INTERNATIONAL JOURNAL OF ACADEMIC RESEARCH IN BUSINESS & SOCIAL SCIENCES
HRMARS MANAGEMENT ACADEMIC RESEARCH SOCIETY EXPLORING INTELLECTUAL CAPITAL
www.hrmars.com
ISSN: 2222-6990

Assessing the Impact of Information and Communication Technology and Economic Growth on Foreign Direct Investment Inflows in China and Malaysia

Muhammad Aiman Haziq Norehan, Abdul Rahim Ridzuan, Shafinar Ismail, Mohamad Idham Md Razak, Mohd Shahidan Shaari

To Link this Article: http://dx.doi.org/10.6007/IJARBSS/v12-i9/14855 DOI:10.6007/IJARBSS/v12-i9/14855

Received: *10* July 2022, ***Revised:*** *12* August 2022, ***Accepted:*** *27* August 2022

Published Online: *07* September 2022

In-Text Citation: (Norehan et al., 2022)

To Cite this Article: Norehan, M. A. H., Ridzuan, A. R., Ismail, S., Razak, M. I. M., & Shaari, M. S. (2022). Assessing the Impact of Information and Communication Technology and Economic Growth on Foreign Direct Investment Inflows in China and Malaysia. *International Journal of Academic Research in Business and Social Sciences*, *12*(9), 434 – 447.

Vol. 12, No. 9, 2022, Pg. 434 – 447

http://hrmars.com/index.php/pages/detail/IJARBSS | **JOURNAL HOMEPAGE**

Full Terms & Conditions of access and use can be found at
http://hrmars.com/index.php/pages/detail/publication-ethics

INTERNATIONAL JOURNAL OF ACADEMIC RESEARCH IN BUSINESS & SOCIAL SCIENCES
HRMARS MANAGEMENT ACADEMIC RESEARCH SOCIETY
EXPLORING INTELLECTUAL CAPITAL
www.hrmars.com
ISSN: 2222-6990

Assessing the Impact of Information and Communication Technology and Economic Growth on Foreign Direct Investment Inflows in China and Malaysia

Muhammad Aiman Haziq Norehan
Sales Department, CIMB Bank Berhad, Malaysia
Email: Aiman.norehan@cimb.com

Abdul Rahim Ridzuan
Faculty of Business and Management, Universiti Teknologi MARA, Malaysia
Institute for Big Data Analytics & Artificial Intelligence, Universiti Teknologi MARA, Malaysia
Accounting Research Institute, Universiti Teknologi MARA, Malaysia
Institute for Research on Socio-Economic Policy, Universiti Teknologi MARA, Malaysia
Centre for Economic Development and Policy, Universiti Malaysia Sabah, Malaysia
Email: Rahim670@uitm.edu.my

Shafinar Ismail, Mohamad Idham Md Razak[1]
Faculty of Business and Management, Universiti Teknologi MARA, Malaysia
Email: shafinar@uitm.edu.my, iedham@uitm.edu.my

Mohd Shahidan Shaari
Faculty of Applied and Human Sciences, Universiti Malaysia Perlis, Malaysia
Email: shahidanshaari@unimap.edu.my

Abstract
Foreign direct investment (FDI) is a key element in this rapidly evolving international economic integration, also called globalisation. FDI provides a means for creating direct, stable and long-lasting links between economies. This paper empirically examines the role of selected macroeconomic variables in determining FDI inflows in the context of China and Malaysia. We used time series data from 1980 to 2015. We co-integrated it with the autoregressive distributed lag approach to examine the relationship between technology development, foreign direct investment and economic growth. The study's findings revealed that ICT development, inflation rate and labour significantly influence FDI inflows in China,

[1] Corresponding author

while only the inflation rate influence FDI inflows in Malaysia. From the results, we emphasise that focusing on improving economic growth can attract more foreign investors in future. Besides, encouraging industries to use more technology in their production can gain confident foreign investors to invest in the market.

