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Globalization and the Malaysian Labor Market: An Empirical Investigation

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Theories have been put forth on the impact of globalization on wages, employment and productivity levels, of which empirical evidence provide mixed results on its effects. The existing empirical studies have largely been either concentrating on developed economies or on developing countries as a group, and rely mainly on correlation and standard econometric technique of regression. This paper, on the other hand, investigates the link between globalization and the Malaysian labor market by applying the autoregressive distributed lag approach, a relatively new time-series technique to the analysis. The findings indicate that globalization does not significantly affect the labor variables in the long run. In fact, inflow of foreign direct investments is an "adjusting" variable that reacts to changes in productivity and output growth. Thus for Malaysia, the main focus should be on upgrading the skills and productivity of workers, rather than on globalization, to improve its overall economic growth.

There are variations to the meaning of globalization. In many writings, the emphasis is on economic globalization. Bhagwati (2004) explains economic globalization as constituting the integration of national economies into the international economy through trade, direct foreign investment, short-term capital flows, international flows of workers and humanity generally, and flows of technology. Alternatively, it can be defined as the process in which the combined force of different elements leading to an increase in countries dependence on or from more positive point of view of interactions with the rest of the world. It leads to a progressive integration of the world economy through pulling barrier of trade, exchange rate and greater mobility of factors of production

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(Bhandari and Heshmati, 2005). Thus, economic globalization can be seen as a process where a mutual interdependence of producers of goods and providers of services is increasing and where decisions on allocation of production factors are ever more make globally (Schlamberger, 2004). In short, economic globalization constitutes five distinct elements - trade, foreign direct investment (FDI), short-term capital flows, knowledge, and movements of labor. On a wider scope, apart from the economic aspect, globalization also encompasses the social and political dimensions. Political globalization is characterized by a diffusion of government policies, while social globalization is the spread of ideas, information, images and people (Dreher, 2006).

Various theories have been put forth on the effects of globalization on the labor market. The neoclassical theory predicts that national economies will converge in their average productivity levels and average incomes because of increased mobility of capital. However, it differs from the endogenous growth theory which argues that convergence is less likely and divergence more likely because of differential benefits from economic integration and trade, restricted free market relations, and developing countries locked into producing certain commodities (Heshmati, 2003). It is argued that globalization has a positive effect by helping to develop international trade, thus increasing employment and domestic product, opening markets, reduced isolation of less developed parts of the world (Schlamberger, 2004). In addition, FDI is thought to supply poor countries with markets, transfer technology and capital, and provide income growth, employment and poverty reduction. (de Soysa and Neumayer, 2005).

Even so, an application of the Heckscher-Ohlin theorem to human capital may indicate that although on average there are benefits to trade, not all groups benefit (Leslie and Pu, 1996). It predicts that increased trade with countries with an abundance of unskilled labor and the specialization in skill-intensive production in developed countries leads to relative losses for the unskilled parts of the labor force (Neumayer and de Soysa, 2006). Also, along the lines of the Stolper-Samuelson theorem, Eckel (2003) and Ethier (2002) state that an increase in commodity trade with unskilled labor-abundant, low-wage countries leads to an increase in the wage rate of skilled workers and depresses the wage rate of unskilled workers.

Rama (2003) argues that globalization may affect the labor market in two opposite ways. Reforms made by countries to become more competitive by dismantling their trade barriers, abolish their legal monopolies, privatize their stateowned enterprises and reduce over-staffing in their bloated bureaucracies could lead to massive loss of jobs and boost unemployment rates. Besides that, the macroeconomic fluctuations resulting from short-term capital movements could also increase job insecurity. On the other hand, the delocalization of production to developing countries could increase the demand for labor, thus expanding employment opportunities and raising workers' earnings.

