Foreign Direct Investments (FDI) and Covid-19 Pandemic Affecting Exchange Rate Movement in Malaysia

By

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DECLARATION

The author hereby declares that this project paper is the original study undertaken by him unless stated otherwise. Due acknowledgement has been given to references quoted in the references. The views and analyses in this study are that of author's, based on the references made; and this does not constitute an invitation to use this study as a technical tool for management purpose.

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Date :

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LIST OF ABBREVIATIONS

ASEAN	Association of Southeast Asian Nations
BBGMM	Generalised Method of Moments estimation
BLUE	Best Linear Unbiased Estimator
BNM	Bank Negara Malaysia (*Central Bank of Malaysia*)
BoP	Balance of Payments
CEE	Central & Eastern Europe
COVID-19	Novel Corona Virus 2019
DPDGMM	Dynamic Panel-Data Model
DV	Dependent Variables
ER	Exchange Rate
FDI	Foreign Direct Investments
IFS	International Financial Services
IMF	International Monetary Fund
IV	Independent Variables
KLSE	The Kuala Lumpur Stock Exchange
MCO	Movement Management
MIDA	Malaysian Investment Development Authority
MITI	Ministry of International Trade & Industry
MNE	Multinational Enterprise
NCI	National Committee of Investment
OLS	Ordinary Least Squares
PACU	Project Acceleration and Coordination Unit
PENJANA	National Economic Recovery (Plan Pelan Jana Semula Ekonomi Negara)
PMCC	Product-Moment Correlation Coefficient
PPP	Purchasing Power Parity
RID	Real Interest Differential
SCMP	South China Morning Post
SELPDM	Estimation of Linear Panel-data Models
SMEs	Small and medium-sized businesses
SPSS	Statistical Package for the Social Sciences
UIRP	Unveiled Interest Rate Parity

UNCTAD	United Nations Conference on Trade and Development
US	United States
VIF	Variance Inflation Factor
WHO	World Health Organization
WPUI	World Pandemic Uncertainty Index

Abstract of the Project Paper Submitted to the Senate of Universiti Tun Abdul Razak in Partial Fulfillment of the Requirements for the Master of Business Administration

Foreign Direct Investments (FDI) and Covid-19 Pandemic Affecting Exchange Rate Movement in Malaysia

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The purpose of this study is to analyse the empirical study on the movement of the exchange rate has a significant impact on the level of foreign direct investment and pandemic covid-19 The main goal of this study is to figure out some factors that influence's the exchange rate movements. The movements of FDI and Pandemic Covid-19 indicators may also have a negative impact on movement of the exchange rate of Malaysia. The impact of movements of foreign exchange will influencing the economics growth of Malaysia, the government stability, the challenges on medical sectors and balance of payments. The cross-sectional research approach was applied with using the random sampling designs with 118 respondents were participated in this study. The qualitative and quantitative also applied in this research to give a comprehensive approach and supportive of research outcomes. The elements of independent variables such as FDI and pandemic covid-19 are shown the negative relationship and significant to influencing the movement in foreign exchange in Malaysia. Some recommendations also proposed from research finding from government's macroeconomics interventions and strategies to combating the issues of pandemic covid-19. The present study focus on two independent variables but may be take into consideration factors such as government policy, related sectors and private sectors involvement. So its finding cannot be generalized as a whole overview. Further in depth comparative studies in other different government strategies, the position of macroeconomics, public cultural and SOP policy reinforcement settings will help to authenticate the research findings. The changes of FDI will be declining the foreign capital mobility to Malaysia and reducing the economic growth. In the same time, the issue of pandemic covid19 will be reducing the industries growth and the public life standard. Linking these topics has created a new study within the combating the threat of cybercrimes in Malaysia. The present study also enhances the understanding of customers' role to combat the impact of cybercrimes on the banking industry performances. Malaysia, on the other hand, is in a poorer situation than its regional counterpart due to the instability of the government and public uncertain policies and initiatives.

CHAPTER 1

INTRODUCTION

1.1 1ntroduction

A very significant factor impacting economic stability is the rate of trade. It has a major impact on the national level of economic activity, which is critical in a free market economy. The availability of capital has a direct impact on consumer spending, and vice versa. That is why the exchange rate is the economy's most tracked, calculated and strategically regulated indicator. The value of the currency rises and falls like any other commodity, depending on the forces of demand and supply.

The monetary policy of a nation embodies the supply and demand of its currency. The exchange rate between countries will be determined by the competitive demand in the state and the supply of capital. A constant increase in the availability of money in the domestic country depreciates the exchange rate. A rise in the home country's interest rate reduces demand for capital, which is accompanied by an increase in prices, resulting in a decline in demand for money and a depreciation of the home country's exchange rate against the foreign country. Similarly, a rise in the rates of interest in a foreign country triggers a decline in the demand for money within this foreign country leads to higher in the price level and foreign exchange rate as well in this foreign country.

Imports and exports from the country improvements in the inflation rate are also driven by an increase in the cost of exporting goods and a decrease in the cost of importing items will result from a currency appreciation in the home country. A weakening of the home currency, on the other hand, would result in higher import costs and lower export costs.

The rate of exchange (ER) is very critical and plays a critical role in global trade, since the inflation rate of one currency is appreciated when, it makes its goods more expensive than previous currencies and can have a negative influence on the profitability of its exports and, as a result, on the economies aggregate demand. In addition, when the currency of the nation depreciates, its goods would be more affordable than they had been before, and that it might have a significant impact on the amount of its exports. This will, however, affect the amount of imports, as they will become more costly and, therefore, their net supply.

Therefore, the currency exchange rate is of crucial importance in monetary policy, deciding whether to be a movement along the demand curve or an expansionary fiscal under the free float system, because it will have a direct impact on exports and imports, as well as the balance of payments, by default.

1.1.1. Exchange rate an economic variable

In addition, the rates of exchange are strongly influenced by private enterprise, since it affects the cost of the products sold (operating costs) and thereby affects the company's profitability and fair value. In addition, the value of company assets kept in a currency other than the local currency is also affected. The exchange rate is considered to be an economic variable that is highly responsive to internal and external consequences, in particular because foreign trade is heavily influenced by both economic growth and although the exchange rate has a significant impact on macroeconomic equilibrium due to its direct and indirect monetary policy indices relationship, the evolution of international financial markets is also important.

As a result, the exchange rate gained supreme importance as a macroeconomic instrument, though the extent of its effect on the economy differed depending on the exchange framework that followed. In the years 1950-1960, theories revolved around the contrast of fixed and variable exchange rate regimes, and exchange rate theories have developed continuously since the seventies and the collapse of Bretton Woods. As a result, several hypotheses have been used to evaluate the variables that influence the currency's foreign exchange rate.

In order to maintain the currency's value in the exchange rates, there are several different decisions that can be made by policy makers and central banks. Each of these decisions and procedures has its benefits and drawbacks, and some of them contribute to a worse situation, and this could be due to a lack of understanding of the key international Exchange Rate Drivers.

Therefore, it is necessary to include the most significant factors that describe the rate of exchange and the various standard models listed in the analysis of the rates of exchange. Several factors influence the value of a country's currency's foreign exchange rate. This research focuses on testing the exchange rate effects of certain macroeconomic variables.

Since foreign exchange rate factors which change between time to time and location to location and in their relevance to exchange rate movements, these drivers are influenced by policymakers' ability to conduct a combination of fiscal and monetary policies with a material impact.

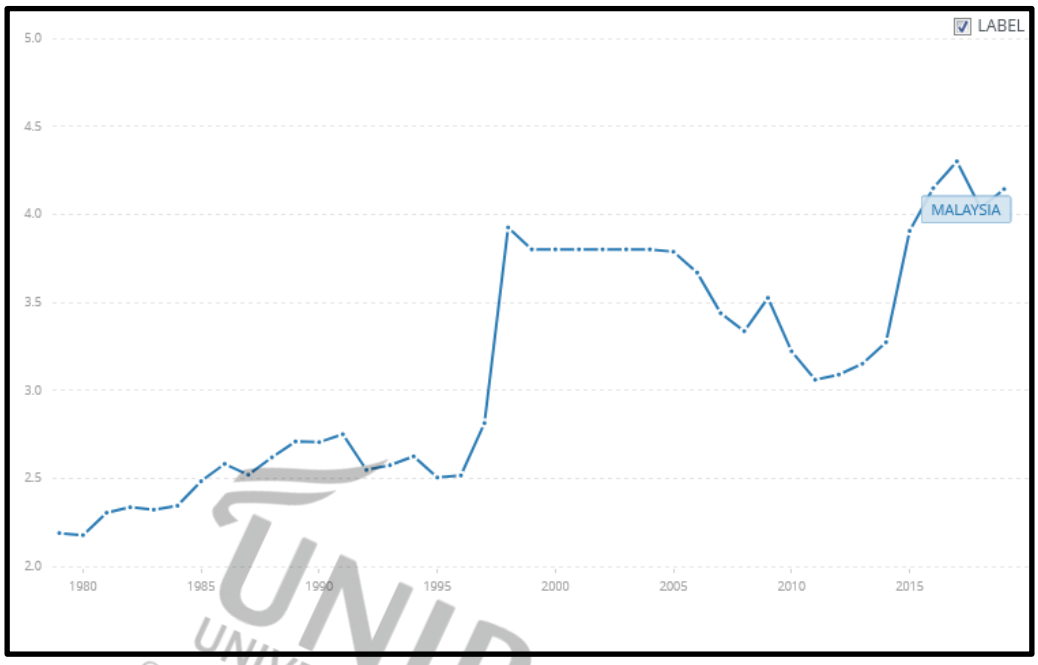


Figure 1.1.1.1

International Monetary Fund, International Financial Statistics

Official exchange rate (LCU per US$, period average) – Malaysia

Data from database: World Development Indicators
Last Updated:
04/26/2021

Year	1990	2000	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Average Exchange Rate	2.71	3.8	3.06	3.09	3.15	3.27	3.91	4.15	4.3	4.04	4.14	4.2	4.11

Figure 1.1.1.2

1.1.2 Foreign direct investment (FDI)

This is a form of international capital flow that allows a parent company or a multinational enterprise (MNE) to exert control over foreign subsidiaries. Since the early 1980s, FDI has become a more widely recognised tool for transferring resources across national boundaries in order to enhance economic quality, industrial and foreign competitiveness, and exports. There will be no FDI in a fully competitive economy, but researchers now prefer to understand FDI flows using incomplete and asymmetric knowledge about business characteristics. Given the importance of FDI, a number of studies have attempted to identify the factors that affect FDI inflows into countries regardless of demand. The exchange rate is one of the variables that has recently become a point of contention. The exchange rate theory of FDI examines the relationship between FDI flows and exchange rate shifts. Some studies accept the significant relationship, while others deny it, according to the current literature. The strength of the relationship among FDI and exchange rate even differs, with some studies indicating that exchange rate has a positive impact on FDI and others indicating that it has a negative effect.