Keywords: FDI Inflow, ICT Development, GDP, ARDL Bound Test

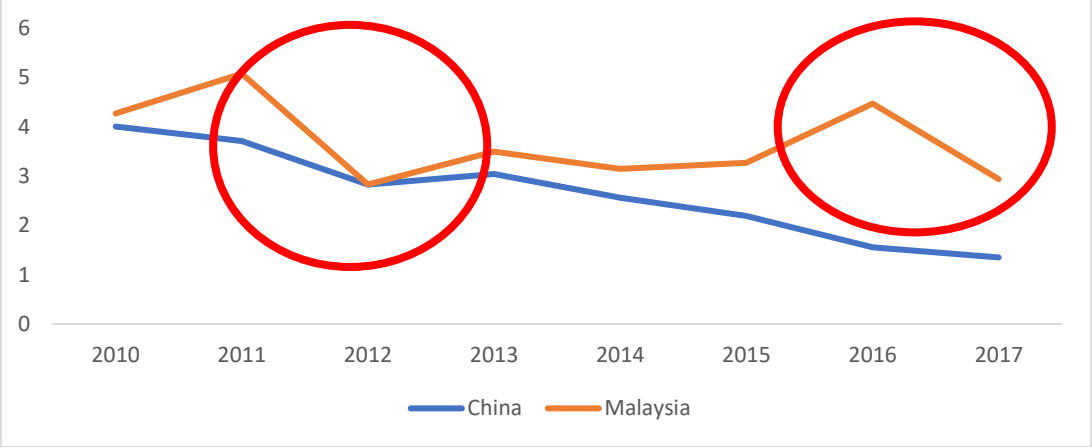
Introduction

FDI is a process through which the people of a country obtain asset ownership to control foreign companies' production, distribution, and other activities (Moosa, 2002). There have been studies on FDI as a growth engine. Chandio et al (2019) studied the role of FDI in Pakistan's economic growth. They say that steady inflows of FDI can help Pakistan improve its economic growth.

The inflow of FDI has been one of the fastest economic activities among countries (Lucke & Eichler, 2016). FDI can contribute to the host country by providing capital management resources that would not be available in the host country. Instead of increasing productivity with facilities and ICT development, foreign investors will inject more capital into the industry, creating new job opportunities in the community. According to UNCTAD (2019), FDI flows in Asia increased by 4 per cent in 2018 to reach US$512 billion. China's FDI inflows increased by 4 per cent, reaching a high record of US$139 billion, 10 per cent more than the world's total. Despite the trade war between China and the United States, it does not reflect that more than 60,000 new companies in China became foreign investors in 2018.

Meanwhile, for Malaysia, FDI flows have been oscillating between US$9 billion and US$12 billion, making Malaysia one of the highest recipients of FDI among neighbouring countries. However, in 2018, FDI flows dropped to US$7 billion, the lowest since 2009. Most investments came from China, Japan, Singapore, and the United States. According to the Malaysian Investment Development Authority (MIDA) (2021), China was the biggest FDI source for three years and heavily invested in the manufacturing industry.

Figure 1.1 below depicts the FDI inflows as a share of GDP for China and Malaysia from 2010 until 2017. After the economic crisis in 2009, China faced a moderate trend of FDI inflows, while Malaysia faced a volatile trend until the end of 2017. Foreign investments have been a strong element in China's rapid growth. They have been an important indicator of the growth of urban jobs. Until today, foreign-invested enterprises have produced about half of China's export, and China keeps continuing large investment inflows into their economies.



Source: World Development Indicator (2017)

Figure 1: FDI Inflows as Share of GDP

In 2016, Malaysia achieved a higher FDI inflow than in 2012, with a total of RM47.2 billion. China has been one of the main investors in that year. In the upcoming years, Malaysia has been facing a declining trend of FDI inflow due to weak global economic growth. Global FDI flow fell by about 23% in 2016 (US$1.43 trillion). According to UNCTAD (2018), negative flows of global FDI are caused by weak aggregate demand and slow growth in some commodity-exporting countries. If this scenario is prolonged, this could hinder the country's plan to achieve rapid development, as investment contributed a lot to financing development in the country.

According to Sinha and Sengupta (2019), economic growth may be affected by FDI inflows and ICT. Positive economic growth is the main goal that every country is trying to achieve. Good economic growth means an increase in real GDP, improving living standards. Positive economic growth enables consumers to demand more goods and services in the market because of the increase in income levels and the absolute reduction in poverty. Subsequently, the government can get more revenue from positive economic growth through tax rebates. Thus, this research aims to explore to what extent ICT and economic growth could attract more foreign investment in Malaysia and China.

Literature Review

In recent years, the empirical analyses of the relationship between foreign direct investment inflows and other macroeconomic indicators have received considerable attention in response to the investment environment. Sarker and Khan (2020) investigate the relationship between foreign direct investment and gross domestic product in Bangladesh from 1972 until 2017. This study uses the ARDL method to analyse the long-term relationship between variables. Foreign investment has been the driving force of Bangladesh's strong economic performance, as insufficient domestic savings can lead to capital shortages. The authors introduced the unrestricted error correction model as follows. Hence, Bangladesh has a long-run relationship between FDI and GDP.

