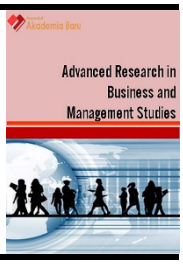
Penerbit Akademia Baru

Journal of Advanced Research in Business and Management Studies

Journal homepage: www.akademiabaru.com/arbms.html
ISSN: 2462-1935



Does FDI influence employment in Malaysia?

Open Access

Sabariah Nordin[1,*]

[1] School of Economics, Finance and Banking, College of Business, Universiti Utara Malaysia, 06010 UUM Sintok, Kedah, Malaysia

ARTICLE INFO

Article history:
Received 20 August 2017
Received in revised form 12 September 2017
Accepted 21 September 2017
Available online 29 September 2017

ABSTRACT

The purpose of this study is to investigate the impact of foreign direct investment (FDI) on employment in Malaysia. This study employs cross-sectional by sectors data which focuses on four main variables: employment, net inflows of FDI, value of gross output and average annual real wages per worker. Employment is the dependent variable and inflows of FDI, gross output and real wages per worker are independent variables. The period of study covers 2000 to 2010. The sectors considered for the panel data include agricultural, mining and quarrying, manufacturing, construction and services. Based on the panel data analysis, FDI is found not to have a significant influence on employment in Malaysia. The insignificant of FDI may be due to the large overall variance among the data. Besides, the period selected may also have influence the data because year 2009 witnessed a significant drop in the inward flows of FDI. The use of high-technology and robotic equipment among the MNEs may also influence the results. Moreover, the inflows of FDI do not evenly scattered among the by sectors cross sections. Most of the flows of FDI were in the services and manufacturing sectors. The wages indicator also does not have a significant influence on employment. The only variable that is significant is the value of gross output.

Keywords:
FDI, employment, panel data, fixed effects

1. Introduction

Foreign direct investment (FDI) is considered as one of the main agenda of most countries due to its benefits of enhancing economic growth, transferring technology as well as providing employment opportunities to a host country. A number of studies support these notions, and further enrich the positive impact of FDI [1-2]. Nevertheless, not all countries similarly receive the benefits of FDI. Some argue that the benefits can only be realized after the host country reaches certain threshold level of identified condition such as human capital and the level of development of its financial market [3]. Even some studies have been adopting an interaction variable of FDI with another variable such as financial market [3] and human capital [3] to verify whether the positive impact comes from the FDI alone or because of the interaction between FDI and another selected indicator.

* *Corresponding author.*
E-mail address: Sabariah Nordin (norsabariah@uum.edu.my)

A number of studies have been assessing the relationship between FDI and employment, particularly employment of the host country. Nevertheless, their results indicate that there is no conclusive finding on the influence of FDI on employment. Different mode of entry of FDI, country of study, the period of study as well as the method applied tend to influence the results.

Pinn *et al*. [1], in their study on Malaysia, indicate that there is no co-integration between FDI and employment in the long run, nevertheless, they manage to show causality running from FDI to employment. Unlike Pinn *et al*. [1], Javed *et al.* [2] manage to show that there is a long run equilibrium relationship between the variables, and FDI as well as GDP are found to have a positive impact on the employment variable. Similarly, Akcoraoglu and Acikgoz [4] find a long run equilibrium relationship among the variables in their employment equation. However, their results show that the real GDP and FDI flows have a significant and negative impact on employment in the long run.

Using data on a large firm-level dataset for the period of 1998 to 2004 in China, Karlsson *et al*. [5] find that firm characteristics such as productivity, capital intensity and wage are strongly correlated with employment growth. The spillover effect of FDI seems to be more important compared to the competition effect which makes FDI to have an indirect positive effect on employment growth, particularly on private domestic firms.

Meanwhile, Aktar and Ozturk [6], in performing an analysis on Turkey, reveal a long run relationship between their underlying variables. Nevertheless, their findings do not indicate a significant influence of FDI on Turkey's unemployment rate. Their variance decomposition's results also show that the FDI does not create any new job during the study period. Even the variation in GDP does not indicate any reduction in the unemployment rate. Correspondingly, Massoud [3] discovers that aggregate FDI has an insignificant direct effect on the demand for labour. He even finds that the interactive terms between FDI and human capital, FDI and financial sector development and FDI and trade openness do not show any significant effect. Only the interactive term between FDI and the size of the technology gap indicates a direct negative effect on the demand for labour.