There are several empirical studies that examine the impact of globalization on wages. For instance, Rama (2003), using data of seventy countries and applying regression techniques, finds that short-term impact of trade liberalization (measured as ratio foreign trade to GDP) on wages is negative; while the impact of FDI on wages is positive. These results stress the importance of the investment climate. If the opening up of the economy fails to attract foreign capital, wages losses could be sizeable. While the impact of FDI on wages fades over time (not significant after 5 years), the impact of openness to trade becomes significantly positive (negative impact is offset after 3 years). However, using a different measure of openness, as constructed by Sachs and Warner (1995), he finds that the negative impact is offset after 5 years. A similar finding is obtained by Majid (2004) in that there is an initial negative impact of globalization on wages, but they tend to recover within 3 to 4 years of openness. He also finds that FDI is relatively less important than trade for determining wages in developing countries.

In developing countries, both trade and FDI can initially impact negatively on wages. In its analysis in the *Key Indicators of the Labour Market*, ILO (2005) states that studies have found that the impact of globalization on wages: (a) shows a Kuznets-type relationship whereby globalization initially has a negative impact on wages, but this effect dissipates over time and eventually the impact of globalization on wages becomes positive; (b) is biased towards high-skilled occupations and has a lesser impact on the unskilled and the poor; and (c) has narrowed the gender gap, particularly in low-skilled occupations.

With respect to employment, Currie and Harrison (1997) find that in Morocco, employment in the average private sector manufacturing firm was basically unaffected by trade liberalization. In Mexico, the shift in labor demand was modest. Reductions in tariffs lead to lower wages in period when trade unions were not active, despite considerable reduction in employment (Revenga, 1997). On the other hand, there is no strong evidence to support the claim that labor demand has become more elastic as a result of globalization (Chinoy, Krisna and Mitra, 1998; Maloney and Fajnzylber, 2000). Rama (2003) finds that other countries such as Chile, Mauritius, Poland and Sri Lanka experienced a long period of high unemployment rates after the launching of the economic reforms. However, when the initial year of the reforms is modified, it becomes unclear whether globalization actually led to higher unemployment rates. He also finds that trade liberalization is associated with job losses in formerly protected sectors. It is also associated with the replacement of permanent workers, who have a more privileged status, by temporary and casual workers, who enjoy fewer benefits.

Globalization is also assumed to have an impact on productivity, where productivity is expected to grow faster in more open economies (Sachs and Warner, 1995; Sala-i-Martin, 1997). Bonfiglioli (2006) focuses on financial integration and applies GMM dynamic panel technique on annual observations from at most 93 countries over the period 1975-1999. She finds that financial globalization has a positive effect on productivity as measured by total factor productivity. Mann (1997) instead examines the impact of exports and imports on productivity for the manufacturing industries in two countries, the United States and Germany. Using correlation and regression techniques, the results of the study suggest that an increase in foreign demand for U.S. exports increases trend productivity growth, and the opposite occurs for an increase in U.S. imports. For Germany, neither international demand shocks nor exposure to international competition are associated with productivity growth. Dasgupta and Osang (2002) also examine the case of the U.S., focusing on the manufacturing industries during 1961-1991. They find that a significant variation in the observed increase in the skill premium can be attributed to the impact of globalization.

The empirical studies on the effect of globalization on the labor market variables rely mainly on correlation and regression techniques. Many of these studies either concentrate on developed economies or on developing countries as a group. However, the impact of globalization on a country, especially a developing one, may differ from another, due to different economic structure, size and location, which in turn will have significant policy implications for that particular country. Thus this paper, instead, focuses on one developing nation, Malaysia. In addition, the relationship between globalization and labor variables may not necessarily be contemporaneous, and perhaps more importantly, the effect may not be from globalization to labor variables, or even unidirectional. Hence, this study utilizes time-series econometric techniques to analyze the relationship between wages, employment and productivity, and globalization variables. It determines whether such link exists, and if so, the direction of the relationship.

The empirical evidence provided in this study can be used to either provide support or invalidate the theories on globalization. The aim of this study is to contribute to the existing literature on the impact of globalization on the labor market of a developing nation by applying Pesaran, et al (2001) autoregressive distributed lag (ARDL) approach, a relatively new-time series technique to the analysis. This approach avoids the problem of "spurious regression" arising from the non-stationarity of the variables of interest when standard regression techniques are used, and does not require the variables to be integrated of the same order, as in Johansen (1988) technique. The findings will also be useful in providing some observations to Malaysian policy makers in their implementation and evaluation of labor and trade policies.