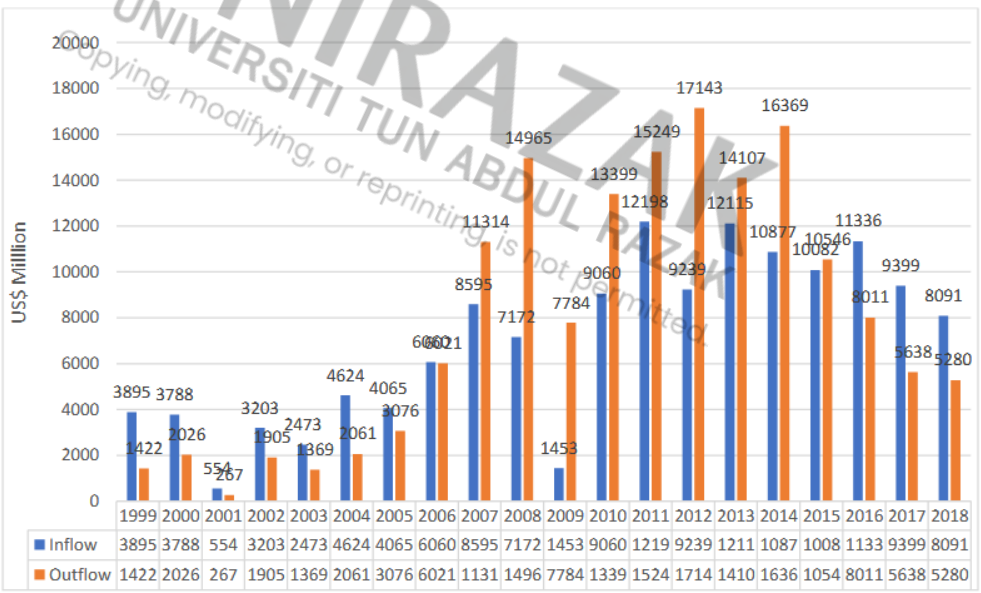


Figure 1.1.2.1

Malaysia's FDI inflow and OFDI 1999-2018

1.1.3 FDI flows and exchange rate shifts

The inflows of increased demand for home currency, FDI may also affect the appreciation or depreciation of the local currency. As a result, until now, the importance and strength of the relationship among exchange rate and FDI have remained a hot topic. According to Albuquerque et al., the position as the largest of FDI in developing economies is related to increased global capital market integration as a result of the numerous reforms and liberalisation programmes implemented in the 1980s. In the ASEAN region, FDI has played a huge role, and this role has grown in importance since the mid-1980s. Each ASEAN country has also given investment incentives, which has indirectly increased competition for FDI among ASEAN countries. Despite the fact that most Southeast Asian countries have adopted a controlled floating exchange rate system, MNEs may still be exposed to exchange rate risk in these countries, which may have an impact on the value of MNEs' investments in the future due to differences in competitiveness among countries as measured by their foreign exchange rates.

As a result, this paper will look into the relationship between foreign exchange rate fluctuations and foreign investment inflows in Malaysia. In contrast to the regulated floating exchange rate, which represents substantial government interference in managing the rate of exchange at some ranges, the actual value of the currency rate may reveal the country's true level of competitiveness.

The aim of this research is to look into the relationship among foreign direct investment and the Malaysian exchange rate in terms of economic growth. While some research has been done in the past, there are still disagreements about the empirical results on the impact of exchange rates and FDI on economic growth. Previous empirical studies on the relationship of exchange rate, foreign direct investment, and economic growth yielded mixed results. In the case of the exchange rate, Aghion et al. (2009); Coudert & Dubert (2005) found that the exchange rate system has a substantial impact on the output of economic development.

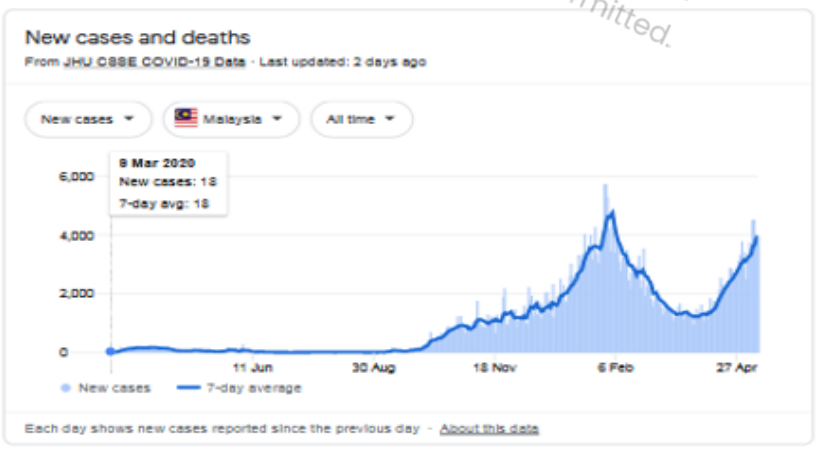
The planet has been dealing with a global economic shock since early 2020, owing to a major pandemic prompted by a novel coronavirus disease known as COVID-19. According to the World Health Organization (WHO), pneumonia of unknown origin was discovered in Wuhan, China on December 31, 2019, and was first confirmed to the WHO Country Office in China.

On January 30, 2020, the WHO declared the outbreak a Public Health Emergency of International Concern. On January 13, 2020, Thailand became the first country outside of China to announce a lawsuit. Malaysia announced its first COVID-19 case on January 25, 2020, and had 3,333 confirmed cases as of April 3, 2020, with 53 confirmed deaths.

1.1.4 Novel Coronavirus disease (Covid-19) : FDI and ER under extreme strain

COVID-19 has been spread quickly worldwide. According to a World Health Organization (WHO) survey, there were 158,402,859 recorded cases of COVID-19 worldwide, with 3,298,916 deaths reported (9th May 2021). As a result, some countries adopted a lockout strategy for movement management (MCO). The key reason for the lockout is to avoid the COVID-19 virus from spreading. This is due to the virus's rapid spread and ease of transmission from person to person. To avoid the spread of COVID-19, the World Health Organization (WHO) (2020) recommends that people wash their hands regularly. Hand washing with just an alcohol-based hand rub or soap and water on a regular basis will protect the public from any virus. Apart from that, citizens must maintain a social gap of at least 1 meter between people who are coughing or sneezing.

People are often advised not to touch their eyes, noses, or mouths because their hands come into contact with a lot of various surfaces and therefore can pick it up viruses. Then, in order to ensure that people observe good respiratory hygiene, they were often advised to practice it.



Daily New Infectious Trends				
Date	09.03.2020	27.09.2020	04.02.2021	11.05.2021
Cases	18	100	4754	3975

Figure 1.1.4.1

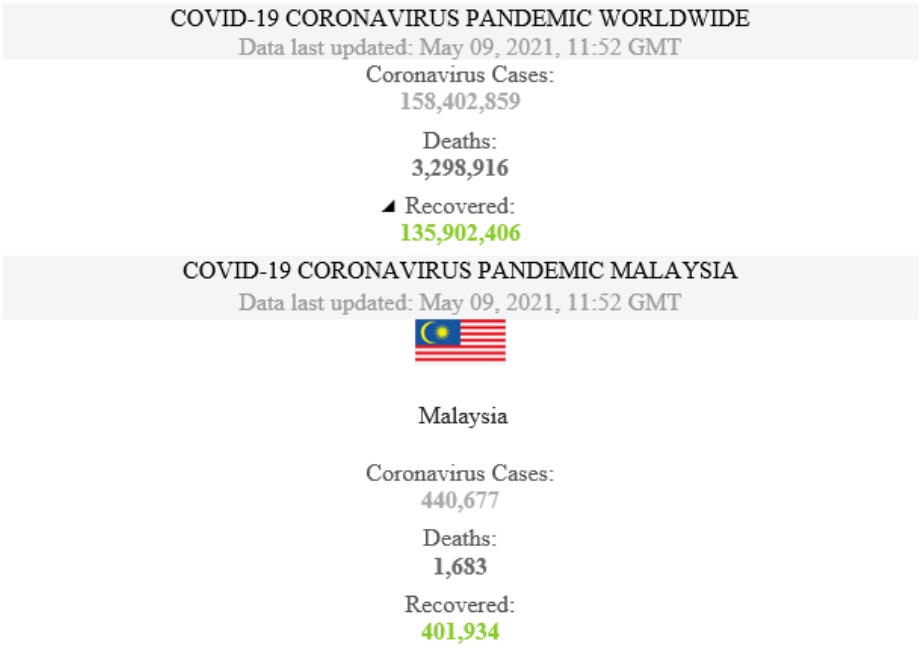


Figure 1.1.4.2

As a result of the COVID-19 pandemic, which has triggered significant trade disruptions around the world and related operations, including direct investments, international flows of foreign direct investment (FDI) would be under extreme strain this year. This is mostly due to the lockdown, travel bans, and border closures, which have disrupted the global supply value chain. According the South China Morning Post (SCMP), the slowing of global communication due to airlines and vessels grounding their planes and ships is threatening to halt global trade. On March 26, 2020, UNCTAD projected that perhaps the Covid-19 will reduce global investment by 40%. Malaysia, as a trading nation with trade accounting for around 131 percent of GDP in 2018 and a country reliant on FDI, will be severely impacted by business and financial disruptions triggered by the global pandemic of Covid-19. Malaysia's government responded by introducing an RM250 billion (roughly US$ 58 billion) stimulus plan to fix the economic effects on its citizens and businesses.

1.2 Background of the Study

This study looks at how the foreign direct investment (FDI) and the covid-19 pandemic influence exchange rate movements in Malaysia. Foreign direct investment (FDI) is characterised as the investment of foreign assets in domestic structures, facilities, and organisations, excluding stock markets. FDI, in general, plays a significant and increasing role in global business. It can also be used to calculate how well a country is doing in terms of economic growth before investors become interested in investing in that country.

Peterson (2005) concluded that indicators used in the model used to characterize exchange rate adjustments are not standardized for nations, using the model of the Real Interest Rate to identify the determinants of movements in exchange rates. The main outcome of the study is that investment is adversely influenced by the transitory part of the exchange rate and not the fixed part. As businesses take advantage of correlated permanent exchange rate adjustments, permanent volatility will not postpone investment, but temporary volatility would reduce investment as companies become more uncertain and delay their financing in critical uncertainty (Byrne and Davis, 2003). The VAR's inference that the calculation of the actual exchange rate using the current account shows that the impact of the real exchange rate over trade deficits is predominantly due towards imports. (Aydin et al., 2004).