In addition, Massoud [3] also reveals that the greenfield investment does not show any significant impact when tested alone. Nevertheless, it indirectly influences the employment positively when it interacts with human capital and exports. As for the merger and acquisitions mode of entry, similar to the findings of Akcoraoglu and Acikgoz [4], it is found to have a direct negative impact on the employment. Meanwhile, the manufacturing sector FDI is found to affect employment directly and indirectly only when the variables of interactive terms between FDI and human capital, and FDI and exports are included in the models. As suggested by a theory, the real wages are found to have a significant negative relationship with the demand for labour, while GDP does not indicate any significant impact on the demand for labour. This study suggests that aggregate FDI alone does not contribute positively towards employment. Only when it interacts with other variables such as human capital and exports, the impact becomes significant and positive. This study highlights the importance of considering the mode of entry of the FDI and also the absorptive capacities of the economy as indicated by the interactive terms.

In contrary, a study by Yusof [7] suggests no cointegration relationship between FDI and employment for Indonesia and Malaysia. Unlike Pinn et al. [1], her results of Granger causality tests do not indicate any short-run relationships between the two variables. However, ARDL results for Thailand indicate a long-run relationship between FDI, employment and productivity but the focus is on the impact of employment and productivity on FDI, not vice versa.

Unlike Masoud [3] and Yusof [7], Ajaga and Nunnenkamp [8] discover contrary results. Their results indicate that there is a long-run relationship between FDI and employment in the state economies as a whole and also in the manufacturing sectors. In terms of causality, they find that there is a bi-directional causality running from FDI to total and manufacturing employment and vice

versa. Likewise, Nunnenkamp, Bremont and Waldkirch [9], in a study on Mexico, highlight that FDI has a significant positive impact on manufacturing employment regardless of white collar or blue collar employment. Nevertheless, the positive impact on the blue collar employment lessens with increasing skill intensity of the manufacturing industries. Their results are also supported by Jayaraman and Singh [10].

On the other hand, results of a study on a sectoral data for the period of 1995 to 1999 by Jenkins [11] find that the impact of foreign direct investment on direct employment in Vietnam is very limited. Although there is an indirect employment effects, the effects are very minimal and could be negative. The rationales for the results are because of the limited linkages created by foreign investors as most of their inputs are imported, and also because of the potential "crowding out" effect of domestic investment.

Similar to Karlsson *et al*. [5], Fu and Balasubramanyam [12] also show that FDI has a positive and significant impact on employment. Wong and Tang [13] also supports the notion of the positive impact of FDI on employment. In addition, they also find that there are long run causalities running from employment in manufacturing and services to FDI inflows and from FDI inflows and employment in services to manufacturing employment. Even short run causalities indicate strong FDI-employment relationship.

Williams [14] argues that the mode of entry, type of subsidiary and nationality of the parent company should be taken into consideration in evaluating the impact of FDI on employment. His results of a survey study conducted on UK's manufacturing subsidiaries of foreign-owned companies indicate that the greenfield investment entry as a dummy variable is positively significant in affecting the changes in company employment. On the other hand, and as has been proved by other studies [3-4], entry mode related to merger and acquisitions is found to be highly negatively significant.

Even though past empirical studies reveal mixed results regarding the impact of FDI on the host country employment, factors such as country of study, mode of entry of the FDI and period of study tend to play significant roles in revealing the impact of FDI on employment. Based on theories and past empirical studies, the impact of FDI on employment can be either positive or negative, depending on the net direct and indirect impact of FDI on employment in the MNEs and also the affected domestic firms. The negative impact is normally due to the crowd-out effect of domestic firms. Among the literature that highlight the positive impact of FDI on employment include Javed *et al.* [2], Nunnenkamp *et al*. [9] and Jayaraman and Singh [10]. Among the literature that highlight the negative impact of FDI on employment include Akcoraoglu and Acikgoz [4] and Massoud [3].

Due to the significant role of FDI in an economy and the inconclusive results of previous findings, this study intends to investigate the role of FDI in influencing employment condition in Malaysia. In achieving the objective, this study adopts a panel data analysis of cross section by sectors, in which there is a very limited study, particularly on Malaysia.

