 5%, and 1% levels, respectively.

In addition, controls are added for trade openness, inflation rate, GDP per capita, and population by province in columns 3, 4, and 5, respectively. The estimation results reveal that openness to trade has a negative and statistically significant impact on income inequality. Consistent with the principal international trade theory (Stolper and Samuelson, 1941), under free trade, country with relatively abundant factor will specialize in the production of goods that use intensively the abundant factor. Most of the developing countries are relatively abundant in unskilled labor and thus have a comparative advantage in producing unskilled labor-intensive goods when compared with developed countries. Therefore, trade openness should raise the

demand for the unskilled workers as well as their wages and consequently decrease in income inequality (Meschi and Vivarelli, 2009).

Inflation rate has a positive and statistically significant influence on income inequality at the 5% significance level. It indicates that inflation hurts the poorest segment of society because it causes the worsening of existing income inequalities in the economy as money transfers from the poor to the rich and it becomes harder to meet life's necessities as well as people are trapped in a vicious circle of poverty. The negative impacts of inflation on the poor are intensified when wages fail to chase increasing price levels. In developing countries such as Vietnam, trade unions are weak and minimum wage laws do not work properly, due to weak institutions, and therefore workers are left with less or no rise in wages, whereas firms enjoy the benefits of rising prices and become richer (MacDonald and Majeed, 2010).

Provincial GDP per capita is found to have a positive and statistically significant relationship with income inequality. It denotes that greater GDP per capita by province is associated with higher income inequality. Similarly, population has a positive and statistically significant impact on income inequality, indicating the fact that poor households mostly account for a substantial part of population growth because they often prefer quantity to quality of children.

Furthermore, everything being equal, an additional child has a higher diminishing impact on household per capita income in poorer households (Asongu and Tchamyou, 2015). The coefficient of inward FDI remains consistently negative and statistically significant upon the addition of these controls.

Fixed Effects

To control the possibility of region-specific effects that are time-invariant and equally inter-temporally correlated within the region, the fixed effects model is applied. This model focuses on within-region variation and the coefficients on the parameters indicate a cross-regional average of their impact on the dependent variable over time. In addition, to check whether the random effects model is more appropriate than the fixed effects model, we use the Hausman specification test. The null hypothesis that the region-specific error term v_i is not correlated with the regressors is repeatedly rejected, meaning that fixed effects model is more appropriate.

Next, we test for the possibility that the residuals exhibit autocorrelation using the Wooldridge (2002) test for serial correlation. The results consistently suggest that there is no presence of autocorrelation across different specifications of the fixed effects regression.

Table 4: Impact of FDI Inflows on Income Inequality - Fixed Effects

	Dependent Variable: LnGIN			
	Fixed Effects			
	(1)	(2)	(3)	(4)
LnFDI	-0.0379** (-2.19)	-0.0386* (-1.79)	-0.0515* (-1.86)	-0.0460** (-2.23)
LnSEC		-0.0341** (-2.31)	-0.0319** (-2.16)	-0.0258** (-2.29)
LnDOI		0.0808 (0.24)	-0.1131 (-1.18)	0.1042 (0.63)
LnTO			-0.0626** (-2.18)	-0.0519* (-1.76)
LnINF			0.0747* (1.82)	0.1016** (2.22)
LnPGPC				0.0997* (1.93)
LnPOP				0.1251** (2.27)
Observations	378	378	378	378
R - squared within	0.1502	0.1453	0.1615	0.2279

Note: Values in parentheses are t-statistics. *, ** and *** indicate significance at the 10%, 5%, and 1% levels, respectively.

Similar to the previous specification, FDI inflows have a negative and statistically significant relationship with income inequality at the 5% level of significance (Table 4, column 1). The result is robust to the addition of secondary education and domestic investment as control variables in column 2, as well as the inclusion of trade openness and inflation rate in column 3. The negative coefficient of inward FDI remains its significance when controlling for provincial GDP per capita and population, which significantly related to income inequality (column 4).

Secondary education is found to have a negative and statistically significant effect on income inequality. This conforms to both economic and statistical expectation. It shows that secondary school attainment helps to reduce income inequality. The impact of education on income inequality is commonly known as “the spread of education”, indicating the positive influence of education on improving distribution. Viaene and Zilcha (2001), and Jin and Lee (2013) have all found that education reduces income inequality and considered education as a means of redistribution and policy prescription.

