



Original Article

# FDI and Employment Creation in the Enterprise Sector in Vietnam

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**Abstract:** Since the Foreign Investment Law was first promulgated in Vietnam in 1987, the inflows of FDI to the country have increased significantly over the years. Among the contributions of FDI to the socio-economic development of the country, interest is placed on employment creation. The purpose of this study is to assess the relation between FDI and employment creation in the enterprise sector in Vietnam. The empirical study is conducted at the local level with all 63 provinces nationwide in the period from 2006 to 2014. The results reveal that the FDI enterprise sector has a higher employment creation capability than the domestic enterprise sector. Besides, a positive relation between the FDI intensity (in terms of the size of FDI in relative to the total capital resource) and the growth of employment in the domestic enterprise sector is found which implies that the relatively larger presence of FDI enterprises can have positive spillover effects on the domestic enterprise sector's employment growth. However, the spillover effects of FDI are considered limited.

*Keywords:* FDI, employment, enterprise sector.

## 1. Introduction

Foreign Investment Law was first promulgated in Vietnam in 1987, setting an important milestone for the process of international economic integration. Through several times of amendments and supplements, to meet the requirements of international economic integration and enhance the state management of investment activities, Investment Law 2005 replaced Foreign

Investment Law and Domestic Investment Promotion Law. This Law creates a unity in the legal system of investment that creates a fair “playing field”, non-discriminates among investors, simplifies investment procedures, and creates favorable conditions to attract and effectively use of investment capital sources. Since 1987, Vietnam witnessed remarkable increase in the flows of FDI into the country.

In general view, the FDI sector has become an important part and increasingly contributes to

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the socio-economic development of the country. FDI fosters economic growth as the sector contributes gradual increase to GDP over the years. FDI promotes economic restructure and plays as an important factor for the development of many modern industries. Through FDI, Vietnam has access to advanced technology of the world to develop industries using modern technology such as biotechnology, telecommunications, software industry, electronics,... FDI helps to improve the country's export capacity and expand export markets to other countries. FDI also contributes significantly to the welfare of the country via employment creation and the state budget revenue contribution.

There are ample studies on FDI in Vietnam both at the qualitative and quantitative level. However, most of empirical studies focus on the effect of FDI on economic growth in Vietnam. Among them are Nguyen Thi Tue Anh et al., 2006 [1], Nguyen Phi Lan, 2006 [2], Nguyen Van Duy et al., 2014 [3], Hoang Quoc Chinh and Duong Thi Chi, 2018 [4] and Ha Thanh Cong, 2019 [5]. While there are many studies on the relationship between FDI and economic growth, there is still lack of empirical studies on the effect of FDI on other aspects, among those is employment. There is one empirical study on the effect of FDI on employment in Vietnam by Jenkins, 2006 [6]. The study showed that the direct employment generated by FDI has been limited. The reason is that most of Vietnam's labor force concentrates in the agricultural sector and in services such as the wholesale and retail trades, and transport where the FDI presence has been insignificant. Besides, the indirect employment effects have been minimal because of the limited linkages which foreign firms create.

There is a big gap in research for the relation between FDI and employment in Vietnam. In a narrow scope, this study does not look at the effect of FDI on the national level of employment but rather focuses on the relation in the enterprise sector. There are two questions that are sought to answer. First, what is the employment creation capability of the FDI

enterprise sector in comparison with the domestic enterprise sector? Second, how FDI enterprises have indirect effects on employment creation in the domestic enterprise sector? The rest of the paper is organized as followed: Section 2 presents the literature review on the effect of FDI on employment, followed by Section 3 overviewing the FDI enterprise sector development in Vietnam. Empirical study on FDI and employment creation is then provided in Section 4 and finally Section 5 is the conclusion.