2. Methodology

In examining the impact of foreign direct investment (FDI) on employment, this study employs a panel data analysis. Basically, similar to the demand for labour, employment is a function of capital, FDI, wage rate and output. These factors, in general, have tendencies to enhance employment opportunities of a country. For instance, capital, either domestic or foreign, can be used to expand production capacity which later helps to increase the demand for labour given that the industry particularly is a labour intensive industry.

Similarly, FDI is also considered as a kind of capital except that it is supplied by foreign investors and it involves physical establishment, not just the flows of capital. The wage rate is considered as

one of the costs to a firm; the lower the cost, the higher will be the ability of the firm to hire more workers. Meanwhile, output is related to total production and the greater the output, the greater will be the demand for labour.

The main focus of this study is to examine the impact of FDI on employment. One way to perform the study is by looking at the activities of the multinational enterprises (MNEs) in the host countries. These MNEs are the results of foreign direct investment (FDI) which are normally established for the purpose of expansion in the production of goods and services.

Additionally, the gross output is also believed to enhance the employment condition of a country. Some past studies reveal the significant impact of GDP on employment [2]. The rationale is that an increase in the output creates demand for the labour. The inclusion of the gross output can also be associated with the Okun's Law where the law describes a positive relationship between unemployment and losses in a country's production. According to the Okun's Law, for every 1 percent increase in the unemployment rate, a country's GDP will roughly be an additional 2 percent lower than the potential GDP.

The relationship between employment and output can also be assessed by looking at the aggregate demand function of consumption, investment, government spending and net export in the calculation of GDP. Generally, investment is affected by output and interest rate. An increase in the interest rate results in a decline in the aggregate demand. Furthermore, since interest is considered as a cost, an increase in the interest rate would result in a reduction in spending by firms and households. Hence, this condition shifts the aggregate demand curve to the left and lowers equilibrium GDP below potential GDP. As production or output falls, many firms tend to cut costs by laying off workers, and cause the unemployment rate to increase.

The third independent variable employed in this study is wages per worker. Since data on the wage rate is not available within the scope of this study, this study uses average annual real wages per worker to represent the wage rate indicator. Wages are considered as a cost to a firm; the lower the cost, the higher will be the ability for the firm to produce more goods. As a result, the firm expands its production, and at the end, it is able to provide more jobs.

Classical and neoclassical economists believe that wage variations are mechanisms to obtain the right level of employment [15]. According to the Classical Theory, the relationship between real wages and employment level can be rationalized on the fact that a decline in real wages should be expected to lead to an increase in the employment level [15]. A reduction in the wages enables employers to hire more workers. On the other hand, Keynes asserts that, under certain circumstances, wage reduction would not succeed in increasing aggregate demand for goods and services due to the income and cost effects; a reduction in the real wages increases the employers' real income, but at the same, influences the income and expenditure of the workers [15].

The relationship between the demand for labour and the price of labour, in this case the average wage per worker, can also be evaluated through scale and substitution effects [3]. The scale effect is the result of a reduction in the production due to the increase in the cost of wages which is passed to consumers on the final price of the product, which then leads to a reduction in the demand for the product. As the production of the product decreases, the demand for labour also decreases. Conversely, the substitution effect is the result of the action taken by entrepreneurs in substituting labour with capital due to the wages increase. As a result, the demand for labour shrinks.

Based on theories and empirical evidences, the three variables, namely foreign direct investment, gross output and wages, are expected to have a significant impact on the employment condition of a country. FDI and gross output are expected to have a positive impact on employment, while wages are expected to have a negative impact on employment. Given that achieving potential employment is important for every country, analyzing factors that affect employment contributes to the

significance of the study. Nevertheless, the main intention of this study is to examine the impact of FDI on employment of the host country and the results obtained later helps to justify the importance of encouraging FDI for Malaysia.

2.1 Data

Since there is a limitation in terms of getting cross-sectional by sectors data, this study focuses on only four main variables which are employment, net inflows of FDI, value of gross output and average annual real wages per worker. Employment is the dependent variable and inflows of FDI, gross output and real wages per worker are independent variables. The period of study covers 2000 to 2010. The sectors considered for the panel data include agricultural, mining and quarrying, manufacturing, construction and services. The idea of applying the panel data analysis for this study is to integrate the heterogeneity component of the data since data on employment shows variations by sectors.