Openness to trade including imports and exports has a negative and statistically significant impact on income inequality. It suggests that trade openness has an inequality reduction effect in Vietnam. Additionally, its coefficient of elasticity also implies that the negative impact of trade openness on Gini index is higher than that of inward FDI. This result is

consistent with the finding of Lim and McNelis (2014), who investigate that trade openness is more effective in changing income inequality than FDI and foreign aid.

Inflation rate, on the other hand, has a positive and statistically significant relationship with income inequality. It means that inflation is one of the key determinants of income inequality. Inflation may create differences in real wages between protected and unprotected workers (Satti et al., 2015). While government may prevent this inflation-generated income distribution gap through fiscal equalization, this can be a major source of inequality, particularly for an economy in transition.

CONCLUSION

Income inequality has widened in both developed and developing countries over the past two decades of deepening globalization. It is open to debate, however, whether FDI as one of the driving forces of globalization has contributed to larger income gaps. Previous empirical findings are inconclusive even though there is a considerable literature on the impacts of inward FDI on inequality in developing countries. This study analyses the effect of FDI inflows on income inequality using panel data across Vietnam's provinces during the period 2002- 2012. By applying the panel data analyses including the pooled OLS model and fixed effects model, at provincial level, FDI is found to have a negative and statistically significant influence on income inequality, indicating that FDI activities in Vietnam tend to reduce income gap by employing predominantly low-skilled workers. This result is consistent with the findings of Farhan et al. (2014) and Msweli (2015). Similarly, secondary education and trade openness are likely to promote the equality of income distribution with the negative and statistically significant coefficients. By contrast, inflation rate, GDP per capita, and population by province have positive and significant relationship with income inequality, suggesting that these factors tend to exacerbate the income gap in the case of Vietnam. Domestic investment, on the other hand, has an insignificant effect on income inequality.

As FDI inflows are likely to improve the income distribution across provinces in Vietnam, therefore, the provinces should encourage more inward FDI because it can lead to more investment and increase employment opportunities. As a result, those people who are unemployed may get jobs. Their earnings may increase and eventually, this could lead to reduce income gap between the rich and the poor (Mushtaq et al., 2014). To make trade openness favorable for income distribution, Vietnamese government should try to enhance exports and decrease imports of the country but a certain limit should be considered because issue of retaliation may occur by the trade partners of Vietnam if it continues to limit its imports beyond a certain limit and this may result in further decline of the country's exports. Economic

growth can be beneficial to the mass of the country if there are better distribution policies. If there is high economic growth but its distribution is not equitable, then it is not favorable for the poor. Thus, economic growth can be made favorable for income distribution through progressive taxation system. In addition, Vietnamese government should keep inflation within a certain limit and it should also compensate the poor against inflation.

Developing supporting industries is very much related to sustaining FDI firms. Additionally, promotion of FDI projects should be parallel with the development of a human resource base as well as the creation of a level playing field that will generate a favorable business environment for all economic entities. FDI, of course, can play a key role in strengthening supporting industries, for instance, through the promotion of joint ventures between (private) local SMEs and foreign partners in supporting industries. In this regard, there is a need to support and to give some incentives from the Vietnamese government (Vo and Nguyen, 2012). It is also very essential to establish closer links between higher value-added services and manufacturing.

Our approach produces some interesting findings but also opens the door for further research. First, at the theoretical level, more effort should be put into the investigation of FDI as a channel for technology transfer, and hence, as a globalization factor affecting inequality. Second, at the empirical level, more care should be dedicated to other income inequality measurements, not only in terms of Gini coefficient, but also in terms of Theil index, the ratio of the average income of the 10% richest to the 10% poorest, the skilled to unskilled wage ratio, and the urban to rural income ratio. Third, other elements of income inequality components will be included, such as environmental, political, and governmental factors. Fourth, to better understand the distributional effect of FDI in the case of Vietnam, future research should focus on exploring how these transmission mechanisms work using microeconomic data at the firm level.

REFERENCES

- Alderson, A. S., & Nielsen, F. (1999). Income Inequality, Development, and Dependence: A Reconsideration. *American Sociological Review*, 64(4), 606-631.
- Alege, P., George, E., Ojeaga, P., & Queen-Esther, O. (2015). Is Africa's Current Growth Reducing Inequality? Evidence from some Selected African Countries. Munich Personal RePEc Archive Paper, No. 62187.
- Asongu, S. A., & Tchamyou, V. S. (2015). Inequality, Finance and Pro-Poor Investment in Africa. African Governance and Development Institute Working Paper, No. WP/15/052.
- Asteriou, D., Dimelis, S., & Moudatsou, A. (2014). Globalization and Income Inequality: A Panel Data Econometric Approach for the EU27 Countries. *Economic Modelling*, 36, 592-599.