Due to investor sentiment, the emergence of COVID-19 causes an uncertain economic situation, slowing down all economic activities. The effect of COVID-19 on the stock market and currency exchange rate has left most countries economically vulnerable. Even though there are several recommendations to prevent the spread of COVID-19, the virus has now spread rapidly across the world and contributed to economic stagnation as a result of the lockdown strategy used in many countries.

Early indications from COVID-19, for example, indicate that now the Chinese economy is performing worse than anticipated. Automobile sales plummeted a record 80%, and China's exports dropped 17.2 percent in January and February 2020, according to surveys of the manufacturing and service sectors in China (Segal and Gerstel, 2020). Malaysia is not spared either and as a result, Malaysia's economy shows a decline in the currency exchange rate between the Malaysian Ringgit and the US Dollar.

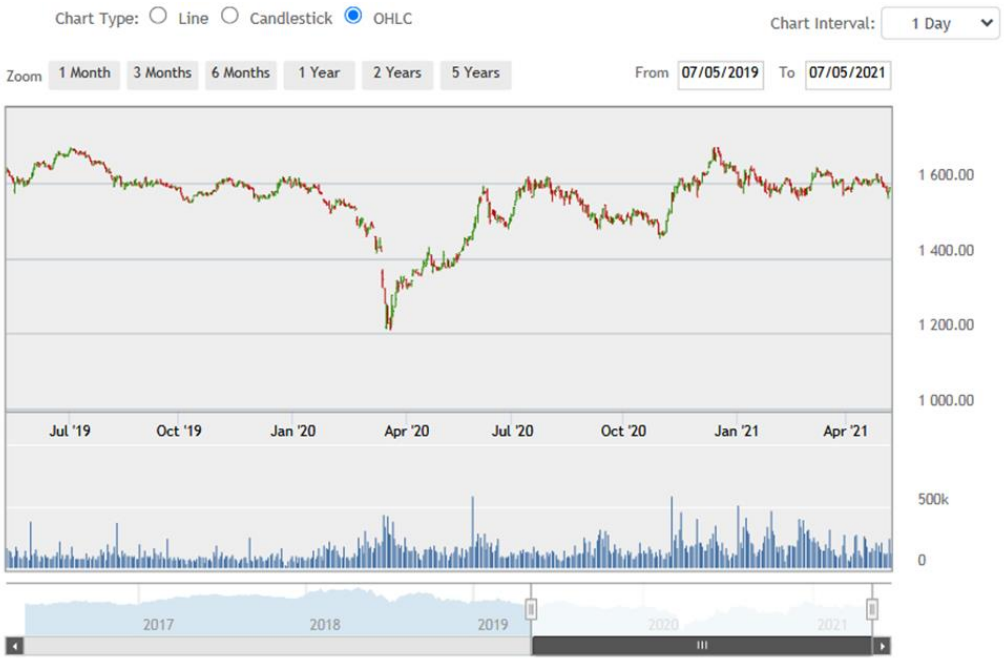


Figure 1.2.1

KLSE Indices

According to the Malaysian Stock Exchange, that value of the KLSE on the first trading day of 2020 was 1602.50. The KLSE index then declined until it reached a low of 1219.72 during the COVID-19 outbreak in Malaysia on March 19, 2020, after reaching the highest of 1691.00 on July 2, 2019. The current index struggled with multiple economic stimulus and government intervention is now sustaining at 1587.45 on 7th May 2021.

The FBM KLCI is declining in trade at Bursa Malaysia on broad-based selling as investors weighed factors including the economic impact of the re-enforcement of the movement control order (MCO 3.0) at several places to curb the spread of the Covid-19.

1.3 Problem Statement

The purpose of this study is to relate the current factors, namely the FDI and Covid-19 affecting movements in exchange rates. For economists around the world, has always been of high significance to understand the mechanism next to exchange rate fluctuations. The pandemic had brought a slowdown to the country and various stimulus packages had been introduces to boost the FDI and to economic sustainability. One of the risks associated with foreign trade is the uncertainty of future exchange rates. The relative values of the two currencies could change between the time the deal is concluded and the time payment is received. A very important topic to be studied is the foreign exchange rate, since it affects not just the government, but also all businesses, traders and all citizens in the economic climate. Foreign exchange rate fluctuations can have a larger and greater impact on society as more and more customers join the foreign exchange market. Residents should now recognize that they are accountable for the stability of foreign exchange rates in their nations, so they need to read more about foreign exchange rates. In order to avoid financial difficulties and even social losses, consciousness of foreign exchange market determinants is important.

As a standard application, a reversal of exchange rates in a country can cause a lot of trouble. In order to effectively regulate currency exchange rates, and to prevent any issues caused by currency devaluation, the persistence of the exchange rates as the origin of all problems must be studied. Thus, considerations of exchange rates movements will be generally studied for the two determinant variables, namely the foreign direct investments (FDI) and Covid 19 pandemic influences. FDI stands for Foreign Direct Investment, a component of a country's national financial accounts. Foreign direct investment is investment of foreign assets into domestic structures, equipment’s, and organizations. It does not include foreign investment into the stock markets. Foreign direct investment is thought to be more useful to a country than investments in the equity of its companies because equity investments are potentially "hot money" which can leave at the first sign of trouble, whereas FDI is durable and generally useful whether things go well or badly.

The exchange rate is a most important factor in an open economy it has direct effect on the macroeconomics factors like FDI and GDP. Economics, investor and Policy maker focused on the exchange rate of country and then make investment their money in that focused country. They have believed that increase in exchange rate creates competitive advantages in international trade. By increasing exchange rate of a country the domestic

export goods become cheaper and it also increases the demand of export, it means international demand of goods will increase and import will be decreased. It impacts on FDI, all of these effects ultimately on GDP of the country. (Javed and Farooq, 2009) investigated that exchange rate means how the unit of domestic currency can be change with the other nations currency unit. Simply it is change of one country currency into the other country currency.

The demand and supply of currency actually are the main element of exchange rate instability. Exchange rate instability directly affects the decision makers to decide that how much import and export is favorably. It also tells that how much things should be manufactured, import, export, money taken reserve and balance of payment. Exchange rate also impacts on the prices of export, import and balance of payment. Exchange rate works as a great opportunity for domestic investor to earn high profit by investing in foreign currency. The investors and traders like that system where there is very small inconsistency difference, between actual and expected value of exchange rate. The instability in exchange rate is source of higher profit; it is the perception of one school of thought.

The implications of this study suggest that the importance of the exchange rate to attract FDI inflows is still questionable as it may provide different effect and direction across countries. Nevertheless, the evidence of insignificant of the relationship in this current study (e.g., Thailand) does not suggest the unimportant effect of exchange rate to the FDI inflows completely. These results actually provide more opportunities for the researchers to study the reasons behind the insignificant relationship. The current study applies aggregate FDI, whereas there is a possibility of relationship of exchange rate and FDI flows in different types of economic sectors. At the aggregate level, it does not consider the effect of exchange rate on each of the economic sectors. Each sector may have different reactions towards the exchange rate movement which may provide different relationship directions. Meanwhile, the true value of the respective country currency is also questionable due to the government intervention in managing the foreign exchange rate which may affect the relationship between the exchange rate and FDI.

In The same time the rapid spread of COVID-19 in 2020 has brought a profound impact on the global economy and forced countries around the world to adopt different intervention measures. Has COVID-19 and these government interventions affected exchange rate volatility? To answer the question, this research explores the impact of COVID-19 and

the relevant government response policies on exchange rate volatility in 20 countries during the period of January 13, 2020 to July 21, 2020 by using system GMM estimation. The empirical results indicate that an increase in confirmed cases does significantly raise exchange rate volatility. The various policies adopted by governments in response to the pandemic, such as closing schools, restrictions on internal movements, and public information campaigns also inhibit exchange rate volatility. Furthermore, the economic response policies implemented by governments during the pandemic, including income support, fiscal measures, and international aid, have a restraining effect on exchange rate volatility. Our findings herein provide valuable information and implications for policymakers and financial investors around the world.

On the other hand, the relative level of economic health can be determined by the foreign exchange rate. This is because the foreign exchange rate plays a fundamental role in a country's level of trade. Malaysia's exchange rate for March 2019 is RM4.08 in exchange for 1 USD and it has depreciated to RM4.26 in exchange for 1 USD in July 2020. This is shown in Figure 2 below. Weaker exchange rates will lead to cost-push inflation as the cost of imported raw materials are rising. This will impact almost all the sectors especially the manufacturing sectors in Malaysia as most of the machineries are imported from China and Japan. Weakened currency adversely affects the purchasing power of Malaysian Ringgit as more Malaysian Ringgit is required to exchange for the US Dollars. This means that living standards of citizens in Malaysia decrease due to lower purchasing power.

From the above discussions on the impacts of COVID-19 to Malaysia's economy, as a finance minister of Malaysia, I would implement expansionary fiscal policy by increasing the existing financial aid provision to the small and medium-sized enterprises (SMEs). To date, the government has provided RM13.8 billion worth wage subsidy via wage subsidy programme with aims to benefit 4.8 million workers and the employers from small and medium-sized enterprises (Tan, 2020). However, this is not sufficient to support these workers and employers throughout the battle with COVID-19 pandemic due to prolongation in the Recovery Movement Control Order (RMCO) which ends in December 2020. The purpose of providing financial aid to small and medium-sized enterprises (SMEs) is to ensure their business is able to cope with the fixed costs such as monthly rentals, worker's salaries and so on and so forth. This is also to ensure the business can overcome the other challenges imposed by the COVID-19 pandemic.

The contribution of this study is focus on the main purpose of conducting this research is to investigate the impact exchange rate on FDI in Malaysia. By collecting data on both variable Exchange rate and FDI, we want to show how these variables affecting each other. The research which is conducting is practically implemented because it's related with Malaysian economy. It's useful for financer and Foreign Investor to know the economy of Malaysia as well as how many benefits he can get from exchange rate how the worth of their asset will be increase due to impact of exchange rate on their assets, for performing their practical operations like investment. So, this research will be helpful for Investor how to maximize the profit of firm and compete with their competitors. In this way foreign investor can get advance knowledge through research. In a nutshell, the COVID-19 pandemic has seriously impacted the Malaysian economy. Therefore the finance minister plays an essential role in this crucial period in order to help Malaysia weather the crisis. The researcher believe that all policies that have suggested will be able to help most of the Malaysians if not all throughout this challenging period especially the small and medium-sized enterprises and underprivileged families. However, this will not work if there is no unity in Malaysia. Thus, every individual has its own responsibilities to help Malaysia in winning this war.

1.4 Research Objectives

The main objective of the analysis is:

1. To examine the Foreign Direct Investment (FDI) affecting the Exchange Rate Movements in Malaysia.
2. To evaluate the pandemic Covid-19 affected the exchange rate movement in Malaysia.
3. To analyse the exchange rate movement in Malaysia affected by the correlation determinants of Foreign Direct Investment (FDI) and the Covid-19 pandemic.
4. To study the strategic plans should the government implement to overcome the Foreign Direct Investments (FDI) and covid-19 pandemic affecting Malaysia's exchange rate movement.