## **2. Literature Review on the Effects of FDI on Employment**

From a theoretical point of view, the effect of FDI on employment creation in the host countries can be both positive and negative [7]. Positive effect of FDI on employment occurs where FDI investment supplements domestic investment and involves the creation of new "greenfield" plants. By introducing new industries or establishing new firms into the existing industries in the local economies, FDI obviously raises the demand for labor. Besides, FDI can indirectly contribute to the employment level of the local economies via job creation from forward and backward linkages with domestic firms. Through these linkages FDI helps to create development opportunities for domestic firms in upstream and downstream industries. FDI spillovers through backward linkages occur when FDI firms establish a relationship with local firms in upstream industries with a purpose to supply intermediate inputs for them. Growth in FDI increases market for local-supplier firms since demand for their output rises. In this way, FDI contributes to the development of domestic supporting industries. Forward linkages take place when local firms in downstream industries can buy high quality at lower cost intermediate inputs produced by FDI firms operating in the upstream industries rather than import them from overseas. Better-quality inputs at lower cost used in the production of domestic firms can make the firms more competitive and enable them to expand production and employment. In addition, as

pointed in Ogunkola and Jerome, 2006 [8] FDI firms can create positive spillover effects from the transfer of technology, knowledge and skills to domestic firms which pave the way for high degree of competitiveness, significant innovation and improvements in the host country's export performance leading to tremendous generation of employment opportunities.

On another hand, FDI can have a negative effect on employment level of the host countries when FDI firms compete directly with local firms. Facing with highly competitive pressure exerted from foreign affiliates, domestic firms lose their market share and employment contraction is the result. As well argued in Lipsey and Sjöholm, 2004 [9], there are at least two channels that FDI can reduce employment of the domestic firms. First, FDI by having firm-specific advantages can gain a competitive edge against their domestic competitors despite a comparatively poor knowledge of local conditions. Second, FDI might raise the wage levels and push pressure upward the wages of their domestic competitors causing the deterrent of job growth in domestic firms. In addition, if the mode of FDI entry takes in the form of acquisition or takeover of local firms then FDI displace the local producers and if they change to adopt capital intensive technology then this obviously harms employment in the host country.

Empirical studies on employment effect of FDI in host countries have been done for both developed and developing countries. The outcome shows mixed results as researchers have not yet reached at any consensus on contribution of FDI to employment generation in host countries. Studies such as Abor and Harvey, 2008 [10], Pinn et al., 2011 [11], Mpanju, 2012 [12] and Tshepo, 2014 [13] found a positive employment effect of FDI. In contrast to this, other researchers found no effect or even negative effect of FDI on employment level (Rizvi and Nishat, 2009 [14], Onimisi, 2014 [15] and Malik, 2019 [16]). Yet other studies claimed that FDI impact on employment may differ across different economic sectors in the economy.

In the study of Mexico, Waldkirch et al., 2009 [17] confirmed that FDI have increased

employment in both skilled and unskilled workforce but found that the employment effect of FDI is stronger in export-oriented industries. Karlsson et al., 2009 [18] examined the effect of FDI on job creation in the Chinese manufacturing sector for the period 1998-2004. The study looked into both direct and indirect effects of FDI on employment. For the direct effects, the finding showed that both FDI and private domestic firms have higher employment growth than non-private domestic firms. This is due to firm characteristics such as high productivity, capital intensity, wage and especially export share which plays as a proxy for access to international markets that gives foreign firms additional competitive advantages as compared to domestic firms. Besides, FDI was found to have a positive indirect effect on employment growth in private domestic firms but no effect in non-private domestic firms. Lipsey et al., 2010 [19] while exploring the relationship between foreign ownership and employment in Indonesia in 1975-2005 also found that foreign-owned manufacturing firms grew more rapidly in employment than firms that were domestically owned. Inekwe, 2013 [20] studied the links between Nigerian employment and foreign direct investment in the manufacturing and servicing sectors between 1990 and 2009. He found that FDI in the manufacturing sector has a positive relationship with employment rate while in the servicing sector the relationship is negative. Studying FDI and growth of employment in India during the period 1991 to 2012, Narender and Dhankar, 2016 [21] showed that FDI plays a significant role in an unemployment reduction in the private sector of but does no help to raise the employment in the public sector.