Data on FDI is the by sectors net flows of FDI obtained from the ASEAN Investment Report of 2011 [16]. As the data on FDI are in US dollar, they are converted into RM using the period average exchange rates. Data on the number of employed persons by industry, value of gross output by economic activity and average annual wages per worker are obtained from the Malaysian Department of Statistics publications.

The wages per worker per year are calculated by dividing salaries and wages paid with the number of employed workers. However, since the data are not available for all sub-sectors in the agricultural and services sectors, a number of proxies have been initiated to represent the data for the agricultural and services sectors. For the agricultural sector, the data are represented by the wages per worker of the rubber estate which are available in the publications of Malaysian Annual Rubber Statistics of 2010 and 2011 which can be downloaded from the Malaysian Department of Statistics' website.

As for the services sector, since the services sector covers a huge range of sub-sectors, only those sub-sectors that have the data (wages/salary, the number of employed workers and gross output) are taken into account. The sub-sectors that represent the service sector's wages per worker and gross output include wholesale trade, retail trade and motor vehicle trade sub-sectors. The wages per worker for the service sector is based on the average of yearly wages per worker of those three sub-sectors and the gross output for the services sector is the addition of the gross output of those three sub-sectors among which are major sub-sectors in the services sector.

Data on wages per worker is deflated using the GDP deflator which is obtained from the International Monetary Fund (IMF) database to represent annual real wages per worker. The GDP deflator is used to deflate wages because of its ability to capture the main development in domestic price behaviour since it does not just include prices of consumer goods, but also prices of investment goods [15].

2.2 Model

It is postulated that FDI and the value of gross output have a positive significant relationship with employment, while the real wages per worker is expected to have a negative relationship with employment. The general model for this study is specified as:

$$EMPL_{it} = \beta_0 + \beta_1 FDI_{it} + \beta_2 RWAGE_{it} + \beta_3 Y_{it} + \varepsilon_{it} \quad (1)$$

where,

$EMPL_{it}$ = Number of employed persons by economic sectors (i) at time t
FDI_{it} = Net inflows of Malaysian foreign direct investment by economic sectors (i) at time t
$RWAGE_{it}$ = Average annual real wages per worker by kind of economic activity (i) at time t
Y_{it} = Gross output by kind of economic activity (i) at time t
i = Cross-sections of agricultural, mining and quarrying, manufacturing, construction and services
t = represents time series of 2000 to 2010
β_0 is a constant parameter and ε_t is the white noise error term.

Table 1 highlights descriptive statistics of the underlying variables of employment, FDI, gross output and wages per worker. Given the nature of the panel data, there are two different kind of variations namely variation between cross-section units and variation within time series units. If the variable does not change through time or across units, the within or between variance will be zero. The data are presented in logged forms. By referring to Table 1, the conclusion that can be made is that the employment, gross output and wages per worker do not change too much through time (within) compared to changes across units (between). On the other hand, FDI shows that the changes across units are lesser compared to the changes through time. Time plays a major role in influencing or attracting the FDI. Nevertheless, this may be due to the unbalanced data of the FDI. Since there are some missing values, this condition may affect the variance of the variable. Even the overall condition of the variance indicates that FDI has a large variability across overall units where the overall variance is 3.1922 = 10.19 percent.

Table 1
Descriptive statistics of employment, FDI, real wages per worker and gross output

Variable		Mean	Std. Dev.	Variance	Min	Max	Observations
LEMPL	Overall	13.7081	1.71312	2.93	10.19242	15.71766	N = 55
	Between		1.89072		10.54398	15.54785	n = 5
	Within		0.1481921		13.35653	14.21023	T = 11
LFDI	Overall	21.9232	3.191792	10.19	0	23.67661	N = 52
	Between		0.6774165		20.90573	22.77975	n = 5
	Within		3.129229		1.017466	24.58736	T = 10.4
LWAGE	Overall	9.876227	0.8918022	0.80	8.725576	11.90525	N = 52
	Between		0.9832332		8.933409	11.54815	n = 5
	Within		0.1249929		9.482805	10.23332	T = 10.4
LY	Overall	25.79355	1.026516	1.05	24.27343	27.45249	N = 54
	Between		1.035611		24.70773	27.13509	n = 5
	Within		0.422422		25.09171	26.56158	T = 10.8