Maryam and Mittal (2019) have studied foreign direct investment in the context of BRICS countries (Brazil, Russia, India, China, and South Africa). BRICS countries stand for Brazil, Russia, India, China and South Africa. Using panel data from 1994 until 2018, their study employed the Pooled Mean Group (PMG) ARDL method. Their study concluded a long-run relationship between FDI inflows with economic growth, exchange rate stability, trade openness, and gross capital formation.

In another study, Sinha and Sengupta (2019) investigated the correlation between FDI inflows, ICT, and economic growth in developing Asia-Pacific countries from 2001 to 2017. This research is critical, and the authors believe that ICT plays an important role in promoting productivity and efficiency and FDI inflows and economic growth in developing countries. In this study, the ordinary least squares method, dynamic ordinary least squares method, combined mean estimator, mean estimator, and dynamic fixed effects method were completely modified by the panel. This study suggests that each developing country should improve their ICT infrastructure to receive more FDI inflows and experience better economic growth.

Samer and Mefteh (2020) conducted a study to examine the relationship between ICT, transport, and FDI in 63 countries from 2000 until 2016. All 63 countries were divided into three sub-panels which were the high-income panel (HI), upper-middle-income panel (UMI), and lower-middle-income panel (LMI). The result of the study found that economic growth

has a positive impact on FDI inflows and ICT. Besides, transport and ICT have significantly influenced FDI attractiveness in host countries.

In another study by Bhujabal and Sethi (2019), the relationship between FDI, ICT, trade, and economic growth across the South Africa Association for Regional Cooperation (SAARC) developing countries from 2000 until 2017 was analysed. This study applied different panel estimations such as fully modified ordinary least squares, dynamic ordinary least squares, Fisher–Johansen co-integration test, panel autoregressive distributed lag, and Dumitrescu–Hurlin causality. The result found unidirectional causality from FDI to ICTINDEX, where an increase in FDI inflows may lead to increased ICT structure in an economy. Economic growth has been found significantly influence FDI inflows in SAARC countries.

Awad (2020) examined the effects of a macroeconomic factor in the host country on FDI for an annual data period from 1970 until 2014. His study applied the ARDL and Vector Autoregressive (VAR) models to analyse the data. This study found that exchange rate, trade openness, inflation rate, and labour cost negatively affected FDI in Malaysia. Meanwhile, over the long run, the real interest rate and GDP growth may significantly influence FDI inflows in Malaysia.

Table 1
Summary of Literature Review

Studies of	Sample Period	Time Series	Dependent Variables	Independent Variables
Sarker and Khan (2020)	Bangladesh 1972-2017	ARDL	GDP	FDI
Maryam and Mittal (2019)	BRICS 1994-2018	PMG ARDL	GDP, TO, ER, CF	FDI
Sinha and Sengupta (2019)	Asia Pacific countries 2001-2017	OLS	ICT, GDP	FDI
Samer and Mefteh (2020)	63 Countries 2000-2016	LLC and IPS	ICT, GDP, T, C, TO, INF	FDI
Bhujabal and Sethi (2019)	SAARC countries 2000-2017	ARDL	ICT, TR, GDP	FDI
Awad (2020)	Malaysia 1970-2017	ARDL	GDP, OP, EX, RAT, INF, LP	FDI

Methodology

The ARDL test for co-integration, as proposed by Pesaran and Pesaran (1997), was employed in this study. This test conveys several econometric advantages, such as 1) It is possible to avoid the inability to test the hypotheses on the estimated coefficients in the long run, which is associated with the Engle-Granger method and the problem of endogeneity. 2) The short-run and long-run parameters of the Model are determined simultaneously. 3) It is assumed that all of the variables are endogenous. 4) The econometric methodology relieves

the requirement to pre-test for unit roots; this applies whenever the underlying variables are I(0), I(1), or fractionally integrated. 5), Using the ARDL method, different variables can have different lag lengths or a maximum number of lags selected, which avoids the collinearity problem between the variables. Finally, the ARDL procedure only employs a single reduced form equation rather than estimating the long-run relationship within a context of system equations, as in conventional co-integration procedures (Ozturk & Acaravci, 2011).