### 3. Overview of FDI Enterprise Sector Development in Vietnam

The development of the FDI sector is recognized both in terms of the growth in the number of enterprises and the size of capital resource. Since 2000, the number of FDI

enterprises has increased continuously from 1,525 to reach at 16,878 in 2018, with an average annual growth rate of 14.5%. During this period, the capital resource of FDI enterprises also experienced a strong growth at the average annual rate of 21%, bringing the capital size of this sector in 2018 nearly 30 times higher than in 2000. Especially in 2007, 2010 and 2013, capital

resource grew at a remarkably high rate of over 30% and even 43% in 2010. It can be noticed that the growth rate of capital resource was much higher than the growth rate of the number of enterprises. This proves that more and more large-scale FDI enterprises invested and expanded their business in Vietnam.

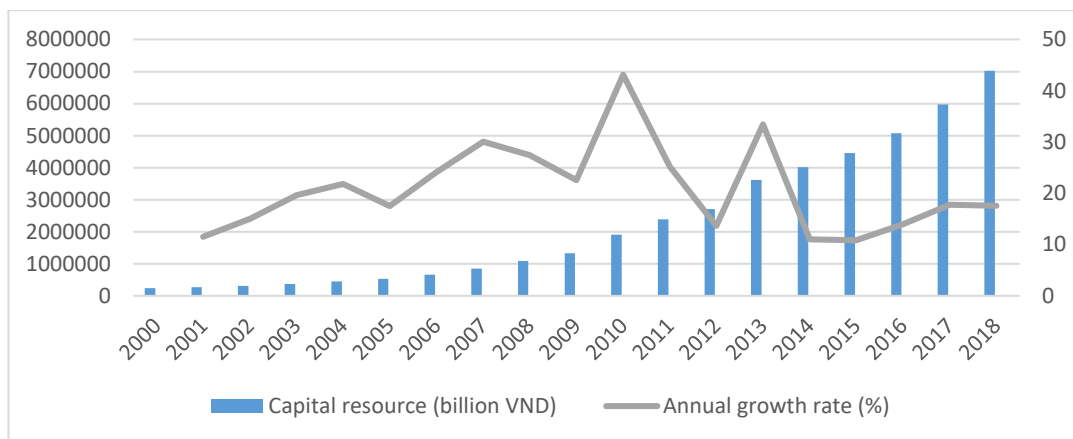


Figure 1. FDI capital resource and its growth in Vietnam.

Source: GSO Vietnam.

Foreign investment was unevenly distributed across the country and mainly concentrated in several large cities and provinces. Particularly, in the two largest cities which are Ho Chi Minh City and Hanoi, FDI accounted for 39% of the total. Provinces with tradition in high FDI attraction continued to be Binh Duong, Dong Nai and Ba Ria Vung Tau. In recent years provinces including Bac Ninh, Ha Tinh, Thai Nguyen and Hai Phong have emerged to become among the top provinces that attract high FDI. Top 10 provinces accounted for 83% of the country's FDI.

By the structure of capital resource, FDI enterprises accounted for more than 18% of the enterprise sector's capital nationwide, thus showing a significant presence of this sector. This share has fluctuated over the years. On the average over a period of 5 years, this share decreased and then increased again and remained relatively stable at 18% (Figure 2).

Along with the development of the FDI sector, the number of jobs created in this sector has also

been recorded with continuous growth over the years. During the 2000-2018 period, the average annual growth rate of employment was 14.9%. In 2018, the sector provided over 4.7 million of jobs. However, when having a close look at the annual growth rate figures, one can see that this rate tended to decrease. During the period of 2001-2005, the average annual growth rate was 24.8%, then sharply decreased to 12.2% in the period of 2006-2010, followed by 11.9% in the period of 2011-2015 and in 3 years of 2016-2018 period this rate was only 7.7% (Figure 3).