Method and Data

Firstly, each series/variable is tested for stationarity. The order of integration of the variables is determined using the Dickey and Fuller (1979) ADF, Phillips-Perron (1988) PP and Kwiatkowski et al. (1992) KPSS tests. In addition, the autocorrelation functions are plotted for both levels and first-difference for a visual inspection and confirmation of the order of integration.

To establish the link between globalization and labor market variables, Pesaran et al. (2001) ARDL method is applied. The test for the existence of a long-run relationship in conducted by determining whether the variables are cointegrated using the bounds testing procedure. The *F*-statistics computed are compared with the critical values for unrestricted intercept and no trend, as reported in Narayan (2005).[1] Once it is established, the "forcing" and "adjusting" variables are identified by examining the significance of the error correction term (ect) in the error correction representation of the ARDL models. The dynamic relationship is analyzed through the associated ARDL error correction models.

The quarterly data 1998:1 to 2006:3 that are used for analysis are obtained from two sources. The *Monthly Statistical Bulletin Malaysia* (Malaysia, various years)
provides data for total salaries and wages paid, and number of paid employees of selected manufacturing industries, and gross domestic product (GDP) contributed by the manufacturing sector.[2] Data on consumer price index (CPI), GDP deflator, real GDP, unemployment rate, total exports and imports of goods and services, official exchange rates, and outflow and inflow of portfolio and direct investments are obtained from the IMF's *International Financial Statistics* website.[3] The salary and wages paid per employee represents the nominal wage. The real wage is computed by deflating it with CPI. The real GDP, total exports and total imports, are converted into US dollars using the official exchange rates. The labor productivity is represented by the ratio of GDP contributed by the manufacturing sector to number of employees and converted into US dollars, and into real terms using the GDP deflator.[4] Productivity, along with real wage and unemployment rate are the variables of the labor market. The logarithms of wage and productivity are used in the analysis.

For globalization, four individual measures are constructed which focus specifically on economic integration. There are several indices that have been constructed to measure globalization,[5] or economic integration.[6] The indices representing overall globalization, although more comprehensive, are not without faults. For measures that are wider in scope, problems arise in mixing a variety of variables some of which are only very indirect indicators and others for which the interpretation is

open to discussion (Andersen and Herbertsson, 2003). The weighting scheme is either completely arbitrary or use some techniques such as factor analysis which are sensitive to changes in the dataset, affected by outliers and suffer from small sample problems. Similar problems are encountered by the index constructed by Andersen and Herbertsson (2003). These indices produce quite different globalization rankings for the countries in the world or in the OECD. Thus, findings of any study may depend highly on which index is being used in the analysis.

On the other hand, examining individual measures of globalization will help to identify which variables play a key role, if any, in affecting the labor market. This is important in formulating the relevant policies for a country. The four globalization measures used in this study are (i) net direct investment which is computed as the difference between inflow and outflow of direct investments; (ii) inflow of direct investment; (iii) total portfolio investment which is the sum of inflow and outflow of portfolio investments; and (iv) total trade which is the sum of total exports and imports; all four as a proportion of GDP.

Empirical Results

The results of the ADF, P-P and KPSS tests on the levels and first-differences of the variables are given in Table 1. All the three tests suggest that unemployment rate, net direct investment and total portfolio investment are integrated of order 0. Both the ADF and P-P statistics support the hypothesis that productivity and total trade are I(1) and FDI inflow and wages are I(0), while the KPSS statistic suggests an integration of order 0 for productivity and total trade, order 2 for wages, and order 1 for FDI inflow. The results of ADF, P-P and KPSS tests also differ for GDP. Based on the ADF and KPSS tests, GDP is I(0), while PP suggests it is integrated of order 1. However, the autocorrelation functions suggest that wage and FDI inflow are I(0) while GDP, total trade and productivity are I(1). The plot of I(1) level series show a gradual decline while the first-difference series return to zero quickly; but for I(0), the level series plot return to zero quickly. Based on the combined results from all the tests and autocorrelation functions, it can be assumed wage and FDI inflow are I(0), and GDP, total trade and productivity are I(1) processes. These findings indicate that the variables

are mixed in their order of integration, thus making ARDL model appropriate for analysis.