Model of FDI Inflows

The first objective of this thesis will examine the determinants of FDI inflows for China and Malaysia. The variables selected are based on past literature reviews, while some are proposed based on the logical justification made instinctively. The regression equation for the FDI inflows model that is introduced in this study is as follows:

$$FDI = (GDP, ICT, FC, INF, L)$$

Where *FDI* is Foreign Direct Investment as proxied by net inflows FDI as the percentage of GDP, ICT consists of three indicators: mobile cellular subscription per 100, fixed telephone subscription per 100 and individuals using the Internet based on the per cent of the population, *GDP* is real gross domestic product constant 2010 USD, and FD is financial development proxied by money supply, M2 over GDP. All variables are transformed into the log form to measure elasticities. The log-linear form that represents *Ln* for the above equation is as follows:

$$LNFDI_t = \alpha_0 + \beta_1 LNGDP_t + \beta_2 LNICT_t + \beta_3 LNFD_t + \beta_4 LNINF_t + \beta_5 LNL_t + \varepsilon_t$$

The term ε represents the error term, and the subscripts *I* and *t* denote country and time, respectively. The expected sign for and are positive. $\beta_1\beta_2\beta_3\beta_4$ and β_5 are positive.

Data

This study used annual data from 1980 to 2017, comprising 37 years, as a sample period. Data such as GDP, FDI, ICT, K, L, FD, INF and L were taken from World Development Indicator (WDI) 2016. HC data was taken from Barro and Lee database.

Table 2
Sources of Data

Model	Description	Sources
Model of FDI inflows		
FDI	FDI inflows as % of GDP	WDI
GDP	Real GDP constant (2010) USD	WDI
ICT	Mobile cellular subscription per 100 people	WDI
FD	Money supply, M2 as % of GDP	WDI

Empirical Findings

The first analysis performed was the descriptive statistics analysis that best described the basic information of the variables, which are total foreign direct investment (LNFDI), economic growth (LNGDP), information and communication technology (LNICT), financial development (LNFD), inflation (LNINF) and labour (LNL). Table 3 displays the information such as mean, median, maximum, minimum, standard deviation, skewness, and kurtosis. The

highest mean amount for LNFDI or, in other words, the highest receiver of FDI inflows was Malaysia (mean = 1.185), followed by China (mean = 0.581). Next, the mean and median, which implied the normal distribution of the data for every variable in China and Malaysia, were close enough to each, thus providing a more robust analysis. The minimum and maximum values showed an overall increasing trend in the variables. Meanwhile, the standard deviation revealed that the average or typical distance score varied from the mean. For example, in the case of Malaysia, the standard of typical distance the LNFDI value varied or spread from the mean was by 0.840, whether it is 0.840 above 1.185 or 0.840 below 1.185.

Table 3
Descriptive Statistic for Model of Foreign Direct Investments Inflows

	LNFDI	LNGDP	LNICT	LNFD	LNINF	LNL
China						
Mean	0.581	28.304	1.311	4.674	1.385	20.309
Median	1.072	28.318	2.037	4.857	1.320	20.398
Maximum	1.822	29.950	3.320	5.336	3.229	20.481
Minimum	-3.507	26.556	-1.535	3.595	-0.876	19.853
Standard Deviation	1.185	1.049	1.846	0.520	0.991	0.201
Skewness	-1.556	-0.0407	-0.414	-0.600	-0.368	-1.044
Kurtosis	5.263	1.779	1.481	2.115	3.047	2.620
Malaysia						
Mean	1.185	25.643	2.480	4.766	0.884	16.015
Median	1.367	25.738	2.749	4.830	1.022	16.025
Maximum	2.170	26.622	3.035	4.947	2.272	16.531
Minimum	-2.870	24.547	1.053	4.165	-1.237	15.498
Standard Deviation	0.840	0.638	0.553	0.190	0.754	0.317
Skewness	-3.208	-0.217	-1.095	-1.800	-1.022	0.002
Kurtosis	15.729	1.764	3.013	5.780	4.134	1.777

The lower power of unit root first checked the presence of unit roots, namely Augmented Dickey-Fuller (ADF), followed by more powerful unit root, namely Phillip-Perron (PP) unit root tests. Table 4 below highlights the results of this test. Based on the China model, the ADF test showed that LNFDI at the level is stationary for the intercept (10% significant level) and trend and intercept (10% significant level). Besides, LNGDP was also stationary at a level for the intercept (1% significant level) and trend intercept (1% significant level). Meanwhile, LNICTT was not significant at that level. Next, the ADF unit root test was conducted again, but this time at first difference. The results showed that there is a mixture of stationary for the variable both and intercept and trend and intercept even for the PP unit root test.