However, when looking at the enterprise sector's structure of employment, the picture is completely opposite. There is a clear rising tendency in the share of employment created by the FDI enterprise sector. Through each 5-year period, this share has increased from 16.3% to 22.5%, then 26.6% and finally reached at 30.8% in the last period. This shows that the FDI enterprises have been increasingly becoming an important source of job creation in the enterprise sector (Figure 4).

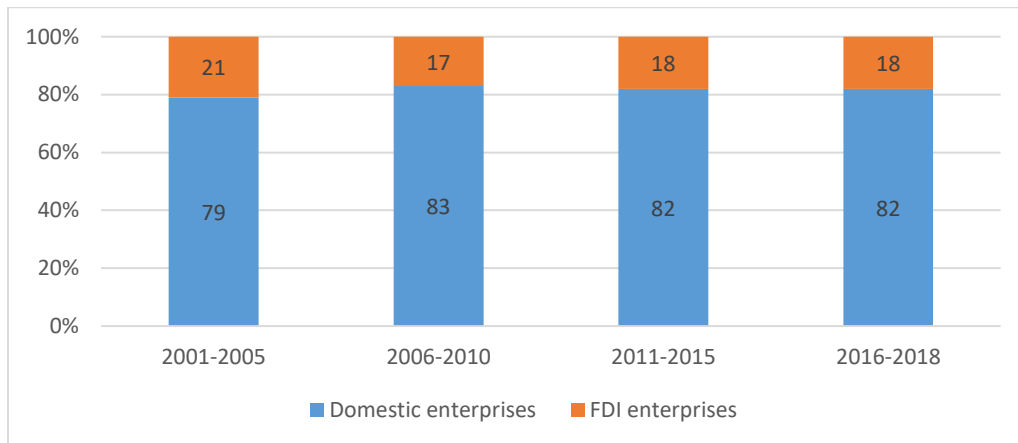


Figure 2. Structure of capital resource in the enterprise sector in Vietnam.  
 Source: The author's own calculations from data collected from GSO Vietnam.

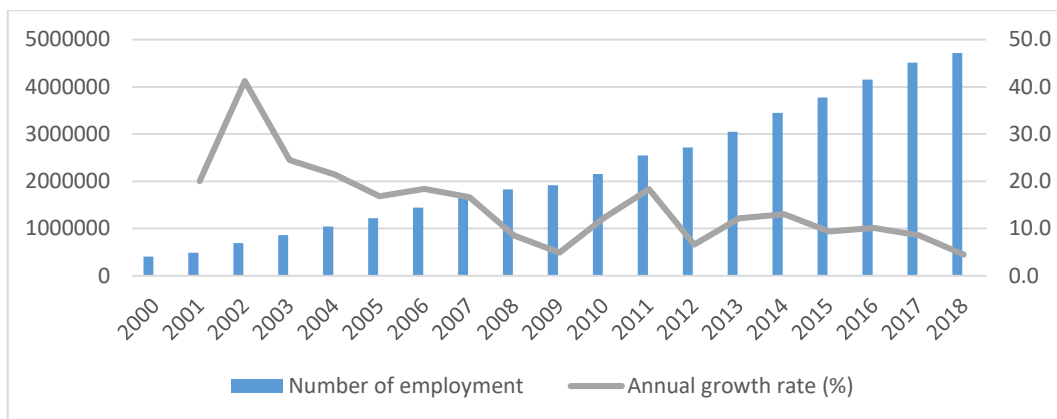


Figure 3. FDI sectors' employment and its growth in Vietnam.  
 Source: GSO Vietnam.