1.5 Research Questions

1. To what extent did the Foreign Direct Investment (FDI) affecting the Exchange Rate Movements in Malaysia?
2. To what extent did the pandemic Covid-19 affect exchange rate movement in Malaysia?
3. How is the exchange rate movement in Malaysia affected by Foreign Direct Investment (FDI) and the Covid-19 pandemic?
4. What strategic plans should the government implement to overcome the Foreign Direct Investments (FDI) and covid-19 pandemic affecting Malaysia's exchange rate movement?

1.6 Significance of the Study

1.6.1. To the study (Researchers)

Currently FDI and Covid-19 is becoming more popular, and appreciation or depreciation in exchange rate movements will always have an impact on a country's economy. Researchers always try to discover and examine the macroeconomic elements related with foreign exchange rate movement in order to have a better prognosis on foreign exchange rate movement. Once the determinants' relationship with the foreign exchange rate has been established, governments can attempt to manage these factors in order to attain the desired foreign exchange rate. Many studies have been given to policymakers in attempt to assist governments in strengthening their economies. This study will help the government spend the proper amount of money at the right time without wasting resources.

Exchange rate movements must be monitored in order to protect a country's economic stability. This study will provide policymakers, public and private sectors with a clear picture of how to conduct effective exchange policies once they understand why the exchange rate is falling or rising.

1.6.2. To the public (Private sectors)

Currency exchange rates are influenced by FDI, Covid-19, interest rates, money supply, and financial stability. Because of these variables, the demand for a country's currency is influenced by domestic events. The interest rate paid by a country's central bank, for starters, has a significant impact. As a result, both the public and private sectors should be aware of the impact and should have the recovery plans in place as an alternative. By better understanding and investigating the macroeconomic factors of foreign exchange rate forecasting, this research will aid individuals, commercial banks, industrial companies and medical companies in improving their forecasting performance. When trading currencies, better forecast performance can assist investors reduce investment risk and avoid losses.

1.6.3. To the policy maker (government)

These variables are growing increasingly common, and exchange rate swings will always have an impact on a country's economy, whether they are positive or negative. Understanding the influence of exchange rate movements on the Malaysia stock market, on the other hand, can help Malaysian policymakers plan and forecast the impact of policies in order to entice investors to the Malaysian market. Economic growth will increase if the policy is effective, and this will be reflected in an active market with an upward trending index. They were able to deduce the reason for the movements based on this research.

Further to it, Bank Negara Malaysia has played a key role in achieving the financial inclusion objective by improving the financial system infrastructure. This is to ensure that financial services are available to all economic sectors and groups of society. In addition, Bank Negara Malaysia is in charge of the country's payment system infrastructure, which focuses on financial system efficiency and security. Aside from BNM, Malaysia's Department of Statistics also plays an important role in driving data that can outline Malaysia's results in the exchange rate and many more government authorities were played a key role on Malaysia economic growth as well.

1.7 Operational Definition

When it comes to data collecting, an operational definition is a precise, succinct, and detailed specification of a metric. When collecting any form of data, the necessity for operational definitions is critical. It's especially critical when deciding if something is correct or incorrect, or when performing a visual check where there's a chance of misinterpretation.

1.7.1. Foreign Direct Investment

In its most basic form, foreign direct investment (FDI) is described as a corporation from one country making a physical investment in the construction of a plant in another country. It is the start-up of a business by a foreigner. Foreign direct investment (FDI) is a kind of cross-border corporate governance in which a business acquires productive assets in another country. Its meaning can be expanded to cover investments made to acquire a long-term interest in businesses that operate outside of the investor's economy.

1.7.2. Pandemic Covid-19

COVID-19 (coronavirus illness 19) is the most serious problem in the globe. SARS-CoV-2 is another name for it. COVID-19 is a recently found coronavirus strain that causes human respiratory illnesses. It has been discovered in Wuhan, China (World Health Organization, 2020). At the end of 2019, the Chinese government notified the World Health Organization that there were many cases of pneumonia with unknown causes. Patients infected with coronavirus can go to a seafood market in China that sells live animals, according to the National Health Commission of China. Bats and bunnies, for example. Humans are the major host of coronavirus because they eat diseased bats for food. Humans can, however, spread the virus to other humans through close contact. The process of transmission is depicted in Figure 1 below. Coughing and sneezing by sick persons might potentially expose them to the coronavirus.

1.7.3. Foreign Rate Mobility

The exchange rate is a critical macroeconomic factor that influences foreign trade as well as each country's real economy. The growth of foreign trade generates conditions where the exchange rate is volatile. The fluctuation in today's exchange rates has an effect on tomorrow's exchange rates.

The impact of the rates of exchange on economic determinants is a critical aspect that aside from evaluating elements that influences exchange rates between countries it also determines the MNE from evaluating their sustainability. In addition, it will help them decide which the priorities are for political issues need to be provided, particularly in the framework of both fiscal and monetary policy.

1.8 Limitation of the Study

There are several limitations to this study's findings. The limitations that are being outlined are as follow:

1. The primary data was responded real time and through the online platform, Google Form to develop sets of questionnaires within one week from 19 May 2021 until 25 May 2021and analysis while for the secondary data was sourced from the Department of Statistic Malaysia, Bank Negara Malaysia (Central Bank), Bursa Malaysia (KLSE), World Bank Data and other sources in Malaysia.

2. Limited variables used, interpreting the relationship between the dependent and independent variables is will be incomplete but specific to its outline.

3. Because there are so many internal and external factors that can classify the relationship and affect the exchange rate movements in Malaysia, only two independent variables (Foreign Direct Investment (FDI) and Pandemic Covid-19) were chosen.

4. This study lasted three months, which is considered a short period in comparison to other studies. It's limited to a fast-track analysis for academic needs.

5. To keep the scope of the study to a minimum, only one country, Malaysia, within the Central Region and the Southern Region only is being studied.

1.9 The Organization of the Study

This study is divided into five (5) chapters which are included as follows;

a. Chapter 1 - Introduction that describes the study background, overview of FDI and Pandemic Covid-19, research of problem statement, research objectives, research questions, hypothesis analysis, significant of study and the organization of the study.

b. Chapter 2 - Overview of the Literature Review which describes on underpinning theory and theoretical framework, review of the prior empirical studies and proposed the theoretical framework.

c. Chapter 3 - Overview that illustrates the research methodology, the research design, sampling design, pilot test, data instruments, data analysis, validity and reliability test, structure of questionnaire and types of data analysis.

d. Chapter 4 - Overview that research analysis, research finding, hypothesis testing and structure of research finding presentation.

e. Chapter 5 - Research summary, conclusion of study, recommendation to the researcher and recommendations to the future researchers.

CHAPTER 2

LITERATURE REVIEW

2.1 Introduction

Past research studies relating to the FDI, Covid-19 pandemic and exchange rate in this research paper are summarized in this chapter. Sections of scholarly published works, papers, books, journals and articles are extracted to provide a better understanding of the nature of FDI, Covid-19, exchange rate, economic growth, market size, inflation rate, quality of infrastructure and other relevant information. Other than that, the relationships between the dependent variable and independent variables are studied as well. With the help of the previous studied models, researchers are able to formulate a new proposed framework for this study.

2.1.1 Foreign Direct Investment (FDI)

Exchange Rate Movement and Foreign Direct Investment in Asean Economies, by Jaratin Lily, Mori Kogid, Dullah Mulok, Lim Thien Sang, and Rozilee Asid (2014). Using annual data on ASEAN economies, namely Malaysia, the Philippines, Thailand, and Singapore, this paper empirically examines the relationship between exchange rate movements and foreign direct investment (FDI). The empirical findings show that for the case of Singapore, Malaysia, and the Philippines, there is substantial long-run co integration between exchange rate and FDI, with all countries showing negative coefficients, meaning that the appreciation of the Singapore dollar, Malaysian ringgit, and Philippine peso has a positive effect on FDI inflows. Both Singapore and the Philippines demonstrate long-run bidirectional causality between exchange rate and FDI by using the ECM-based ARDL method for causality testing, while Malaysia shows long-run unidirectional causality between exchange rate and FDI. Furthermore, this research discovered that in Singapore, short-run unidirectional causality exists between the exchange rate and FDI.

Foreign direct investment (FDI) has a generally positive impact on economic development. Foreign direct investment (FDI) benefits for recipient countries could only be realised once the nation has reached a stable stage of financial growth. Malaysia has good

prospects for FDI inflows due to its stable political climate and sustained economic development. Strong economic growth has always been and will continue to be a requirement for Malaysia to draw FDI inflows (Ang, 2008). Low interest rates and a steady exchange rate are both catalysts for attracting and promoting investment. This would ultimately close the technological divide between developing and developed countries. Other influences such as government expenditure, human capital expenditure, trade terms, and a comprehensive tax system are thought to act as a stimulus and complement to economic development. FDI will continue to stimulate economic development while also acting as a catalyst for several downstream industries. Ang (2008) also claims that if the monetary system is stable and open, the potential to attract FDI would be more effective, allowing for better use of the investment's benefits. Most of the evidence from previous studies suggests that FDI has a significant effects on economic growth (Adams, 2009), but there are also instances where FDI has a negative impact on growth (Ang, 2009).

When taking into account the degree of financial development, exchange rate (volatility) has a major impact on economic growth, according to Aghion et al. (2009). This conclusion holds up when different measures of financial growth and their relationships are taken into account. Furthermore, the instability of the exchange rate did not have a substantial impact on the isolation. The capacity of the rate of exchange as a financial variable, according to Miles (2006), is likely to have a positive effect on long-term economic development. An empirical research, on the other hand, indicates that the rate of exchange has the opposite effect. There seem to be two channels through which exchange rates can stimulate development. Dornbusch (2001) found that the only way to minimise exchange rate risk is to adopt the common currency. This is due to the common currency's ability to strike a balance between interest rates and the possibility of price inflation. In the meantime, there seems to be a substantial effect on reduced transaction costs in foreign trade. Nonetheless, Slaughter (2001) dismisses the theory, claiming that the results are often difficult to confirm, according to another report.

Financial theories of foreign direct investment, by S. Veeramani, Abha Shukla & Mariam Jamaleh (2019), they were able to distinguish four key strands of fundamental analysis on FDI as a result of our research. The first model describes FDI as a function of various exchange rate variables. The second relates portfolio theory to multinationals' international diversification. The third strand examines foreign direct investment through the prism of behavioural finance.

Finally, the final strand looks at the unique internationalisation direction taken by financially distressed multinationals based in emerging markets. In certain cases, the study revealed theoretical contradictions within and among different classes of financial theories, which converted into inconclusive empirical results.