Table 4
ADF and PP unit Root Tests for Model of Foreign Direct Investment Inflows

Model	Variables		ADF test		PP test	
			Intercept	Trend and Intercept	Intercept	Trend and Intercept
China	Level	LNFDI	-2.30(1)*	-1.19(1)*	-5.10(1)***	-3.18(1)*
		LNGDP	-1.36(2)***	-3.39(3)*	-1.23(0)	-0.94(0)
		LNICT	-2.44(3)	-1.18(2)	-1.47(5)	0.24(4)
		LNFD	-3.08(0)**	-1.35(0)	-6.87(12)***	-1.08(8)
		LNINF	-2.90(0)**	-3.06(0)	-2.89(2)*	-3.15(1)*
		LNL	-27.93(9)***	-27.66(9)***	-4.24(1)***	-1.05(3)
	First difference	LNFDI	-5.69(0)***	-4.83(1)***	-5.69(2)***	-9.62(11)***
		LNGDP	-4.63(1)***	-4.29(1)***	-3.37(2)**	-3.52(3)**
		LNICT	-1.49(1)	-2.22(1)	-0.92(1)	-1.82(2)
		LNFD	-5.08(0)***	-5.94(0)***	-5.09(1)***	-7.79(11)***
		LNINF	-6.18(1)***	-6.09(1)***	-6.86(5)***	-6.74(5)***
		LNL	-22.23(9)***	-2.10(5)	-4.88(3)***	-6.68(3)***
Malaysia	Level	LNFDI	-5.16(0)***	-5.18(0)***	-5.16(0)***	-5.18(1)***
		LNGDP	-1.12(0)	-1.25(0)	-1.08(2)	-1.41(2)
		LNICT	-0.30(1)	-1.84(1)	-3.56(3)***	-2.21(3)
		LNFD	-3.10(0)**	-3.74(1)**	-3.15(1)**	-3.44(2)*
		LNINF	-3.98(0)***	-3.88(0)**	-3.91(1)***	-3.79(1)**
		LNL	-1.38(3)	-3.00(3)*	-0.089(1)	-2.46(1)
	First difference	LNFDI	-6.81(1)***	-6.72(1)***	-25.08(23)***	-24.68(23)***
		LNGDP	-4.94(0)***	-4.96(0)***	-4.95(1)***	-4.97(1)***
		LNICT	-1.40(2)	1.20(0)	-1.36(1)	0.73(1)
		LNFD	-5.72(1)***	-5.69(1)***	-6.58(5)***	-6.80(6)***
		LNINF	-4.83(1)***	-4.86(1)***	-9.97(0)***	-9.98(0)***
		LNL	-4.60(2)***	-4.17(2)***	-4.69(2)***	-4.61(2)***

Note:1,(*)(**)(***) indicate significant at 10%, 5% and 1% significant level respectively.
2. The optimal lag length is selected automatically using the Schwarz information criteria for the ADF test, and the bandwidth has been selected using the Newey-West method for the PP test.

Table 5 shows the ARDL approach to co-integration using F-test to confirm the existence of co-integration between variables in the Model. The optimum lag was obtained by using

Akaike Information Criteria (AIC). Given that the data used in this study is annual, the maximum lag that can be set is 4. AIC in the Table 5 implies that the optimum order were (2, 2, 4, 3, 2, 4) for China and (1, 0, 0, 0, 0, 0) for Malaysia. The F-statistic needed to be compared with the critical value provided by (Narayan, 2005). The co-integration results showed that the F-statistic obtained from the optimum lag for China and Malaysia was greater than its upper bound critical value. For example, the F statistics of China (10,105) and Malaysia (4.675) were greater than the upper bound value at a 5% significant level. On the other hand, the F-statistic for Malaysia, which was 4.675, was only greater at the 10% upper bound, I (I). Thus, it is confirmed that there is a long run between the variables for China and Malaysia.

Table 5
ARDL Test for co-integration for Model of Foreign Direct Investment Inflows

Model		AIC (Lag order)	F Statistic
China		(2, 2, 4, 3, 2, 4)	10.105
Malaysia		(1, 0, 0, 0, 0, 0)	4.675
Critical Values for F-statistic#		Lower Bound, I(0)	Upper Bound, I(I)
1%		3.41	4.68
k = 5	5%	2.62	3.79
10%		2.26	4.68

Note: # The critical value is obtained automatically under Eviews 9, k is several variables (IV), critical values for the bounds test: case III: unrestricted intercept and no trend *,**, and *** represent 10%, 5% and 1% level of significance, respectively.