Table 2
Correlation Matrices: The Impact of FDI on Employment

	EMPL	FDI	RWAGE	Y
EMPL	1			
FDI	0.47502571	1		
RWAGE	-0.50729645	-0.10965758	1	
Y	0.49172997	0.62651567	-0.34542956	1

In the meantime, table 2 highlights correlations among the underlying variables of employment, FDI, gross output and annual real wages per worker. As indicated by the correlation matrix, EMPL and FDI have a positive correlation of 0.48. The gross output (Y) also shows positive correlation of

0.49 with EMPL, while the RWAGE and EMPL shows a negative correlation; higher output and lower cost of wages enhance the number of employed labour. Even the RWAGE and FDI, and RWAGE and Y demonstrate negative correlations. In general, the signs indicated by the correlation matrices are consistent with theories and past empirical studies.

2.3 Methods of Estimation

The basic panel data regression model is specified as

$$y_{it} = \beta_0 + \beta_1 x_{it} + \varepsilon_{it}, \text{ i=1,…,N; t=1,…,T} \quad (2)$$

where ε_{it} is the error term with $E(\varepsilon_{it}) \sim N(0,\sigma 2)$. Basically, there are three ways to estimate equation (2); develop either the pooled model, the random effects model or the fixed effects model which depend on the assumptions we make about the intercept, the slope coefficients and the error terms.

The pooled effect model is estimated based on the usual OLS regression. The pooled model can be written as:

$$EMPL_{it} = \beta_0 + \beta_1 FDI_{it} + \beta_2 RWAGE_{it} + \beta_3 Y_{it} + u_{it} \quad (3)$$

where i stands for the i_{th} cross-sectional unit and t for the t_{th} time period, with the assumption that there are a maximum of N cross-sectional units and a maximum of T time periods. Equation (3) assumes that the intercept (β_0) and slope coefficients (β_1, β_2 and β_3) are constant across time and space and the error term, u_{it}, captures differences over time and individuals. Its main weakness is that it does not take into account the "individuality" of each cross-sectional unit. Due to its simplicity, the pooled regression may distort the true picture of the relationship between Y and X across the cross-sections.

2.3.1 Fixed effects model

One way to take into account the "individuality" of each cross-sectional unit is to let the intercept varies for each cross-section, but slope coefficients are still constant across cross-sections. This is known as a fixed effects model, where even though the intercept may differ across individuals, each individual's intercept is time invariant. This technique is appropriate in situations where the individual specific intercepts may be correlated with one or more regressors. In addition, the slope coefficients, as assumed in equation (4), do not vary across individuals or over time. For this study, its fixed effect model can be written as:

$$EMPL_{it} = \beta_{0i} + \beta_1 FDI_{it} + \beta_2 RWAGE_{it} + \beta_3 Y_{it} + u_{it} \quad (4)$$

where i on the intercept term suggests that the intercepts of the cross-sections may be different. The variation in intercept by cross-section is done through the adoption of the dummy variable technique. That is why the fixed effects model is also known as the least-squares dummy variable (LSDV) model. Similarly, we can also allow the fixed effects model to account for time effect by introducing time dummies. The consideration of the variation in intercept by cross-section is addressed as a one-way fixed effects model, while the consideration of cross section and time effect is addressed as a two-way fixed effects model. Nevertheless, the adoption of a one-way or a two-way fixed effect model depends on the significance of the coefficients. After conducting a regression

analysis on the fixed effects model, we can continue testing either the pooled or fixed effects model should be selected based on the redundant fixed effect test.

2.3.2 Random effects model

The random effects model is developed to address the question raised regarding the use of dummy variables in the fixed effects model. The use of dummy variables in the fixed effects model has been associated with the lack of knowledge about the (true) model. In the random effects model, it is assumed that the intercept of an individual unit is a random drawing from a much larger population with a constant mean value.

From equations (5) and (6), the error term of ω_{it} consists of ε_i, which is the error term of individual-specific, and u_{it}, which is the error component of the combined time series and cross section. One advantage of the random effects model over the fixed effects model is that it is economical in degrees of freedom where there is no need to estimate N cross sectional intercepts. This technique is appropriate when the intercept of each cross-sectional unit is uncorrelated with the regressors [17]. Similar to the fixed effects model, the random effects model can be conducted based on a one-way or a two-way random effects model. For this study, the random effects model can be written as:

$$EMPL_{it} = \beta_0 + \beta_1 FDI_{it} + \beta_2 RWAGE_{it} + \beta_3 Y_{it} + \varepsilon_i + u_{it} \quad (5)$$

$$EMPL_{it} = \beta_0 + \beta_1 FDI_{it} + \beta_2 RWAGE_{it} + \beta_3 Y_{it} + \omega_{it} \quad (6)$$

In order to evaluate either the random or the fixed effects model is better, the Hausman test is performed with the random effects model functions as the null hypothesis. If the fixed effects model is found to dominate the test, its estimates can be further improved through the adoption of Generalized Least Squares (GLS) or FE with robust standard error. In addition, we can also adopt the Breusch Pagan test to assist in selecting either the pooled model or the random model is better.