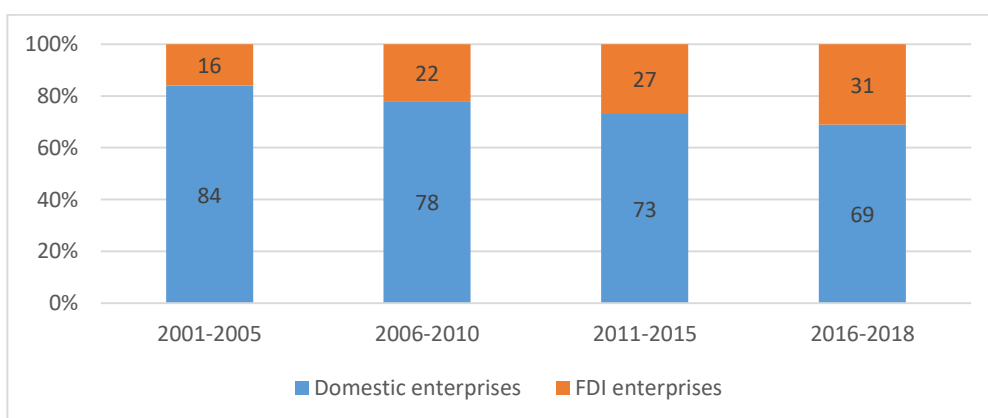


Figure 4. Structure of employment in the enterprise sector in Vietnam.  
 Source: The author's own calculations from data collected from GSO Vietnam.

#### 4. Empirical Study on FDI and Employment Creation in the Enterprise Sector

The empirical study is conducted with the two objectives. First is to assess the employment creation capability of the FDI enterprise sector in comparison with the domestic enterprise sector. Second is to assess the indirect effect of FDI on employment creation in the domestic enterprise sector.

The employment creation capability in the enterprise sector can be measured as the percentage increase in the number of jobs associated with 1 percentage increase in the size of capital resource. This measurement is known as the employment elasticity of capital with the formula.

$$E_L = \frac{\% \Delta L}{\% \Delta K} \quad (1)$$

where  $E_L$  is elasticity of employment with respect to capital,  $K$  is the size of capital resource and  $L$  is number of jobs. When the enterprise sector grows in terms of increase in the size of capital resource, more jobs will be created and how much more is determined by the  $E_L$ . The employment elasticity formula indicates that 1% increase in capital resource will lead to an  $E_L$  % increase in the number of jobs. The higher the elasticity value, the greater the employment creation capability in the sector.

The study on the employment creation capability in the enterprise sector is conducted at the local level with all 63 provinces nationwide in the period from 2006 to 2014. The chosen period in the study is due to the availability of published data. The regression equation can be written as

$$\text{LN}L_{i,t} = c + \alpha_i + \beta \text{LN}K_{i,t} + e_{i,t} \quad (2)$$

Where subscript  $i$  denotes province and  $t$  denotes time in year.

$\text{LN}L$  and  $\text{LN}K$  are natural logarithm of number of jobs and natural logarithm of capital resource, respectively. Equation (2) indicates that when capital resource increases by 1%, the number of jobs increases by  $\beta\%$  or  $E_L = \beta$ . Therefore, the estimated value of  $\beta$  measures the employment elasticity coefficient or job creation capability in the enterprise sector.

To have a comparative assessment, regression is conducted for both FDI and local enterprise sectors. Data on capital resource (in billions of VND) and employment (in number of employed workers) is taken from various enterprise surveys published by the General Statistics Office of Vietnam. In particular, data for the FDI enterprise sector is taken from publications including *Foreign direct investment enterprises in the period of 2006-2011* and *Results of foreign invested enterprises in the period 2011-2016*. Data for the entire enterprise sector is taken from publications including *Development of Vietnam enterprises in the period of 2006-2011* and *Business results of Vietnamese enterprises in the period 2000-2014* [22]. Data for the domestic enterprise sector is derived by subtracting data for the FDI enterprise sector from data for the entire enterprise sector.