The research also revealed a regional bias, with multinational firms and FDI from developing countries being understudied. While the concept of developing a single structural theory on FDI is appealing, we believe that future studies should focus on context-specific financial factors before the controversy over financial market efficiency is resolved.

2.1.2 Pandemic Covid-19 Crisis

Abu Bakar and Rosbi (2018) build an effective frontier of portfolio investment based on two stocks from the KLSE (KLSE). The estimated portfolio return is 0.54 percentage points at global minimum portfolio risk of 2.34 percentage points, according to the results. Using Modern Portfolio Theory, Abu Bakar and Rosbi (2018) analyse the risk mitigation for portfolios in Islamic investment and find that diversification can minimise risk while maximising return. Then, Abu Bakar and Rosbi (2019) look into portfolio risk reduction using a hybrid approach that combines Modern Portfolio Theory and Genetic Algorithms.

They discovered that this hybrid method has a higher accuracy of prediction for investment return and portfolio risk. Using the Monte Carlo Simulation process, Abu Bakar and Rosbi (2019) analyze the performance rate of sharia-companies on the Malaysian Stock Exchange. The result shows that the volatility rate distribution is natural, and the Monte Carlo Simulation revealed that the volatility rate is 4.85 percent with a standard deviation of 2.23. The result demonstrates that the value of the volatility rate is statistically regulated when Monte Carlo Simulation is used. However, owing to the COVID-19 outbreak, the global economy is currently experiencing a downturn. As a result, since COVID-19 is a new virus discovered in 2019, there is still a lack of research into its financial effects. As a result, this research aims to close the gap by looking into the effect of COVID-19 on the stock market and currency exchange rate.

During the early stages of the COVID-19 outbreak, a few studies reported the negative effects on the Chinese economy (Al-Awadhi et al., 2020; McKibbin and Fernando, 2020). The Chinese economy is export-driven, so any major changes in exports as a result of

COVID-19 may have an effect on the currency's exchange rate. There are numerous research studies on the relationship between a country's exchange rate and its exports, specifically in the case of China (Burdekin and Willett, 2019; Taylor, 2016). According to some of these studies (Park et al., 2010), there is a positive relationship between RMB depreciation and Chinese exports, whereas others are inconclusive (Cheung et al., 2012).

However, due to its novel existence, the current situation can vary from the traditional exchange-rate-exports relationship. The RMB exchange region is assumed to demonstrate several coherence the with COVID-19 outbreak in the current scenario, even directly and indirectly.

According to Salim Lahmiri and Stelios Bekiros (2020), their main goal of this paper is to assess the effects of the COVID-19 pandemic on randomness in volatility sequence of major global markets, as well as to investigate its impact on their interconnections. To evaluate randomness, the wavelet packet Shannon entropy is determined from the estimated volatility sequence. To investigate interconnections between volatilities, hierarchical clustering is used. They discovered that the COVID-19 pandemic had the greatest impact on randomness in S&P500 market volatility and randomness in precious metals volatility, while randomness in oil markets was less affected by the pandemic than equity and precious metal markets.

Furthermore, they observed the emergence of three volatility clusters: precious metals (Gold and Silver), oil (Brent and Gas), and Bitcoin and WTI, and the S&P500 volatility reflects a distinct cluster, while the S&P500 market volatility was unrelated to the volatility of Bitcoin, energy, and precious metal markets prior to the pandemic. Furthermore, during the pandemic, the S&P500 price volatility became linked to volatility in energy markets and volatility in Bitcoin, and the volatility in precious metals is less linked to volatility in energy markets and volatility in the Bitcoin market. It is concluded that investors can diversify their portfolios across single cluster constituents, investing in energy markets during the pandemic era is appealing due to lower randomness in their respective volatilities, and building a diversified portfolio will not be difficult because clustering structures are relatively stable across periods.

This paper explores the impacts of health pandemics on foreign direct investment (FDI) using the new world pandemic uncertainty index (WPUI). They investigated the effects of pandemics, including COVID-19, on FDI based on a sample of 142 economies and sub-

samples (incomes and regions) from 1996 to 2019. The two-step system Generalised Method of Moments estimation of linear dynamic panel-data model (DPDGMM) is used in this study. The estimation results are robust with the results of the two-step sequential (two-stage) estimation of linear panel-data models (SELPDM) and the two-step system Generalised Method of Moments estimation (BBGMM). The results show that health pandemics have negative impacts on FDI. Significantly, the uncertainty caused by pandemics creates adverse shocks on FDI net inflows in Asia-Pacific countries and emerging economies (Linh Tu Ho and Christopher Gan, 2021).

The aim of this study is to see how Covid -19 affects FDI inflow and other barriers to obtaining FDI commitment which collectively affects the movement of exchange rates. This research is both descriptive and empirical in nature. The analysis relies on secondary data. Foreign direct investment is possible because the government has prioritised agriculture, tourism, electricity, information technology, infrastructure, and other sectors in light of the country's rapid economic development. The government is welcoming and enforcing donor commitments for foreign investment. The Covid -19 pandemic, on the other hand, has cut FDI commitments short of expectations. The threat of a pandemic isn't the only thing that keeps people from investing. Even, there are investment roadblocks such as the business environment, inadequate infrastructure, a shortage of human resource expertise, political changes, weak governance, natural disasters, a varied and dynamic geography, tax slab, red tape, including climate change are all important. While FDI inflows were on the rise until 2019, the 2020 pandemic had decreased FDI as the primary source of economic growth.

Foreign Direct Investment (FDI) is an important factor that contributes to economic growth, according to Segundo Camino-Mogro and Mary Armijos (2020). It is particularly important in developing countries. They evaluate how lockdown/restriction policies can affect FDI inflows in this way. They do so by using exogenous variation resulting from the COVID-19 pandemic and lockdown policies. They combine official administrative FDI data with a regression distortion in time design to find an overall significant decrease in FDI inflows. They also compare the effects of different FDI outlets and find that capital rises have a greater impact than new firm constitutions. They also examine whether partial re-opening of operations has a positive impact on FDI. Their key conclusion is that lockdown policies reduce FDI inflows, a finding with high policy implications that can be used to design investment attraction policies.

The aim of this study was to look at the effect of FDI inflows on GDP growth and see if the COVID-19 crisis would have an even greater impact on the economies' growth prospects than it already has. Despite concerns that foreign capital may have an adverse effect on the local market, the study indicates that attracting foreign capital is beneficial to an economy. The emergence of foreign companies aids the host country's development on many levels, including the development of new technologies and managerial ideas including human capital, the flow of foreign capital bringing economic benefits, the development of banking activity to support market financing, governments getting forced to adjust legislative measures, and improved foreign trade. On the economies, they had to use a panel data regression to show that FDI inflows are highly positively correlated with GDP growth. The findings show that due to a decrease in FDI inflows, all CEE countries may experience a greater level of contraction (Radu Ciobanu, Robert-Aurelian Sova, Adriana Florina Popa, 2020).

2.1.3 Exchange Rate Mobility

The exchange rate is a critical macroeconomic factor that influences foreign trade as well as each country's real economy. The growth of foreign trade generates conditions where the exchange rate is volatile. The aim of this study is to look at how real effective exchange rate volatility affects economic growth. Furthermore, the impact of three channels of control on economic development, each of which is dependent on the calculation of exchange rate volatility, is investigated. The research examines the essence and extent of such movements on growth using annual data for fourteen CEE (Central & Eastern Europe) countries from 2002 to 2018. The empirical results from panel data using fixed effects calculation show that exchange rate volatility has a substantial negative impact on real economic development.

Alternative indicators of exchange rate volatility, such as standard deviation and z-score, tend to support the findings. In order to foster economic development, policymakers should enact various policies to keep the exchange rate steady, according to this article (Fatbardha Morina, Eglantina Hysa, Ugur Ergun, Mirela Panait and Marian Catalin Voica, 2020).

The main purpose of the paper is to examine whether a significant contemporaneous and lagged variability of Asian firms' stock returns are affected by exchange rate movement in Asian markets, such as Hong Kong, Singapore, China, Taiwan, and Malaysia during the

period from August 2005 to March 2010. Differences of capital maturity were compared with among these five Asian economies, covering both developed markets and emerging markets in Asia. This comparison makes sense to understand the efficient market hypothesis theory. In order to ensure our research's validity and reliability, sample firms are randomly chosen by the method of stratified sampling. The second step in this study is to examine the impact of firm-specific factors on sensitivity to exchange rate movement for those firms with a significant exchange rate exposure. The five firm specific factors are firm size, leverage situation, hedging activities, foreign involvement level, and industry classification. The main methods in this quantitative research are simple and multiple linear regressions. The ordinary least squares method in SPSS program was used to estimate the parameters for each independent variable (Wen Mingjie and Tang Tang, 2010).

Kamin and Roger's (2000) study in Mexico indicates that in order to minimise the potential effects of devaluation, the undervaluation of an exchange rate must be avoided. Furthermore, they argue that there is no easy way to reduce the cost of production at modest concentrations after devaluation. Initially, an undervalued national currency can lead to an increase in output, but it can give rise to uncertainty of an economic crisis, which, in turn, can lead to an exchange rate depreciation and the resulting output losses.

Roubini (2000) recommended that the economic occurrence may be affected by the shift in economic determinants. Exchange rate movements at the regional level would also trigger changes in the market phenomenon. The principal economic and financial measure, such as with the rate of interest, would trigger changes in the movement of the currency rate. Moreover, the encouraged to take in method is recommendable at the political level will result to currency appreciation, and may be inverse.

In the meantime, Kashif (2000) estimates in the Economic Indicator that the impact of the exchange rate has shown a negative and insignificant link between both the rates of interest change in the rates exchange between us currencies and the Pakistani rupee. The rate of inflation coefficient's result has been negative. This indicates that the uncertainty of these two variables shows that whenever the gains in the inflation rate are seeing a rise and the rate of inflation results in a reduction, they do not switch together.

In the case of inflation in countries is far higher than in other countries, the Achsani (2010) the analysis also gets the right indication of the rate of inflation, which is a negative and significant relationship among rates exchange for the relationships. The shifts in the real

exchange rate in the home currency would fluctuate due to the currency depreciation and the unchanged value of the domestic price in Levin (1997). In fact, the export expansion is triggered by the depreciation of the home currency.

The pressure on a country's foreign exchange rate has been calculated via BOP calculations based on the balance of payment theory. On the other hand, currency value is not specified on the basis of market forces under fixed systems. The official international reserves would then be used by the monetary authorities to hold the BOP in a state of equilibrium. (In 1976, Milton, Robert).

While the theory's complete form of PPP which is Purchasing Power Parity assumes that the equilibrium rate for a given country would be similar to the proportion at the level of the domestic price and the international price level (Stephanie, and Martin, 2014). Although the relative shape of this theory is considered to be more plausible, it suggests that exchange rate fluctuations should be equivalent over the same duration to the relative price changes in both countries. (2012 by Jeff Madura).