Next, an analysis is conducted to determine if wages, unemployment rate and productivity are cointegrated with each of the four globalization variables. This study at the outset assumes no *a priori* direction of relationship, i.e., no assumption is made about the "forcing" or "adjusting" variables. Firstly, the relationship between a labor variable and a globalization variable is examined. Secondly, GDP is included to determine the interrelationship between the three variables since output may be related to the labor and globalization variables. The orders of lags on the first-differenced variables used are 2 and 4, since results may be sensitive to the order of vector autoregression (VAR) as shown in Bahmani-Oskooee and Bohl (2000). A larger value for the lag order cannot be applied since the number of observations is not large enough. Quarterly dummies are included since plots of the series indicate that they are seasonal. The outcome varies somewhat with the choice of lag order.

For the bivariate analyses, wages and unemployment rate are not related to any of the four globalization variables. Productivity, however, is cointegrated with one of the variables, the inflow of FDI at the 10 percent level, with F(productivity|FDI inflow)=5.4608. The error correction model (ECM) indicates that the changes in inflow of FDI adjust to productivity growth, and not vice-versa. When the variable GDP is included in the model, the results still indicate that total trade and net direct investment have no significant effect on the labor variables. On the other hand, the inflow of FDI and total portfolio investment, through their interactions with output, are now related to the labor variables.

Table 2 presents the *F*-statistics obtained for the bounds test of cointegration between labor and globalization variables, and GDP. There is a significant relationship between FDI inflow, productivity and output. The lags for the ARDL specifications are based on Akaike Information Criterion (AIC), Schwarz Bayesian Criterion (SBC), Hannan-Quinn Criterion (HQ), and R-bar Squared criterion. To economize space, only the ECMs based on AIC are presented in Table 3 since other criteria also produce the same or similar results.[7] All three

variables are not weakly exogenous, as indicated by the significance of the ects. Productivity and inflow of FDI overadjust, while output corrects about 22.5 percent in the next quarter for a deviation from the long-run equilibrium level in one quarter. In the short run, both output and productivity growths have lag effects on changes in FDI inflow and productivity. GDP growth, on the other hand, is contemporaneously affected by productivity growth. CUSUM and CUSUMSQ are applied to the residuals of the ECMs to examine the stability of the coefficients. Following Pesaran and Pesaran (1997), the plots of CUSUM and CUSUMSQ statistics stay within the critical bounds of 5 percent significance level for FDI inflow and productivity equations, which suggest that the coefficients in the ECMs are stable. For the output equation, although CUSUM plot stays within the bounds, CUSUMSQ plot does not. This indicates that there may be some structural instability for this model.

The relationship between FDI inflow, wages and output is given in Table 4. Based on the ECMs, GDP is the forcing variable, while inflow of FDI and wages adjust to changes in output. As in the previous case, FDI inflow overadjusts, while the speed of adjustment to equilibrium for wages is moderate (0.437). With respect to the dynamic relationships, GDP growth has a positive lag effect on inflow of FDI, and on wage changes. CUSUM and CUSUMSQ plots indicate no problem of structural instability for all ECMs.

The findings as given in Table 2 also indicate that there exist cointegrations between unemployment rate and output with FDI inflow, and with total portfolio. FDI inflow and unemployment rate adjust to changes in output to maintain a long-run relationship. In fact, both these variables over-adjust, and more so for unemployment rate, as shown in Table 5. In the short term, output growth has a positive lag effect on changes in FDI inflow, while unemployment rate is affected by itself, and the other two variables. The results also indicate that total portfolio is an “adjusting” variable, by accommodating to changes in GDP (see Table 6). In the short run, it is positively affected by unemployment rate. Tests on structural instability on all equations indicate its absence.