The diagnostic statistic in Table 6 indicates that the equation or the Model is well specified. None of the statistics (probability value) shown in the table is significant at 10%, 5% and 1% levels. Based on the critical value of χ^2 for one degree of freedom, the null hypothesis of normality of residuals, the null hypothesis of no first-order serial correlation, and the null hypothesis of no heteroskedasticity were accepted in all the selected countries. In addition, no misspecification of the functional form was expected in all the cases.

Table 6
Diagnostic Test for Model of Foreign Investment Inflows

Model	Serial Correlation χ^2 (I) [p-value]	Functional Form χ^2 (I) [p-value]	Normality χ^2 (I) [p-value]	Heteroscedasticity χ^2 (I) [p-value]
China	4.122	0.630	0.105	0.544
	[0.100]	[0.446]	[0.949]	[0.892]
Malaysia	1.067	2.212	203.332	1.085
	[0.358]	[0.148]	[0.000]	[0.3936]

Note: The probability values of the battery of Diagnostic tests are presented in squared brackets. A Lagrange multiplier test for residual serial correlation; B. Ramsey's RESET test using the square of the fitted value; C. Based on the test of skewness and kurtosis of residuals; D. Based on the regression of square fitted values.

Next, the stability was supported in all the cases because the plots (blue) of both CUSUM and CUSUMQ fell inside the critical bounds (red) of 5% significance, as shown in Figure 2

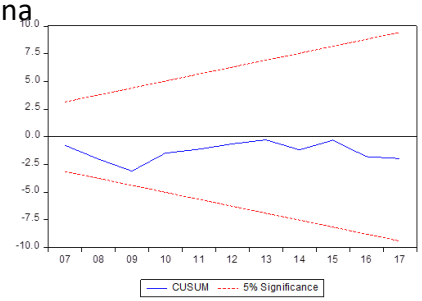
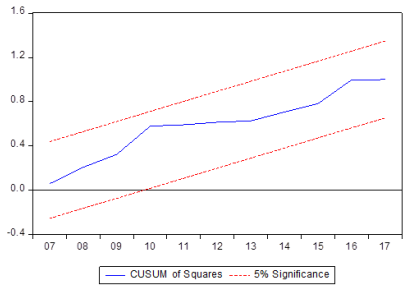
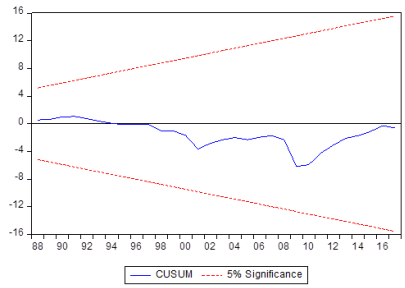
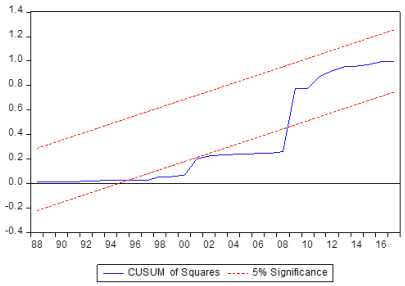
CUSUM	CUSUMQ
China	
	
Malaysia	
	

Figure 2: CUSUM and CUSUMQ Stability Test

Table 7 shows the long-run elasticities of the variables. An insignificant positive relationship was detected between the economic growth rate (LNGDP) and total foreign direct investment (LNFDI) in China and Malaysia. Next, the information and communication technology (LNICT) was positive and statistically significant at standard significance in China (1% significant level). In contrast, an insignificant and positive relationship was detected in Malaysia. A 1% increase in LNICT increased LNFDI in China by 0.83%, respectively. In other interpretations, a 100 million US$ increase in information and communication technology increased the total FDI inflows by 83 million US$ in China. The positive relationship between these two variables in China is in line with previous studies conducted by (Sinha and Sengupta, 2019). Bhujabal and Sethi (2019) have also found a similar result from their study conducted across the South Asian Association for Regional Cooperation (SAARC) developing nations.

Next, the positive and significant impact of LNFD on LNFDI was present in China. In contrast, positive and insignificant outcomes on LNFD and LNFDI were found in Malaysia. The negative relationship between China and Malaysia reveals that the financial development in these countries might not be as stable due to some economic situations, such as economic instability, thus reducing the confidence of potential foreign investors to invest in the country.