3. Results

Table 3 highlights estimation results of pooled, random and fixed effects models. In order to determine the selected model, pooled, random or fixed effects, the Redundant Fixed Effects test and Hausman test were conducted. The significant p-value of the Redundant Fixed Effects test suggests selecting the fixed effects model as the preferred model compared to the pooled OLS. Consequently, the significant p-value of the Hausman test recommends selecting the fixed effects model as opposed to the random effects model.

Nevertheless, the fixed effects model is found to exhibit heteroskedasticity and serial correlation problems which violate the assumptions made by the fixed effects model where the residual variance is constant across units and contains no autocorrelation (serial correlation). There is no multicollinearity problem since the variance-inflating factor (vif) is equal to 1.58 which is less than 5. In order to rectify the indicated problems of heteroskedasticity and serial correlation, the fixed effects model was improved by applying the robust technique of GLS.

Based on the results provided in Table 3 (FE GLS), even though FDI is not significant in influencing the number of employed people, it shows a positive coefficient with an elasticity of 0.00731 where a one percent increase in the net inflows of FDI is reflected in a 0.00731 percent increase in the number of employed workers (the elasticity is calculated by dividing the mean of respected variable with the

mean of the number of employed persons, and then multiplies it with the coefficient given in Table 3 with respect to the variable).

The average annual real wage is also not significant in influencing the number of employed workers. However, the negative sign indicated by the variable is consistent with the theory previously discussed in which wages are considered as a cost to a firm, and the higher the cost, the lower will be the number of employed people. The elasticity of the number of employed people with respect to the real wages variables indicates that a one percent increase in the average annual real wages per worker is reflected in a decrease of the number of employed people by 0.0078 percent. The only variable that is found to be significant in influencing the number of employed persons is the gross output (Y). It is significant at one percent level where a one percent increase in the gross output is reflected in an increase by 0.1204 percent in the number of employed workers. The signs of all underlying variables are consistent with theories and expected hypotheses.

Table 3
Results of Static Linear Panel Data Analysis (Dependent Variable: EMPL)

	Pooled OLS	Fixed Effects	Random Effects	FE (GLS)	OLS with Hetero & Serial Correlation
Constant	1561493 (3.26)***	1752121 (14.03)***	1713776 (6.63)***	1918400 (29.97)***	1561493 (1.79)
FDI	0.0001643 (2.42)**	3.24e-06 (0.30)	4.92e-06 (0.45)	2.30e-06 (0.72)	0.0001643 (2.21)*
RWAGE	-21.79625 (-3.55)***	-1.129690 (-0.40)	-4.987965 (-1.94)*	-0.498864 (-1.29)	-21.79625 (-2.53)*
Y	1.06e-06 (0.82)	1.62e-06 (5.25)***	1.80e-06 (6.04)***	9.38e-07 (3.77)***	1.06e-06 (0.53)
Redundant Fixed Effects test	191.229 (0.0000)***				
Hausman test		53.62 (0.000)***			
Observations	49	49	49		
Multicollinearity (vif)	1.58				
Heteroskedasticity (x^2-stat)		64171.49 0.0000)***			
Serial Correlation (F-stat)	27.447 (0.0063)***				

Notes: ***, ** and * indicate significance levels at 1%, 5% and 10% respectively. Figures in the parentheses are t-statistics, except for the Redundant Fixed Effects test, Hausman test, Heteroscedasticity and Serial Correlation, which are p-values.