The data for 63 provinces is collected in the same period that provides a strongly balanced panel data. Analyzing panel data requires control for unobserved factors affecting the dependent variable. Because each province has its own characteristics, these unobservable factors are considered as provincial heterogeneity. The variable  $\alpha_i$  includes unobserved factors that affect the dependent variable and thus reflects the provincial specific impact. It could be a fixed effect or a random effect. Regression analysis of panel data was performed with Stata program. A fixed effect model and a random effect model were tried and the Hausman test revealed that the fixed effect model was more useful. The regression results are reported in Table 1.

Table 1. Employment creation capability in FDI and domestic enterprise sectors

FDI enterprise sector		Domestic enterprise sector	
Coefficient	P - value	Coefficient	P - value
$E_L$		$E_L$	
0.909	0.000	0.651	0.000
Number of observations: 558		Number of observations: 567	

Source: Author's own calculation (see Appendix).

As can be seen from Table 1, there is clearly a substantial difference in the capability of employment creation among the two enterprise sectors. The coefficient of employment elasticity with respect to capital in the FDI sector is 0.91 which is higher than the coefficient of 0.65 in the domestic sector. 1% increase in the size of capital resource in the FDI enterprise sector leads to 0.91% increase in employment while in the domestic enterprise sector there is an increase of only 0.65% in employment as a result from 1% increase in capital resource. This shows that the FDI enterprises sector has a higher employment creation capability than the domestic enterprise sector and thus growth in the FDI sector is more beneficial to employment growth than growth in the domestic sector.

As well indicated in the literature, there are reasons to expect that the presence of foreign enterprises can have both positive and negative effects on employment in domestic enterprises. On one hand, positive effects can be caused by spillover effects from foreign enterprises via the support of linkage industries or improvement of domestic enterprises' productivity. On another hand, negative effects can be caused by increased competition that foreign enterprises place on domestic enterprises. The net effect of FDI on employment in the domestic enterprise sector depends on the strength of spillover effects and competition effects which one outweigh another. To assess the indirect effect of FDI on employment, the variable FDI intensity (measured as the ratio of FDI enterprise sector's capital resource and the total capital resource) is included into the regression equation 2 which is now applied for the domestic enterprise sector. The magnitude of the FDI intensity determines the position of FDI enterprises in the enterprise sector. When this intensity increases, the size of capital resource in the FDI enterprise sector will increase stronger than the increase in the entire sector's capital resource, making FDI enterprises gain a higher position in the sector. The higher the FDI intensity the more presence the FDI enterprises in the enterprise sector. If this intensity plays as a determinant of employment, then the sign of the impact would tell whether

FDI has a beneficial or an adverse impact on employment growth in the domestic enterprise sector. Besides, one control variable included into the model is the state of economic development. When the economy experiences high economic growth performance, the level of production in the economy increases and higher total output leads to higher demand for labor. In addition, increase in the national income also raises the level of consumption and thus increases demand for goods produced in the enterprise sectors and result in a higher employment growth in the sector. The regression equation is rewritten as follows

$$\text{LNL}_{i,t} = c + \alpha_i + \beta_1 \text{LNK}_{i,t} + \beta_2 \text{IFDI}_{i,t} + \beta_3 \text{EGR}_{i,t} + e_{i,t} \quad (3)$$

Where subscript  $i$  denotes province and  $t$  denotes time in year.

Dependent variable: Employment

$\text{LNL}$  indicates the natural logarithm of number of workers in the domestic enterprise sector.

Explanatory variables

*Size of capital resource (LNK)*: the natural logarithm of the size of capital resource in the domestic enterprise sector.

*FDI intensity (IFDI)*: the relative presence of FDI enterprises in the sector which is measured by the FDI enterprises' capital over total capital in the sector.

*State of economic development (EGR)*: is measured by the annual economic growth rate of the country which reflects how well the economy is performing.