- Balan, F., Torun, M., & Kilic, C. (2015). Globalization and Income Inequality in G7: A Bootstrap Panel Granger Causality Analysis. *International Journal of Economics and Finance*, 7(10), 192-203.
- Barro, R. J. (2000). Inequality and Growth in a Panel of Countries. *Journal of Economic Growth*, 5(1), 5-32.
- Basu, P., & Guariglia, A. (2007). Foreign Direct Investment, Inequality, and Growth. *Journal of Macroeconomics*, 29(4), 824-839.
- Beer, L., & Boswell, T. (2002). The Resilience of Dependency Effects in Explaining Income Inequality in the Global Economy: A Cross-national Analysis, 1975-1995. *Journal of World-Systems Research*, 8(1), 30-59.
- Bhandari, B. (2006). Essays on Foreign Direct Investment and Income Inequality, and Cross-price Effects in the US Trade Balance. Doctoral Dissertation. University of Oregon, United States.
- Chintrakarn, P., Herzer, D., & Nunnenkamp, P. (2010). FDI and Income Inequality: Evidence from a Panel of US States. Kiel Institute for the World Economy, Kiel Working Paper, No. 1579.
- Choi, C. (2006). Does Foreign Direct Investment Affect Domestic Income Inequality. *Applied Economics Letters*, 13(12), 811-814.
- Cornia, G. A. (2015). Income Inequality in Latin America: Recent Decline and Prospects for its Further Reduction. WIDER Working Paper, No. 2015/020.
- Esiyok, B., & Ugur, M. (2015). A Spatial Regression Approach to FDI in Vietnam: Province-level Evidence. *The Singapore Economic Review*, No. 1550115.
- Farhan, M.Z.M., Azman-Saini, W.N.W., & Law, S. H. (2014). FDI and Income Inequality in ASEAN-5 Countries: A Quantile Regression Approach. *Persidangan Kebangsaan Ekonomi Malaysia ke-9 (PERKEM ke-9)*, 601 - 608.
- Faustino, H., & Vali, C. (2011). The Effects of Globalization on OECD Income Inequality: A Static and Dynamic Analysis. Technical University of Lisbon, School of Economics and Management, Department of Economics Working Papers; No. 12/2011/DE.
- Figini, P., & Görg, H. (2011). Does Foreign Direct Investment Affect Wage Inequality? An Empirical Investigation. *The World Economy*, 34(9), 1455-1475.
- Georgantopoulos, A. G., & Tsamis, A. D. (2011). The Impact of Globalization on Income Distribution: The Case of Hungary. *Research Journal of International Studies*, 21, 17-25.
- Heckscher, E. (1919). The Effect of Foreign Trade on the Distribution of Income. *Ekonomisk Tidskrift*, 21, 497-512.
- Jensen, N. M., & Rosas, G. (2007). Foreign Direct Investment and Income Inequality in Mexico, 1990-2000. *International Organization*, 61(3), 467-487.
- Jin, F., & Lee, K. (2013). Dynamics of Growth-Inequality Nexus in China: Roles of Surplus Labor, Openness, Education & Technical Change in Province-Panel Analysis.
- Kai, H., & Hamori, S. (2009). Globalization, Financial Depth, and Inequality in Sub-Saharan Africa. *Economics Bulletin*, 29(3), 2025-2037.
- Kratou, H., & Goaid, M. (2016). How can Globalization Affect Income Distribution? Evidence from Developing Countries. *The International Trade Journal*, 30(2), 132-158.
- Kurtovic, S., Dacic, H., & Talovic, S. (2016). The Effect of Foreign Direct Investment from Austria on Skilled and Unskilled Labor in Bosnia and Herzegovina. *Business and Economic Research*, 6(1), 210-233.
- Lim, G. C., & McNelis, P. D. (2014). Income Inequality, Trade and Financial Openness. The University of Melbourne, Melbourne Institute Working Paper Series, No. 7/14.
- Lipsey, R. E., & Sjöholm, F. (2001). Foreign Direct Investment and Wages in Indonesian Manufacturing. National Bureau of Economic Research (NBER) Working Paper, No. 8299.