On the other hand, the theories of rate of interest via parity, protected rates of interest parity, show that in a market, the premiums and discounted rate will be equivalent to the change in rates of interest between countries that are taken into account (Jeff Madura, 2012). The currency value of the discovered rates of interest parity principle should be equal to rates of interest differentials between domestic and international countries. In addition, traders are risk averse, seeking a risk premium to accept assets kept in foreign currency (Peijie Wang, 2005). High rates of interest currencies have a high rate of projected inflation, according to Irving Fisher, and are based on the PPP hypothesis that currency prices with high expected rates of inflation would be devalued.

From previous research, the impact of exports on exchange rate volatility has been studied and there is a strong link among both real exchange rates. In order to find out the connection between both the fluctuation of the exchange rates and the volatility of Argentina's export markets, Moccero (2006) started an investigation. It is seen from the results that there are adverse interactions between these variables. Simply put, while the transaction rate is down, the volatility of export markets will be high. Moreover, a significant correlation was shown between the real exchange rate and the export results. This variable's volatility impacts the value of the revenues of many other countries.

According to Kasif, the inflation and exchange rate have an adverse and negligible relationship between the US dollar and the Pakistani rupee (2000). Achsani (2010), however, estimates that economic growth can be interpreted as the extremely average price increase for a period of time. For Asia, the causal connection between interest rates and the real exchange rate of the country is a positive significant one. Kamin's European Journal of Economics, Finance and Administration (2003) empirically found that in most Asian and Latin American countries, the relationship between the exchange rate and real exchange rates has shown a negative relationship. In addition, the impact of interest rate changes on interest rates in Latin America has been closely linked.

The main goal of this research is to figure out what factors influence exchange rate movements in a few Asian countries. The United States is used as the starting point. The research employs the real interest differential (RID) model, which is backed by the Keynesian and Chicago price theories. For the period 1977–2010, data on money supply, industrial output, interest rate, and inflation rate were obtained from the World Bank. Ordinary least squares were used to estimate both long- and short-run exchange rates (OLS). The findings indicate that not all of the model's variables contribute to the interpretation of exchange rate movements. In all countries, industrial development is important. The other three factors, money supply, interest rate, and inflation rate, produce mixed results. There are only two major variables in each of China, Malaysia, Thailand, and Singapore. As a result, policymakers must be mindful of control mechanisms to ensure that movements of any determinants do not disrupt the market process (Jerson B. Patosa and Dr. Agustina Tan Cruz, 2013).

According to Miles (2006), the ability of the exchange rate as the financial variables is likely to provide a positive impact on long-term economic growth. However, there is also an empirical study which shows that the exchange rate has the opposite impact.There are two channels that have been identified in which the exchange rates might stimulate growth. Study conducted by Dornbusch (2001) found that exchange rate risk can only be reduced if the common currency implemented. This is because the common currency can balance between the interest rate and the risk of rising prices. In the meantime, a significant impact on minimized transaction costs in the context of international trade could be observed. Nevertheless, Slaughter (2001) refutes the idea because, according to another study, the effects are sometimes difficult to prove.

2.2 Theoretical Framework

The Keynesian theory and the Chicago cost of models are two theories that support Jeffrey A. Frankel's RID system, which he introduced in 1979. The new framework of work, wealth, and interest developed by Keynes is known as Keynesian theory. John Maynard Keynes, a British analyst who lived from 1883 to 1946, is credited with coining the term "Keynesianism." Salary and expenses, according to Keynesians, will not be flexible, but will continue to fall. The inability of the economy's capital to be completely employed is due to the downwards stickiness of rates and wages.

Another theory used by Frankel is the Chicago price theory, suggested from Milton Friedman in 1976 and George Stigler in 1982 and funded by the Economics department, Chicago University. This hypothesis indicates that expenditures and wages are flexible; a contrast to the idea of Keynesia. It is based on the idea that the ability to integrate definition and evidence to respond to important outstanding economic questions requires. Peterson (2005) used the Chicago market theory to clarify the fluctuations in the exchange rate across countries which included the supply of money, economic growth, rates of interest and variance for inflation.

The Frankel RID model tested the Deutche Mark/US currency rate around 1974-1978 and discovered that the formula helps to explain over 80 percent of the variations in the Frankel RID model's for the rates of exchange of the US and Germany. The framework is very confident about its ability to anticipate variations in exchange rates to a greater degree worldwide. The framework has been re-evaluated and tested in different time periods by several economists.

However, interest for the concept after the 1980's was very limited. They concluded in Isaac and de Mel's review (1999) that Frankel's verification of the RID model was a mere random coincidence. In Peterson's (2005) study, however, it was found that the size tends to be able to justify the uncertainty of the exchange rate to some extent up to the current stage..

The model has, as underlying theoretical assumptions, the Purchasing Power Parity (PPP) and the Unveiled Interest Rate Parity (UIRP), the two basic building blocks of open macroeconomics. When combined, the PPP and UIRP have a correlation between financial changes and the rates of interest. Peterson (2005) also argued that in all the countries included within his study, the model is a big significant cause (supply of money, production, rates of interest and rate of inflation) for rates exchange movements. The purpose of this research is

to find out if the parameters used in the Peterson model (2005) can help to distinguish exchange rate changes in Malaysia.

The factors of the rates of exchange have been studied and many policymakers and researchers of economics worldwide has created several theoretical frameworks. These studies, however, are centered on outdated data, and as the relationship among old information variables may change based on changes in expectations, the researcher is trying to accomplish the variables in the selected 7 Developing countries that have a significant effect on the formation in exchange rates for both the period from 1995 to 2015.

In most (most common) literatures, the researcher have used factors that were mentioned to have a major impact on the exchange rate, since each of these variables were mentioned for both exchange rate theories, in the relevant cases.

2.3 Empirical Research

In this part, the model for the theory of actual interest differentials is presented. Equation 8 is used to calculate trade flows with the United States as the reference for the variable results.

This study measured the factors driving trade flows in selected countries in Asia during the years 1977-2010. To approximate the method, ordinary least square (OLS) and correlation coefficient coefficients were used (Frankel, 1979). For the estimation of the parameters to be BLUE (Best Linear Unbiased Estimator), the following conditions must be met:

i. Each random error has a zero-mean probability distribution. That is, some errors will be positive; E (t) = 0

ii. The probability distribution of each random error has a variance of σ2, E (ε̇2) = var (ε̇) = σ2.

iii. There is zero covariance between the two random errors corresponding to any two related observations; cov (ε̇sε̇t) = 0 where

2.3.1 Empirical Results

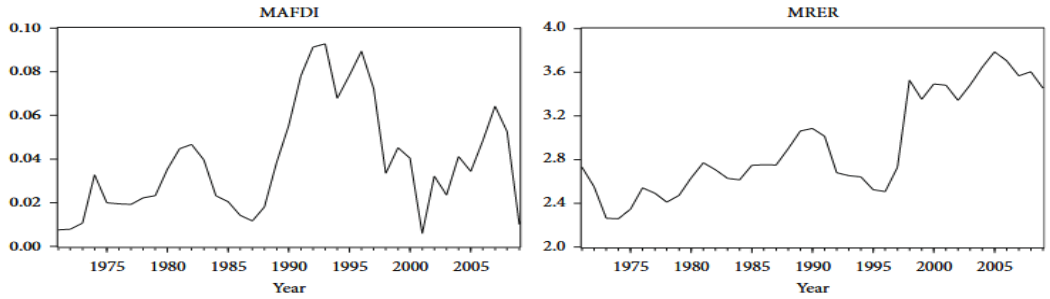


Figure 2.3.1.1

Malaysia-FDI and RER

Figure 2.3.1 depicts the original sequence of exchange rate fluctuations and FDI relationship. Both series factors fluctuate significantly in general. The ADF, PP, and DF-GLS unit root tests revealed that all variable series of all cases yielded mixed results. These findings indicate that the majority of variable series have a different integration order. Since the unit root tests revealed that many of the series variables have a specific order of integration, the ARDL bounds testing methodology is used to test more rigorous cointegration analysis. In the case of Malaysia, the findings revealed that FDI and exchange rate have long-run cointegration relationships. These suggested that both FDI and the exchange rate for the countries in question would appear to shift in the same direction toward equilibrium. It should be noted, however, that the study's attention is on FDI as the dependent variable, not the other way around. Meanwhile, the estimated long-run coefficients between FDI and exchange rate based on ARDL models are as derived in the study. As predicted, the results show that all of the coefficients have the correct sign. The ECM-ARDL is then used to evaluate dynamic interaction, short-run causal relationships, and long-run causality analysis. In Malaysia, however, there is no proof of short-run causality.

2.3.2 Malaysia Financial Policy

There are two major monetary policy goals of the Central Bank of Malaysia: a low inflation rate and a floating exchange rate. The dedication of these targets to Malaysia's growth and development is often stressed because the relatively steady inflation rate would clash with a stable exchange rate. If the policy interest rate is inappropriately set or the exchange rate shifts foreign prices directly in an inflationary and deflationary way, this conflict may occur (wiki.answers.com).

Prior to the Asian Financial crisis in 1997, the Malaysian ringgit had been a globalised the currency that has been traded extensively across the world. Until the July Asian Crisis, 1997, the Ringgit was valued at 2.50 to the dollar. In a matter of weeks, the Ringgit falls as much as 4. 10 to the dollar due to speculative operations. Bank Negara Malaysia, the country's central bank, agreed to enact trade restrictions to keep Ringgit from exiting the market economy. The floating exchange rate was abandoned in July 2005 in favour of the floating exchange rate, moments after the same move was announced by the People's Republic of China.

In March 2008, the Ringgit greatly contribute to 3.18 to the US dollar. Meanwhile, Bank Negara Malaysia has been steadily easing several facets of capital management. The country, however, did not learn the ringgit to understand (en.wikipedia.org).

In describing the exchange rate fluctuations, industrial development has the greatest contribution. Industrial output and inflation rate are important among the variables included. The elasticity of the rates of exchange with industrial compliance output in Malaysia is -0.615, which means that a 1% decline in industrial production induces a 0.615% depreciation of the Malaysian exchange rate. Supply of money and rates of interest differentials are not really an important, which suggests that the two variables the exchange rate fluctuations do not impact in Malaysia.

Variable Name	Estimated Coefficient	Standard Deviation	P-Value	Partial Correlation
Constant	-5.533*	1.161	0.000	
Money supply	-0.035^{ns}	0.111	0.758	-0.057
Industrial production/real GDP	-0.615*	0.092	0.000	-0.778
Inflation rate	0.742*	0.364	0.050	0.353
Interest rate	-0.018^{ns}	0.040	0.668	0.080

R^2 adjusted = 65.39,
* = Significant at 10% level,
^{ns} = Not significant

Table 2.3.2.1

Estimates of coefficients – RID model for the Malaysia, 1977-2010.