The inflation (LNINF) coefficients for China and Malaysia showed a significant positive relationship between LNINF and LNFDI. China was 0.26%, and Malaysia had 0.52%. Both countries are significant at 1% of significant level. An increase of 1% in LNINF increased LNFDI by 0.26% for China and 0.52 for Malaysia. Lastly, labour (LNL) is significantly and positively related to LNFDI in China. In this case, a 1% increase in LNL increased LNFDI by 6.47% in China. The outcome is in line with a study by Cahyadin and Sarmidi (2019) that highlights the

importance of labour and quality in influencing the foreign investment. This showed how important the labour force in China might lead to economic performance that will effectively attract foreign investors. Meanwhile, no significant and negative relationship signs for Malaysia.

Table 7
Long-Run Elasticities for Model of Foreign Direct Investment Inflows

Country	China	Malaysia
DV	LNFDI	LNFDI
Lag order	(2, 2, 4, 3, 2, 4)	(1, 0, 0, 0, 0, 0)
IV	Coefficient	Coefficient
LNGDP	0.206	1.022
LNICT	0.827***	0.080
LNFD	-4.197***	-0.853
LNINF	0.260***	0.518***
LNL	6.474**	-2.142
C	-118.095**	12.697

Note: (*), (**), (***) indicate significance at 10%, 5% and 1% significance level respectively.

Lastly, Table 8 explains the short-run elasticates and error correction term (ECT) results. The short-run elasticities elaboration is only based on zero lag. In the short run, the LNGDP had a significant negative relationship with China's LNFDI. At the same time, Malaysia did not have a significant positive relationship sign. Next, it was found that LNICT had no significant and positive signs in China and Malaysia. Furthermore, a significant and positive sign was found in LNINF toward LNFDI for China and Malaysia. Lastly, for LNFD and LNL, China showed significant and negative signs. In contrast, Malaysia showed no significant and negative signs for both variables.

Table 8
Short Run Elasticates and Error Correlation Term for Model of Foreign Direct Investment Inflows

Variables	China Coefficient	Malaysia Coefficient
Δ(LNFDI(-1))	0.306**	-
Δ(LNGDP)	-3.068*	1.144
Δ(LNGDP(-1))	-3.284	-
Δ(LNICT)	1.252	0.089
Δ(LNICT(-1))	-0.875	-
Δ(LNICT(-2))	3.120**	-
Δ(LNICT(-3))	-1.752**	-
Δ(LNFD)	-1.368**	-0.955
Δ(LNFD(-1))	1.643**	-
Δ(LNFD(-2))	2.133***	-
Δ(LNINF)	0.096**	0.580***
Δ(LNINF(-1))	-0.124**	-
Δ(LNL)	-2.641**	-2.397
Δ(LNL(-1))	-9.083***	-
Δ(LNL(-2))	-4.948***	-
Δ(LNL(-3))	6.458***	-
CointEq(-1)	-0.886***	-1.119***
R square	0.97	0.48
Adj. R square	0.92	0.38

Note: Δ refers to the first difference. The dependent variable is LNFDI. (*), (**), and (***) indicate significance at 10%, 5% and 1% significance level.

Conclusion

This study assesses the impact of selected macroeconomic variables on FDI inflows in China and Malaysia. To summarise, the outcome of the analysis showed that ICT development, inflation and labour significantly influence FDI inflows in China. Meanwhile, in the case of Malaysia, only the inflation rate was found to be significant toward FDI inflows. The study employed the Autoregressive Distributed Lag model (ARDL) on annual data covering the period 1980-2017. The study found that ICT development, inflation rate and labour had a positive and significant effect on inbound FDI in China over time. Economic growth and financial development negatively influenced FDI inflows in the long run. Meanwhile, for Malaysia, only the inflation rate influences their FDI inflows. In contrast, economic growth, ICT development, financial development, and labour are insignificantly influenced by FDI inflows in Malaysia.

According to these findings, based on the outcome of the first research objective, ICT development was highly significant in explaining the FDI inflows in China; the policymakers should tailor their policies following the needs of the ICT development. The idea is to have better ICT development for the countries, hence attracting the FDI inflows to China. The policies that can be imposed are adopting 5G in the country and increasing technology availability. With the presence of 5G, foreign investors will gain more confidence in investing in China. Besides, the inflation rate significantly influences FDI inflows in China and Malaysia. In order to control the inflation rate, policymakers should reduce the money supply within an

economy by decreasing bond prices and increasing interest rates. This will helps reduce spending power because when there is less money in the market, those who have money want to keep it and save it. Lastly, labour positively influences FDI inflows in China. The countries' policymakers are suggested to increase training hours per year, incentive programs, upgrading the machinery, computers or any other equipment that labour may utilise in daily operations.