Discussion and Conclusion

The findings of this study indicate that globalization does not play any significant role in affecting labor variables in the long term. The inflow of FDI is associated with productivity, wages and unemployment, and total portfolio investment with unemployment, but these are mainly through changes in output. Even that, these globalization variables are not the forcing variables, rather, they adjust to changes in GDP and productivity. Higher productivity levels and economic growth attract a bigger inflow of direct investment into Malaysia, and not vice-versa. Similarly, output growth also influences variations in the total inflow and outflow of portfolio investment. In addition, the analysis suggests that unemployment and productivity levels respond very quickly to changes in output, in fact, they over-accommodate for a shock in GDP. Real wage, on the other hand, adjusts more slowly to output.

These results appear to reject the theories of the effects of globalization on the labor market of a developing country. The neoclassical theory that mobility of capital will increase average productivity levels and average incomes is not supported. There is also no evidence to support other theories on how globalization improves employment and growth. The empirical findings of this paper are consistent with those of Currie and Harrison (1997), Chinoy, Krisna and Mitra (1998), Maloney and Fajnzylber (2000), and Revenga (1997) in that trade liberalization has no significant impact on employment. The results are also in line with the study by Bonfiglioli (2006) on Germany in which productivity is not affected by trade.

Other studies that show the impact of globalization on labor market such as Rama (2003) and Majid (2004) assume at the outset that the direction of relationship is from trade liberalization (or other globalization measures) to wages, and apply simple correlation or regression techniques to produce the necessary results. The assumption on the direction of impact must first be tested to determine if it is supported, and secondly, the variables used must be checked for stationarity to avoid the problem of spurious relationship when standard regression techniques are used.

The lack of relationship between globalization and labor variables does not necessarily imply that globalization has no impact on wages, employment or productivity. This study analyzes the impact of globalization on overall levels of (un)employment, wages and productivity. As discussed by Eckel (2003) and Ethier (2002), trade may increase the wages of the skilled, and depresses the earnings of the unskilled. Thus, overall, these two impacts may cancel each other out. Greater economic integration may increase demand for labor in some sectors or occupations, and a decrease in others. Or, as discussed earlier (Rama, 2003), reforms taken by countries to become competitive by reducing overstaffing in their bureaucracies can be offset by the increase in employment due to the decentralization of production to developing countries. A similar argument can also be applied to labor productivity. Further research may focus on the impact of globalization on specific sectors and different levels of workers, however, this is subject to availability of data.

Notwithstanding this line of reasoning, this study shows that expansions in overall growth can be achieved mainly through increases in productivity, and not directly through globalization. Thus, the focus of policy-makers must therefore be on the upgrading of skills and productivity of workers for them to attain higher earnings and enjoy higher standards of living. This can be done through education and training, and retraining, with proper monitoring and evaluation to ensure that workers are equipped with the knowledge, skills and creativity to match technological advances in production and services. In addition, since unemployment appears to very responsive to changes in output and productivity, there is a need for the policy makers to implement a better social net for the poor to withstand in adverse circumstances.

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Endnotes

[1] Since the number of observations in this analysis ranges from 26 to 29, the critical values for 30 observations are used since that is the minimum number of observations reported in Narayan (2005).

[2] The data on wages and salaries, and number of employees for all manufacturing industries are not available. However, the data reported in the *Bulletin* are based on establishments that accounted for most of the production in the various manufacturing industries and represents 77.6% of the value of gross output of the manufacturing sector in 1993. Data on wages and salaries for all workers in Malaysia are also not available.