All data for the dependent and other explanatory variables are taken from the General Statistics Office of Vietnam's publications as previously stated in [22]. The data for 63 provinces is collected in the same period that provides a strongly balanced panel data. Diagnostic tests showed that the panel data has a contemporaneous correlation, heteroskedasticity, and serial correlation. With the presence of these problems in data, Torres-Reyna, 2007 [23] suggests using the generalized least square method. The regression results are reported in Table 2.

Table 2. Indirect effect of FDI on employment in the enterprise sector  
Dependent variable: *LNL: Employment*

Explanatory variables	Coefficient	P-value
<i>LNK: Size of capital resource</i>	0.683	0.000
<i>IFDI: FDI intensity</i>	0.003	0.002
<i>EGR: State of economic development</i>	0.265	0.000
CONSTANT	2.225	0.000
Number of observations: 558		

Source: Author's own calculation (see Appendix).

As can be seen from Table 2, all three explanatory variables have a statistically significant effect on the creation of jobs in the domestic enterprise sector.

With the statistical significance level of 1%, FDI intensity shows to be a determinant of employment in the domestic enterprise sector. The positive coefficient value shows the larger the relative presence of FDI, the higher the growth rate of employment. The positive impact of the FDI intensity on employment implies that the positive spillover effects dominate the negative competition effects leaving the beneficial impact on employment creation in the domestic enterprise sector. There are several implications can be withdrawn from this finding. First, the competition between foreign enterprises and domestic enterprises, if exists, would be at a low level. There would be the case when foreign enterprises do not compete with domestic enterprises for local markets but rather concentrate on foreign markets where they export their products. Second, the spillover effects can work in various channels. In one channel, spillover effects work through the diffusion of technology, knowledge, and skills from foreign to domestic firms. Direct technological transfer occurs via joint ventures between foreign and their counterpart local firms. Indirect diffusion may occur via interpersonal contact where local firms can learn about technology and managerial skills from foreign firms. In either way, FDI improves productivity for domestic firms and higher productivity tends to be

associated with larger firm size which leads to an increase in employment. In another channel, spillover effects work through linkage industries that FDI enterprises establish with local enterprises. When the FDI sector grows, its higher output demands for more intermediate inputs produced by local enterprises. Business expansion in the local enterprise sector means higher employment level in the sector. With the coefficient value of 0.003, 1 percentage point increase in the FDI intensity leads to 0.003 percentage increase in employment in the domestic enterprise sector. This suggests spillover effects of FDI on the domestic enterprise sector's employment are there, but still minimal.

In fact, there exists backward linkages between FDI enterprises and local enterprises in Vietnam. According to the survey of the Vietnam Chamber of Commerce and Industry (VCCI), about 14% of the domestic private enterprises have FDI enterprises operating in Vietnam as their customers and about 27% of input materials in the FDI sector are purchased in Vietnam [24]. Private domestic enterprises produce and supply components, accessories, and auxiliary products for FDI enterprises and thereby FDI helps to develop supporting industries and job creation in those industries. A bright example is Samsung Corporation with more than 200 Vietnamese supporting industry enterprises by the end of 2017. However, in general view, the linkages between FDI and domestic enterprises are there but weak and not as expected. One of the reasons for the poor linkages is the difference in technology level. The majority of Vietnamese enterprises are small and medium size with low level of technology. Modern and advanced technology products are demanding at each detail and component which is not easy for local small and medium enterprises to meet [25]. Therefore, spillover effects of FDI are still limited.

## 5. Conclusion

In the enterprise sector in Vietnam, FDI enterprises have become an important part with the share of about 18% in the structure of capital



resource. Since 2000 the FDI sector has experienced significant growth in terms of number of enterprises as well as the size of capital resource and output. The growth of the FDI enterprise sector is accompanied by the growth in the number of jobs created in this sector with the average annual growth rate of nearly 20% in the 2000-2018 period. The employment contribution of FDI enterprises in the enterprise sector has also continued to increase over the years and the share reached 31.8% in 2018 making this sector become an important source of employment creation in the enterprise sector.