For future research recommendations, even though this study focused on a vital element of FDI inflows, it has several flaws that need to be addressed in future research. Future research could help with this problem by incorporating new macroeconomic factors and various methodologies and techniques.

Acknowledgement

This research project is fully funded by IRMIS, Universiti Teknologi MARA (600-IRMIS/FRGS 5/3 (243/2019). Modelling an Integrated Digital-Green Economy for Malaysia Firms for the Era of Industrial Revolution.

References

Awad, A. (2020). Foreign direct investment inflows to Malaysia: Do macroeconomic policies matter? *Journal of International Studies*, *13*(1), 196–211. https://doi.org/10.14254/2071-8330.2020/13-1/13

Bhujabal, P., & Sethi, N. (2019). Foreign direct investment, information and communication technology, trade, and economic growth in the South Asian Association for Regional Cooperation countries: An empirical insight. *Journal of Public Affairs*, *20*(1). https://doi.org/10.1002/pa.2010

Cahyadin, M., & Sarmidi, T. (2019). The Impact of Foreign Direct Investment, Labour Force, and External Debt on Economic Growth in Indonesia and Malaysia. *Jurnal Ekonomi Malaysia*, *53*(1), 171–185. https://doi.org/10.17576/jem-2019-5301-14

Chandio, A. A., Mirani, A. A., & Shar, R. U. (2019). Does agricultural sector foreign direct investment promote economic growth of Pakistan? Evidence from co-integration and causality analysis. *World Journal of Science, Technology and Sustainable Development*, *16*(4), 196–207. https://doi.org/10.1108/wjstsd-05-2019-0025

Lucke, N., & Eichler, S. (2015). Foreign direct investment: the role of institutional and cultural determinants. *Applied Economics*, *48*(11), 935–956. https://doi.org/10.1080/00036846.2015.1090551

Maryam, J., & Mittal, A. (2020). Foreign direct investment into BRICS: an empirical analysis. *Transnational Corporations Review*, *12*(1), 1–9. https://doi.org/10.1080/19186444.2019.1709400

Moosa, I. A. (2002). Foreign Direct Investment. *Foreign Direct Investment: Theory, Evidence and Practice*. Published. https://doi.org/10.1057/9781403907493

Narayan, P. K. (2005). The saving and investment nexus for China: evidence from co-integration tests. *Applied Economics*, *37*(17), 1979–1990. https://doi.org/10.1080/00036840500278103

N.S.T. (2021). *China remains Malaysia's largest foreign partner for manufacturing sector, says MIDA*. MIDA | Malaysian Investment Development Authority. https://www.mida.gov.my/mida-news/china-remains-malaysias-largest-foreign-partner-for-manufacturing-sector-says-mida/

Ozturk, I., & Acaravci, A. (2011). Electricity consumption and real GDP causality nexus: Evidence from ARDL bounds testing approach for 11 MENA countries. *Applied Energy*, *88*(8), 2885–2892. https://doi.org/10.1016/j.apenergy.2011.01.065

Pesaran, M. H. (1997). The Role of Economic Theory in Modelling The Long Run. *The Economic Journal*, *107*(440), 178–191. https://doi.org/10.1111/1468-0297.00151

Samir, S., & Mefteh, H. (2020). Empirical Analysis of the Dynamic Relationships between Transport, ICT and FDI in 63 Countries. *International Economic Journal*, *34*(3), 448–471. https://doi.org/10.1080/10168737.2020.1765186

Sarker, B., & Khan, F. (2020). Nexus between foreign direct investment and economic growth in Bangladesh: an augmented autoregressive distributed lag bounds testing approach. *Financial Innovation*, *6*(1). https://doi.org/10.1186/s40854-019-0164-y

Sinha, M., & Sengupta, P. P. (2019). FDI Inflow, ICT Expansion and Economic Growth: An Empirical Study on Asia-Pacific Developing Countries. *Global Business Review*, 097215091987383. https://doi.org/10.1177/0972150919873839

UNCTAD. (2018). *World Investment Report; Foreign Direct Investment Inflows in Malaysia*. www.unctad.org/diae

UNCTAD. (2019). Special Economic Zones. *World Investment Report 2019*, 169–202. https://doi.org/10.1017/9781108233118.008