[3] http://imfStatistics.org

[4] Productivity is commonly defined as a ratio of a volume measure of output to a volume measure of input. Productivity measures can be classified as single factor measures (ratio of output to a single input, such as labor or capital) or multifactor measures (ratio of output to a bundle of inputs - labor and capital, or labor, capital and intermediate inputs) (OECD, 2001; Spithoven, 2003). However, in many empirical studies, labor productivity is often used since it relates to the single most important factor in production and is intuitively appealing. Equally important, and is often the case, it may be the only way to measure productivity due to lack of data. Many studies measure productivity as GDP or output per worker, either at aggregate or sectoral level, as in Darby and Wren-Lewis (1993), Alexander (1993), Wakeford (2004), Papapetrou (2001), Huh and Trehan (1995), Bahmani-Oskooee and Miteza (2004), Bahmani-Oskooee and Nasir (2004) and Doyle and O'Leary (1999). Other studies such as Khawar (2003) use the ratio of real gross value of output to labor efficiency unit, while some others use several indicators including total factor productivity as in Aiginger (2005) to measure labor productivity. In this paper, due to data limitations, labor productivity is represented by the ratio of manufacturing output to number of employees.

[5] These include the Kearney index which attempts to incorporate four components in measuring globalization – economic integration, technology, personal contact, and political engagement (Heshmati, 2003). Economic integration includes trade, FDI, portfolio capital flows, and income payment and receipts, while number of internet users, internet hosts, and secure servers are used to measure technology. On the other hand, personal contact consists of international travel tourism, international telephone traffic, and across borders money transfers; and political engagement is represented by the number of international organizations and UN Security Council missions in which each country participates and the number of foreign embassies that each country hosts. Heshmati (2003) also uses data from Kearney to construct a similar index but using principal component technique to determine the weights, rather than the ad hoc basis utilized by Kearney index. There are other composite measures of globalization, such as that by KOF Swiss Economic Institute (Dreher, 2006) which includes three dimensions of globalization - economic, social and political.

[6] An index constructed by Andersen and Herbertsson (2003) focus on economic integration of the goods and capital markets and provide an index indicating the relative globalization of OECD countries. They examine two dimensions of globalization, the direct effect, i.e., how countries use the opportunity of integrating into the world economy (trade, foreign investment, etc.) and an indirect effect, i.e., the extent to which the institutional setup in different countries allows for participation in global activities (freedom to trade with foreigners, freedom to use alternative currencies, and freedom to exchange in international capital and financial markets) and apply factor analysis so that the weighting of various variables is based on statistical methods rather than *a priori* judgments.

[7] The same applies to the ECMs presented in Tables 4-6.

Table 1: Tests for Unit Roots – Augmented Dickey-Fuller Phillips-Perron and Kwiatkowski et al.

Variables	ADF		P-P		KPSS	
	Level	1st difference	Level	1st difference	Level	1st difference
Productivity	-3.314 (0.081)	-8.524 (0.000)	-3.382 (0.071)	-9.048 (0.000)	0.084	
Unemployment rate	-4.754 (0.0031)		-5.234 (0.000)		0.086	
Log real wage	-5.817 (0.000)		-13.561 (0.000)		0.338***	0.193**
Total trade	-2.336 (0.4045)	-6.237 (0.000)	-2.362 (0.392)	-6.266 (0.000)	0.102	
Net foreign direct investment	-6.664 (0.000)		-6.557 (0.000)		0.087	
Inflow of foreign direct investment	-4.586 (0.005)		-4.655 (0.004)		0.137*	0.500
Total portfolio investment	-4.729 (0.004)		-4.734 (0.004)		0.072	
GDP	-3.647 (0.042)		-3.332 (0.078)	-16.711 (0.000)	0.104	

Notes: Numbers in parentheses indicate *p*-values.
*, ** and *** indicate significance at 10, 5 and 1 percent levels, respectively.