The relation between FDI and employment creation in the enterprise sector is assessed. The result shows that the FDI enterprise sector has a higher employment creation capability than the domestic enterprise sector. One percentage increase in the size of capital resource leads to a higher percentage increase in employment in the FDI enterprise sector than in the local enterprise sector. Next, the assessment of indirect effect of FDI reveals a positive relation between FDI intensity and employment growth in the domestic enterprise sector. This finding implies that there exist spillover effects of FDI on the domestic enterprise sector. However, with a small value for the coefficient, the spillover effects are considered limited. Among the reasons for it would be the poor linkages between FDI and domestic enterprises or the low level of technological absorption capacity in the domestic enterprise sector.

This study is considered as the first attempt to investigate the effects of FDI on employment creation in the enterprise sector in Vietnam. Although we found that the FDI enterprise sector has a higher employment creation capability than the domestic enterprise sector and FDI has a positive indirect effect on employment growth in the domestic enterprise sector, there are several issues left unexplored. Namely, the causes that make the FDI enterprise sector be more capable in creating jobs than the domestic enterprise sector and channels through which the spillover effects of FDI work. These would be the interest for further studies.

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## Appendix

Employment creation capability in the FDI enterprise sector						
Cross-sectional time-series FGLS regression						
Coefficients: generalized least squares						
Panels: homoskedastic						
Correlation: no autocorrelation						
Estimated covariances	=	1	Number of obs	=	558	
Estimated autocorrelations	=	0	Number of groups	=	63	
Estimated coefficients	=	2	Obs per group: min	=	5	
			avg	=	8.857143	
			max	=	9	
			Wald chi2(1)	=	3311.03	
Log likelihood	=	-789.7565	Prob > chi2	=	0.0000	
lnfl	Coef.	Std. Err.	z	P> z	[95% Conf. Interval]	
lnfk	.9096184	.015808	57.54	0.000	.8786352	.9406015
_cons	1.318276	.1249099	10.55	0.000	1.073457	1.563095

**Employment creation capability in the domestic enterprise sector**

Cross-sectional time-series FGLS regression

Coefficients: generalized least squares  
 Panels: homoskedastic  
 Correlation: no autocorrelation

Estimated covariances	=	1	Number of obs	=	567
Estimated autocorrelations	=	0	Number of groups	=	63
Estimated coefficients	=	2	Time periods	=	9
			Wald chi2(1)	=	2482.75
Log likelihood	=	-325.3428	Prob > chi2	=	0.0000

lnl	Coef.	Std. Err.	z	P> z	[95% Conf. Interval]	
lnk	.6518418	.0130821	49.83	0.000	.6262014	.6774821
_cons	4.204892	.1344451	31.28	0.000	3.941385	4.4684

**Indirect effect of FDI on employment creation in the domestic enterprise sector**

Cross-sectional time-series FGLS regression

Coefficients: generalized least squares  
 Panels: homoskedastic  
 Correlation: no autocorrelation

Estimated covariances	=	1	Number of obs	=	558
Estimated autocorrelations	=	0	Number of groups	=	63
Estimated coefficients	=	4	Obs per group: min	=	5
			avg	=	8.857143
			max	=	9
			Wald chi2(3)	=	3014.17
Log likelihood	=	-270.4476	Prob > chi2	=	0.0000

lnl	Coef.	Std. Err.	z	P> z	[95% Conf. Interval]	
lnk	.6837534	.0134	51.03	0.000	.65749	.7100169
ifdi	.0033572	.0010634	3.16	0.002	.0012729	.0054415
egr	.2653906	.0270582	9.81	0.000	.2123576	.3184236
_cons	2.225308	.2423325	9.18	0.000	1.750345	2.700271