The real and predicted rates of exchange values of the US dollar Vs Malaysian ringgit with the as the base are shown in Figure below. From 1977 to 1989, the changes of real and forecast exchange rate values were almost constant, but the major variations between the two values occurred from 1989 to 2010.

Malaysia's policy has adopted some form of exchange rate stability as one of its objectives. This goal would also lead to conflict with the moderate inflation objective. The sustainability of the currency rate will confrontation with the target of a low level economic growth rate if it contributes to an unreasonable setting of monetary policies or if inflationary and deflationary international prices are directly passed on by the exchange rate.

From September 1998 to July 2005, Malaysia preferred the nominal effective sustainability of trade against with the US dollar, which resulted in the rapid rise including its Malaysian ringgit. On 21 July 2005, Malaysia dropped its pledge to bilateral fixed exchange rates in favor of a commitment to successful sustainable economic growth (McCauley, 2007).

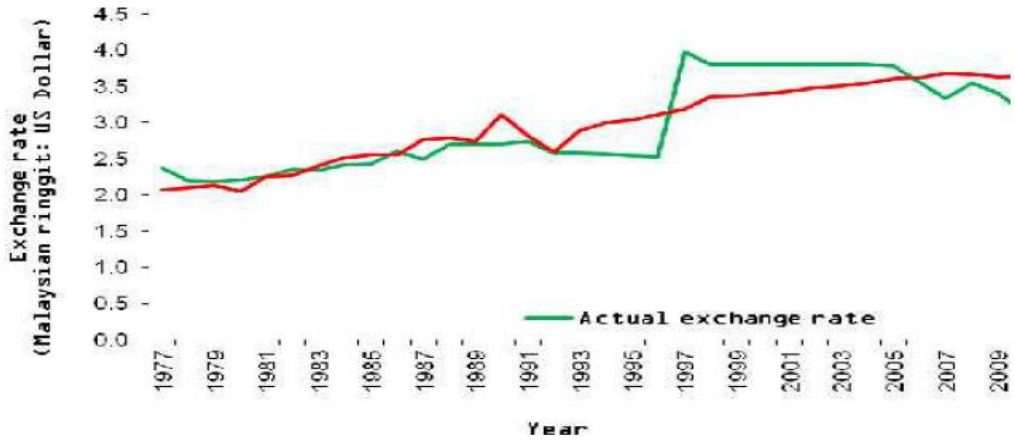


Figure 2.3.2.1

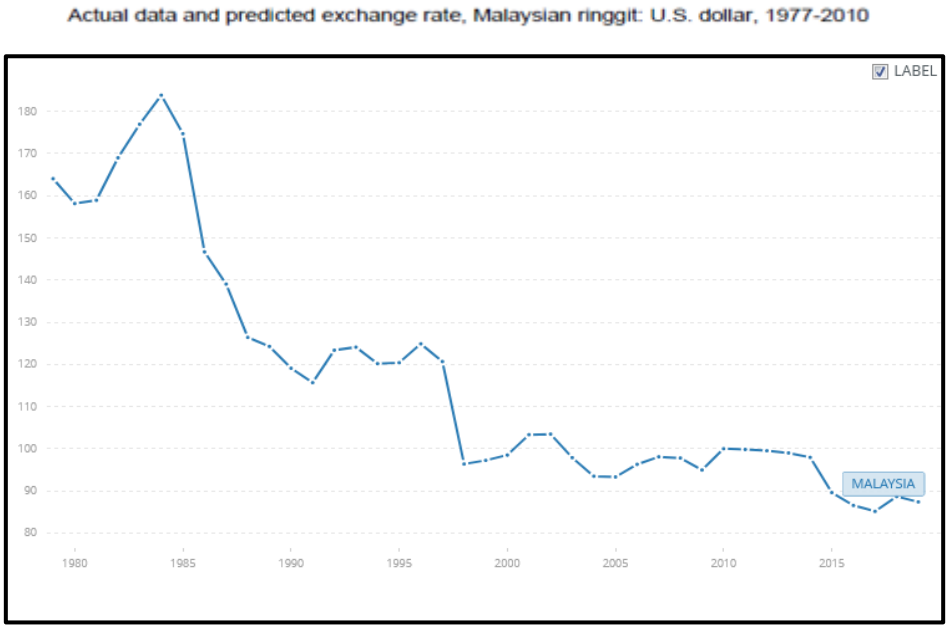


Figure 2.3.2.2

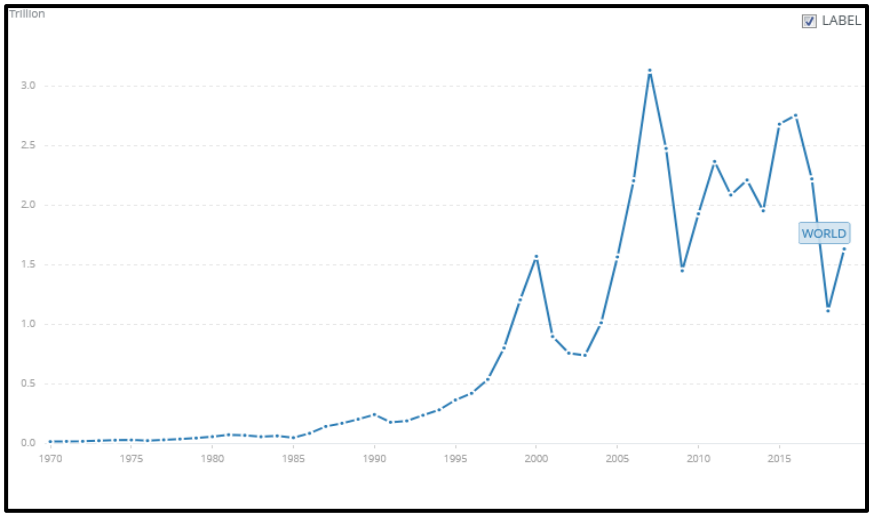
Real effective exchange rate index (2010 = 100) – Malaysia

Real effective exchange rate is the nominal effective exchange rate (a measure of the value of a currency against a weighted average of several foreign currencies) divided by a price deflator or index of costs.

- *Source*: International Monetary Fund, International Financial Statistics.

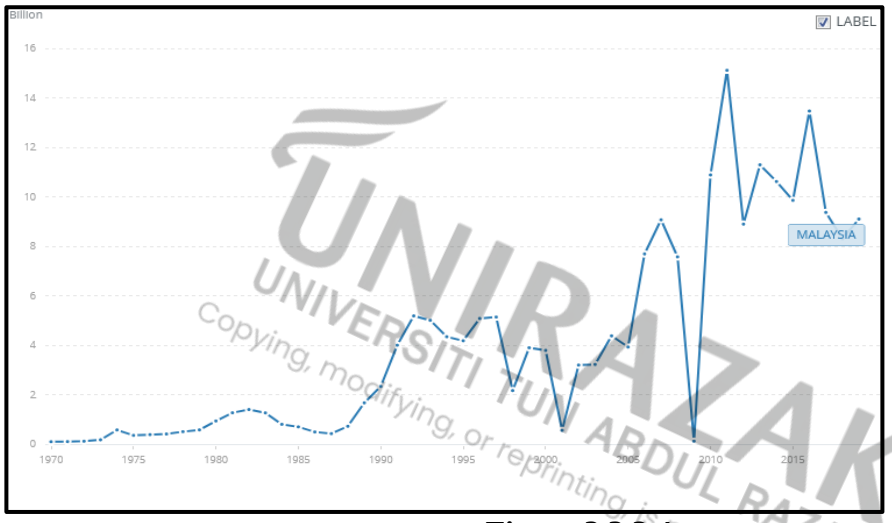
Foreign direct investment, net inflows (BoP, current US$)

International Monetary Fund, Balance of Payments database, supplemented by data from the United Nations Conference on Trade and Development and official national source



World (2019)
1.631 Trillion

Figure 2.3.2.3



Malaysia (2019)

9.101 Billion

Figure 2.3.2.4

2.3.3 Economic impacts of COVID-19 in Malaysia

By now, it is clear that such a pandemic would have severe consequences for both the Malaysian macroeconomy and the rakyat's economic well-being. The key dependent on economic impact in Malaysia are twofold: the first is the spillover effect from the coronavirus's effects abroad, and the second is caused domestically as a result of the recently enacted movement control (MCO) steps.

First, the outbreak of the latest coronavirus in China had caused wide-ranging supply and demand shocks that had reverberated across the world long before the partial lockdown measures in Malaysia. The consequences of such China shocks in Malaysia may be disastrous. The Malaysian economy is one of the most vulnerable in the region to both Chinese demand and supply. Malaysia's top trading partner, a major source of

foreign investment, and top tourist destination outside of ASEAN is China. Malaysian companies have also been among the most deeply integrated in global production networks over the last decade. This is complicated by the fact that regional supply chains are increasingly centred on China. Indeed, intermediate components account for more than a quarter of Malaysia-China trade (approximately US$20 billion in 2018)– exactly the type of product that suffers the most when global supply chains are interrupted.

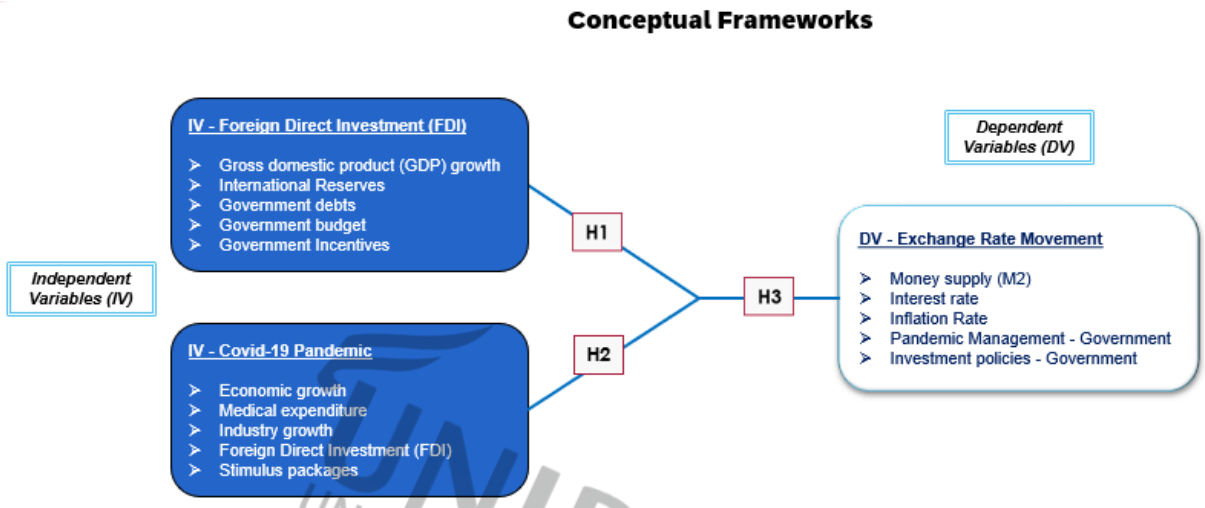
Second, while the MCO steps are critical in preventing the spread of the new coronavirus in Malaysia, they will come at a significant financial expense. On a macro level, industry and service closures, as well as travel and movement restrictions, would have a significant effect on private consumption and business investment. It will have far more devastating consequences for individual livelihoods and companies. Individuals and companies impacted by the temporary closures are likely to experience acute cash flow problems as their earnings decline. Small and medium-sized businesses (SMEs) and disadvantaged groups including such lower-income families, part-time and unemployed employees would be disproportionately affected by the liquidity squeeze. This could have far-reaching consequences for the entire economy, leaving companies bankrupt, individuals bankrupt, and the financial system burdened with non-performing loans.