Table 2: Bounds test for Cointegration – *F*-statistics

		Lag2	Lag 4			Lag 2	Lag 4
1	Productivity	1.364	1.599	7	Wages	4.373	15.639***
	Total trade	0.504	1.987		FDI inflow	5.034*	40.622***
	GDP	2.178	1.616		GDP	0.659	47.199***
2	Productivity	2.795	0.645	8	Wages	2.453	1.141
	Net FDI	2.074	0.365		Total portfolio	0.849	0.706
	GDP	1.642	0.404		GDP	0.526	1.061
3	Productivity	2.332	0.476	9	Unemployment rate	2.413	2.393
	FDI inflow	6.934**	0.584		Total trade	0.800	0.725
	GDP	1.065	0.491		GDP	0.785	1.337
4	Productivity	9.316***	8.902***	10	Unemployment rate	3.245	1.225
	Total portfolio	3.997	1.284		Net FDI	1.321	0.843
	GDP	3.160	1.201		GDP	0.758	0.909
5	Wages	3.801	0.832	11	Unemployment rate	4.446	0.573
	Total trade	0.571	0.868		FDI inflow	4.498*	2.318
	GDP	4.770*	2.799		GDP	0.358	0.992
6	Wages	2.007	1.973	12	Unemployment rate	2.341	4.666*
	Net FDI	1.597	.0730		Total portfolio	1.138	1.529
	GDP	0.927	1.824		GDP	0.636	2.058

Notes: *, ** and *** indicate significance at 10, 5 and 1 percent levels, respectively.

Table 3: Error Correction Representation for the Relationship between FDI inflow, Productivity and Output

Dependent:	dFDIinflow	Dependent:	dProd	Dependent:	dGDP
dProd	0.178	dProd(-1)	1.152	dFDIinflow	0.003
	(.358)		(.020)		(.979)
dProd(-1)	-0.521	dProd(-2)	0.954	dProd	0.242
	(.048)		(.031)		(.000)
dProd(-2)	-0.487	dProd(-3)	0.566	Constant	0.099
	(.066)		(.042)		(.576)
dGDP	0.082	dGDP	1.248	dQ2	0.049
	(.851)		(.009)		(.000)
dGDP(-1)	1.00	dGDP(-1)	-1.285	dQ3	0.051
	(.015)		(.071)		(.000)
dGDP(-2)	1.00	dGDP(-2)	-2.207	dQ4	0.038
	(.043)		(.001)		(.000)
Constant	1.491	dFDIinflow	0.179	ect(-1)	-0.225
	(.020)		(.548)		(.001)
dQ2	0.028	dFDIinflow(-1)	-0.773		
	(.371)		(.053)		
dQ3	0.025	dFDIinflow(-2)	-0.160		
	(.524)		(.599)		
dQ4	-0.020	dFDIinflow(-3)	0.226		
	(.293)		(.305)		
ect(-1)	-1.455	Constant	-2.417		
	(.000)		(.038)		
		dQ2	-0.038		
			(.294)		
		dQ3	-0.114		
			(.011)		
		dQ4	0.012		
			(.647)		
		ect(-1)	-1.291		
			(.022)		
$\overline{R}^2$	0.636	$\overline{R}^2$	0.766	$\overline{R}^2$	0.921
F	5.746	F	7.223	F	51.457
DW	1.977	DW	1.811	DW	1.786

Table 4: Error Correction Representation for the Relationship between FDI inflow, Wages and Output

Dependent:	dFDIinflow	Dependent:	dWage	Dependent:	dGDP
dGDP	0.157	dGDP	0.157	dGDP	0.33
	(.606)		(.037)		(.232)
dGDP(-1)	0.552	dFDIinflow	-0.396	dFDIinflow	0.068
	(.112)		(.120)		(.670)
dGDP(-2)	0.761	Constant	1.639	dWage	0.130
	(.047)		(.087)		(.210)
dGDP(-3)	0.385	dQ2	0.053	Constant	-0.692
	(.258)		(.040)		(.148)
dWage	-0.181	dQ3	0.05	dQ2	0.079
	(.280)		(.051)		(.000)
Constant	-0.178	dQ4	0.15	dQ3	0.056
	(.809)		(.000)		(.000)
dQ2	0.063	ect(-1)	-0.437	dQ4	0.029
	(.065)		(.032)		(.038)
dQ3	0.070			ect(-1)	-0.031
	(.078)				(.465)
dQ4	0.053				
	(.144)				
ect(-1)	-1.336				
	(.000)				
$\overline{R}^2$	0.632	$\overline{R}^2$	0.931	$\overline{R}^2$	0.857
F	6.179	F	59.666	F	23.183
DW	2.153	DW	1.587	DW	1.866