4. Conclusion

In summary, this study intends to examine the impact of the inflows of foreign direct investment (FDI) on employment in Malaysia by adopting a panel data analysis of five cross-section units for the period of 2000 to 2010. The Redundant Fixed Effects and Hausman tests indicate that the best model to explain the relationship between the underlying variables of employment, FDI, real wages per worker and gross output is the Fixed Effect Generalized Least Square (FE GLS) model. Results of the model do not reveal any significant influence of FDI on employment in Malaysia. These results further strengthen the findings by Yusof [7]. The insignificant influence of FDI on employment in Malaysia may be due to the period of study where year 2009 witnessed a significant drop of the inward flows

of FDI and also may be because most MNEs established in Malaysia are using high-tech and robotic equipment which requires less labour. Furthermore, it should be noted that not all sectors receive a significant amount of FDI. Real wages are also not significant. Only the gross output is found to have a significant influence on employment. Nevertheless, their signs complement theories and past empirical studies. The conclusion that can be drawn from this study is that FDI, in general, does not contribute significantly towards employment.

References

[1] Pinn, Stan Lee Shun, Kok Sook Ching, Mori Kogid, Dullah Mulok, Kasim Mansur, and Nanthakumar Loganathan. "Empirical analysis of employment and foreign direct investment in Malaysia: An ARDL bounds testing approach to cointegration." *Advances in Management and Applied Economics* 1, no. 3 (2011): 77.

[2] Javed, K. , M. H. Sial, R. U. Awan, and F. Sher. "Foreign Direct Investment, Economic Growth and Employment: Evidence from Pakistan." *Interdisciplinary Journal of Contemporary Research in Business* 3, no. 3 (2011): 1399-409.

[3] Massoud, Nada. "Assessing the Employment Effect of FDI Inflows to Egypt: Does the Mode of Entry Matter?." In *International Conference on 'The Unemployment Crisis in the Arab Countries*, pp. 17-18. 2008.

[4] Akcoraoglu, Alpaslan, and Senay Acikgoz. "Employment, international trade and foreign direct investment: Time series evidence from Turkey." *International Research Journal of Finance and Economics* 76 (2011).

[5] Karlsson, Sune, Nannan Lundin, Fredrik Sjöholm, and Ping He. "Foreign firms and Chinese employment." *The World Economy*32, no. 1 (2009): 178-201.

[6] Aktar, Ismail, Nedret DEMİRCİ, and Latif ÖZTÜRK. "CAN UNEMPLOYMENT BE CURED BY ECONOMIC GROWTH AND FOREIGN DIRECT INVESTMENT?." *Sosyal Ekonomik Araştırmalar Dergisi* 17 (2009): 452-467.

[7] Yusof, Selamah Abdullah. "Globalization and Labor Markets of Malaysia, Indonesia And Thailand: An Empirical Investigation."

[8] Ajaga, Elias, and Peter Nunnenkamp. "Inward FDI, value added and employment in US states: A panel cointegration approach." *Aussenwirtschaft* 63, no. 4 (2008): 347.

[9] Nunnenkamp, Peter, and José Eduardo Alatorre Bremont. *FDI in Mexico: An empirical assessment of employment effects*. No. 1328. Kiel Working Paper, 2007.

[10] Jayaraman, Tiru K., and Baljeet Singh. "Foreign direct investment and employment creation in Pacific Island countries: an empirical study of Fiji." *Asia-Pacific Research and Training Network on Trade Working Paper Series* 35 (2007): 1-15.

[11] Jenkins, Rhys. "Globalization, FDI and employment in Viet Nam." *Transnational Corporations* 15, no. 1 (2006): 115.

[12] Fu, Xiaolan, and Vudayagiri N. Balasubramanyam. "Exports, foreign direct investment and employment: The case of China." *The World Economy* 28, no. 4 (2005): 607-625.

[13] Nyen Wong, Koi, and Tuck Cheong Tang. "Foreign direct investment and employment in manufacturing and services sectors: Fresh empirical evidence from Singapore." *Journal of Economic Studies* 38, no. 3 (2011): 313-330.

[14] Williams, David. "Explaining employment changes in foreign manufacturing investment in the UK." *International Business Review* 12, no. 4 (2003): 479-497.

[15] Apergis, Nicholas. "The employment-wage relationship: was Keynes right after all?." *American Review of Political Economy* 6, no. 1 (2008): 40.

[16] "Asean Investment Report." In *Sustaining FDI Flows in a Post-crisis World*. Jakarta, 2011.

[17] Gujarati, D. N. *Basic Econometrics*. 4th ed. Singapore: McGraw-Hill Education, 2003.