- Lundqvist, J. (2014). Foreign Aid's Impact on Income Inequality. Lund University, Department of Economics, Bachelor's Essay.
- MacDonald, R., & Majeed, M. T. (2010). Distributional and Poverty Consequences of Globalization: A Dynamic Comparative Analysis for Developing Countries. Scottish Institute for Research In Economics (SIRE) Discussion Paper, No. SIRE-DP-2010-62.
- Mah, J. S. (2002). The Impact of Globalization on Income Distribution: the Korean Experience. *Applied Economics Letters*, 9(15), 1007-1009.
- Mahutga, M. C., & Bandelj, N. Foreign Investment and Income Inequality: The Natural Experiment of Central and Eastern Europe. *International Journal of Comparative Sociology*, 49(6), 429-454.
- Meschi, E., & Vivarelli, M. (2009). Trade and Income Inequality in Developing Countries. *World Development*, 37(2), 287-302.
- Mihaylova, S. (2015). Foreign Direct Investment and Income Inequality in Central and Eastern Europe. *Theoretical and Applied Economics*, XXII(2), 23-42.
- Milanovic, B. (2002). Can We Discern the Effect of Globalization on Income Distribution? Evidence from Household Budget Surveys. *World Bank Policy Research Working Paper*, No. 2876.
- Msweli, P. (2015). The Effect of Foreign Direct Investment on Inequality: The Case of South Africa. Master's Thesis, Stellenbosch University.
- Mugeni, S. (2015). Foreign Investment, Democracy and Income Inequality: Empirical Evidence. Master's Thesis, Department of Economics, University of Ottawa.
- Mushtaq, M., Ahmad, K., Ahmed, S., & Nadeem, M. (2014). Impact of FDI on Income Distribution in Selected SAARC Countries. *Journal of Applied Environmental and Biological Sciences*, 4(7S), 1-10.
- Nunnenkamp, P., Schweickert, R., & Wiebelt, M. (2007). Distributional Effects of FDI: How the Interaction of FDI and Economic Policy Affects Poor Households in Bolivia. *Development Policy Review*, 25(4), 429-450.
- Ohlin, B. (1933). *Interregional and International Trade*. Harvard University Press, Cambridge, MA.
- Reuveny, R., & Li, Q. (2003). Economic Openness, Democracy and Income Inequality: An Empirical Analysis. *Comparative Political Studies*, 36(5), 575-601.
- Satti, S. L., Mahalik, M. K., Bhattacharya, M., & Shahbaz, M. (2015). Dynamics of Income Inequality, Finance and Trade in Kazakhstan: Empirical Evidence from a New Transition Economy with Policy Prescriptions. Monash Business School, Department of Economics Discussion Paper, No. 36/15.
- Stolper, W. F., & Samuelson, P. A. (1941). Protection and Real Wages. *The Review of Economic Studies*, 9(1), 58-73.
- Sylwester, K. (2005). Foreign Direct Investment, Growth and Income Inequality in Less Developed Countries. *International Review of Applied Economics*, 19(3), 289-300.
- Todaro, M. P., & Smith, S. C. (2012). *Economic Development*. 11th Edition. Harlow: Pearson Education Limited.
- Tsai, P-L. (1995). Foreign Direct Investment and Income Inequality: Further Evidence. *World Development*, 23(3), 469-483.
- Viaene, J-M., & Zilcha, I. (2001). Human Capital Formation, Income Inequality and Growth. *CESifo Working Paper*, No. 512.
- Vo, T. T., & Nguyen, A. D. (2012). Experiences of Vietnam in FDI Promotion: Some Lessons for Myanmar. In Lim, H., & Yamada, Y. (Eds.), *Economic Reforms in Myanmar: Pathways and Prospects*, BRC Research Report No.10, Bangkok Research Center, IDE-JETRO, Bangkok, Thailand.
- Wooldridge, J. M. (2002). *Introductory Econometrics: A Modern Approach*. Second Edition. South-Western College Pub.

Yang, X. (2014). Foreign Direct Investment and Urban-Rural Income Inequality: The Case of China. Master's Thesis, Graduate School of Clemson University.

Zhang, X., & Zhang, K. H. (2003). How does Globalization Affect Regional Inequality within a Developing Country? Evidence from China. *The Journal of Development Studies*, 39(4), 47-67.

Zulfiu-Alili, M. (2014). Inward Foreign Direct Investment and Wage Inequality in Macedonia. *Eastern European Economics*, 52(5), 56-86.