Table 5: Error Correction Representation for the Relationship between FDI inflow, Unemployment Rate and Output

Dependent:	dFDIinflow	Dependent:	dURate	Dependent:	dGDP
dGDP	-0.184	dGDP	1.714	dGDP	0.330
	(.591)		(.023)		(.249)
dGDP(-1)	0.792	dURate(-1)	1.181	dURate	-0.003
	(.044)		(.016)		(.801)
dGDP(-2)	0.733	dURate(-2)	0.620	dFDIinflow	0.070
	(.075)		(.076)		(.682)
dURate	-0.016	dURate(-3)	0.246	dFDIinflow(-1)	0.212
	(.216)		(.242)		(.114)
dURate(-1)	0.009	dFDIinflow	-9.408	Constant	-0.303
	(.581)		(.027)		(.228)
dURate(-2)	0.007	dFDIinflow(-1)	15.941	dQ2	0.081
	(.590)		(.028)		(.000)
dURate(-3)	-0.014	dFDIinflow(-2)	10.821	dQ3	0.058
	(.182)		(.082)		(.000)
Constant	-0.134	dFDIinflow(-3)	6.106	dQ4	0.043
	(.693)		(.105)		(.000)
dQ2	0.064	Constant	-7.567	ect(-1)	0.029
	(.089)		(.186)		(.293)
dQ3	0.046	dQ2	-0.167		
	(.236)		(.329)		
dQ4	-0.003	dQ3	-0.422		
	(.862)		(.057)		
ect(-1)	-1.279	dQ4	-0.398		
	(.000)		(.037)		
		ect(-1)	-2.244		
			(.001)		
$\overline{R}^2$	0.688	$\overline{R}^2$	0.637	$\overline{R}^2$	0.863
F	6.184	F	4.743	F	20.886
DW	2.078	DW	1.700	DW	2.225

Table 6: Error Correction Representation for the Relationship between Total Portfolio Investment, Unemployment Rate and Output

Dependent:	dTotalport	Dependent:	dURate	Dependent:	dGDP
dGDP	-0.175	dGDP	6.256	dGDP(-1)	0.565
	(.180)		(.327)		(.083)
dURate	0.027	dGDP(-1)	-18.299	dGDP(-2)	0.246
	(.345)		(.007)		(.464)
dURate(-1)	0.081	dTotalport	1.907	dGDP(-3)	-0.323
	(.014)		(.142)		(.276)
dTotalport(-1)	0.303	dTotalport(-1)	-2.264	dURate	0.008
	(.350)		(.169)		(.437)
dTotalport(-2)	0.529	dTotalport(-2)	-3.121	dURate(-1)	-0.009
	(.114)		(.059)		(.596)
dTotalport(-3)	0.635	Constant	-11.713	dURate(-2)	-0.010
	(.010)		(.087)		(.474)
Constant	1.660	dQ2	-1.503	dURate(-3)	-0.021
	(.153)		(.034)		(.044)
dQ2	0.081	dQ3	-0.469	dTotalport	-0.045
	(.007)		(.289)		(.534)
dQ3	0.115	dQ4	-0.270	dTotalport(-1)	-0.078
	(.001)		(.392)		(.406)
dQ4	0.102	ect(-1)	-1.000	dTotalport(-2)	0.078
	(.001)		(.)		(.339)
ect(-1)	-1.037			Constant	-0.280
	(.006)				(.439)
				dQ2	0.098
					(.000)
				dQ3	0.084
					(.006)
				dQ4	0.028
					(.241)
				ect(-1)	0.017
					(.670)
$\overline{R}^2$	0.725	$\overline{R}^2$	0.588	$\overline{R}^2$	0.881
F	7.700	F	5.078	F	14.350
DW	1.870	DW	2.125	DW	2.582