2.3.4 Economic policy responses in Malaysia

Unlike most of the global financial crisis of 2008 and the Asian financial crisis of 1997, Malaysia's COVID-19 crisis is first and foremost a public health emergency, followed by an economic emergency. Following that, economists believe that economic policy should primarily concentrate on bolstering public health efforts in dealing with the pandemic while still maintaining the wellbeing of the rakyat and businesses. The announced RM20 billion stimulus package is a good start and already includes many of the planned steps, but given recent events and the magnitude of the crisis, there is a sense that the package should be much larger. There were 23 reported cases of COVID19 when the stimulus package was revealed. There has been a multiple-fold rise in reported cases as of this writing. In general, Malaysia's economic reaction to the coronavirus pandemic must be divided into two phases. As quarantine/partial lockout

measures are enforced to protect the profits and liquidity of affected individuals and businesses, stage one initiatives should be introduced. Stage two interventions should include a significant fiscal stimulus portion which should be enforced as long as the outbreak begins to subside and movement restrictions are lifted.

2.4 Proposed Theoretical Framework



The study's of theoretical structure. The economic variables defined that can influence the movements of the exchange rate are foreign direct investments (FDI).

2.4.1 Research Hypothesis

- H1 - Perceived factors of Foreign Direct Investment (FDI) are positively related to exchange rate movement in Malaysia
- H2 - Perceived factors of pandemic Covid-19 is positively related to exchange rate movement in Malaysia.
- H3 - Perceived factors of Foreign Direct Investment (FDI) and pandemic Covid-19 are positively related to exchange rate movement in Malaysia

It is hypothesized that exchange rate fluctuations are influenced by the supply of capital, industrial output, interest and inflation rate. The interest and inflation rates are commonly seen as normal determinants for the exchange rate movements among the four

economic variables. In his original RID model, Peterson (2005) observed that these variables appear to be the most influential influences.

The price of a foreign currency available in the domestic currency is one of the many prices in the economy that have risen, following an increase in the supply of capital. A permanent increase in the money supply of a nation induces a long-term proportional weakening of its currency against the foreign currencies. Similarly, a gradual decline in the money supply of a nation triggers a proportionate long-term appreciation of its currency against the foreign currencies (Krugman and Obstfeld, 2006). As its buying power gradually rises compared to other currencies, a country with a lower inflation rate shows a growing currency value. Usually, some countries with higher inflation rates, observes depreciation in their currencies in comparison to their trading partners' currencies. This will cause higher interest rates. The rate of interest is calculated by the demand for capital. In an economy, an increase in interest rates will give a higher return to the lenders. An increase in interest rates invites foreign capital and causes the rates of exchange to increase.

However, if inflation in the country is much higher than in others, or if the currency is pushed down due to other additional factors (www.investopedia.com), the effect of higher interest rates is mitigated. Increase in the domestic industrial production or output level shall increases the domestic money demand, leading to a decline in the domestic long-term price level. This will cause an appreciation of the domestic currency against the foreign currencies, as per the PPP model. A rise in foreign production increases demand for foreign currency, leading to a decline in the long-run foreign price level.

2.4.2 Purchasing Power Parity

Purchasing power parity (PPP) must also hold for the RID model to hold. PPP is a determination of the one-price rule, where the currency is translated into the same currency, two similar items must sell for similar price. PPP notes that when translated into a common currency, the general price level must be the similar.

The PPP equation is expressed as:

$$P_d = xP_f \quad (1)$$

where:

P_d = domestic price level
x = spot exchange rate
P_f = foreign price level

Sticky costs is the presence of non-traded goods and the fact that the these goods consumed in different countries may vary according to the choice, cultural and social factors are the reasons for PPP failure. The actual exchange rates that have to float should be equal to one for absolute PPP to hold.

In fact, it is not very possible that absolute PPP holds (Copeland, 2005). Relative PPP can, however, help clarify exchange rate movements. This assumption says that when the currency of the home country. According to Copeland (2005), the inflation rate in the home country is equal to the foreign country inflation rate, in addition to the percentage of depreciation. Similarly, if the currency depreciates by the same amount, domestic inflation can only be higher than international inflation.

2.4.3 Unveiled Interest Rate Parity

The second underlying principle is the Exposed Interest Rate Parity (UIRP), which denotes a compensated depreciation with the home currency, if the domestic interest rate is higher than that of foreign interest. Higher inflation in the domestic currency, an equivalent decrease in the value of the foreign currency, results in a compensated depreciation of the home currency.

The UIRP equation is written as:

$$r_d = r_f + d_p \qquad (2)$$

where:

r_d = domestic interest rate
r_f = foreign interest rate
d_p = the expected percent depreciation of the domestic currency

If the currency of a domestic country is projected to depreciate and therefore lose value, domestic assets will not be retained by domestic or international agents unless a higher interest rate is given to compensate for the lower value of the currency. UIRP assumes the risk neutrality of economic agents. When pursuing risky investments, they do not need a risk premium. In other words, whether they keep volatile assets or not, they are indifferent and thus think more about the average return (Copeland, 2005).

2.5 Hypothesis Development

This theory explains that when the domestic currency is experiencing a higher inflation then the value of the currency of the home country must be equal. The research supports the hypothesis that uncertainty in exchange rates has a negative effect.

The hypothesis is clearly stated that the movements of the exchange rate are driven by economic factors, the availability of currency, industrial output, interest and inflation rate. The interest and the inflation rate are known to be the standard determinants of changes in exchange rates.

The Johansen cointegration test checks the null hypothesis that there is no cointegration vector against the alternative hypothesis that there are no cointegration vectors.

2.5.1 Economic Response to the Covid-19 Pandemic

The economical response to handle the corona virus pandemic will be costly. Government budget deficit targets will need to be overshot. All the affecting variables will be distorted. The FDI will be inconsistent globally. This being a global pandemic, each nation will have to handle the pandemic in their own means. Borders are shut but economical trades continues but most without being able to be controlled. There are businesses that totally collapsed but there are opportunistic business that flourish during this pandemic.

Later, difficult decisions about how to increase tax revenues would need to be made– though, as Emmanuel Saez and Gabriel Zucman point out, these costs do not have to be borne by the lower to middle classes because of progressive income and wealth taxes. In addition, a great deal of political willpower will be needed.

As previously stated, certain policy responses can necessitate the use of a special or urgent parliamentary session to bypass or change such laws. Finally, the banking sector will face significant financial pressures, necessitating intervention from our monetary policy. Furthermore, despite extensive and valiant attempts to mitigate the blow to the rakyat and companies, certain job losses and company closures would be inevitable. However, the economic, social, and political costs of inaction–or even inadequate action–are much greater and much more terrifying. In light of the emerging threats, it is clear that fiscal policy must go beyond the stimulus program in order to protect the rakyat's livelihoods.

After all, the current COVID-19 crisis will be overcome gradually by robust public health campaigns, but the economic wounds it leaves behind will be violently long-lasting without a sufficiently significant and forceful fiscal response.

2.5.2 Economic Response to the FDI (Post Covid)

Malaysia continues to be in reliance attract on foreign direct investment (FDI). This is due, in part, to the government's incentives aimed at the high-tech and digital sectors.

Business-friendly policies were designed as part of the National Economic Recovery Plan (PENJANA) attempt to improve investment activities, such as a 10- to 15-year exemptions for new FDI in the manufacturing sector with a capital expenditure of RM300 million (US$72.8 million) or more. Other pro-FDI policies include the establishment of the Project Acceleration and Coordination Unit (PACU) – under its Malaysian Investment Development Authority (MIDA), which is under the Ministry of International Trade & Industry (MITI) – that year to provide edge facilitation with all projects adopted by the National Committee of Investment (NCI) and, as a result, ensuring that all projects adopted by the National Committee of Investment (NCI) are completed.

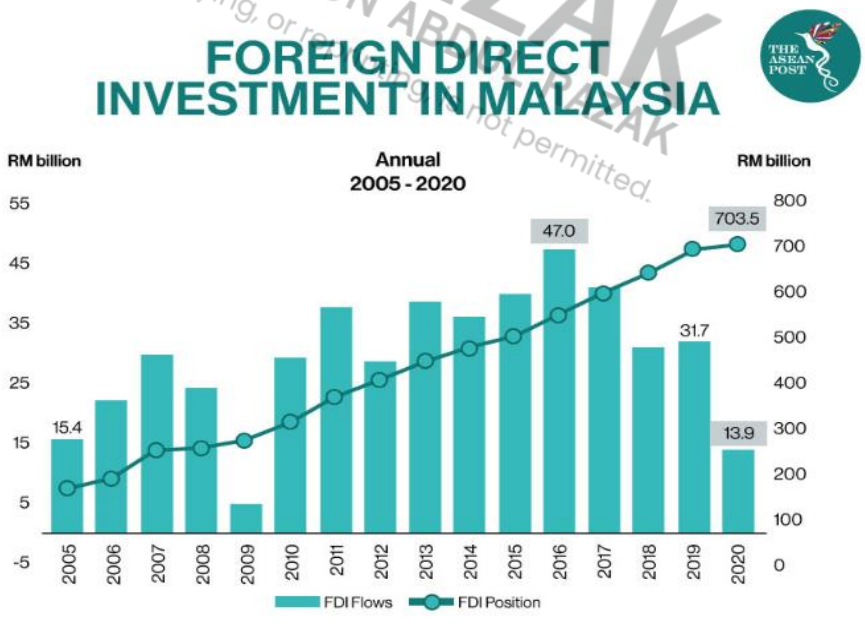


Figure 2.5.2.1

Source: Department of Statistics, Malaysia

Direct and proactive State involvement in the economy as a result of expenditure and fiscal policies on the one hand, and increased DDI on the other, bodes well for FDI flows into Malaysia to continue. Malaysia must take advantage of its ASEAN (Association of Southeast Asian Nations) membership to serve as a significant gateway and "first-stop" for FDI into the rest of the country. Malaysia's foreign direct investment (FDI) has always been focused on solid and sustainable foundations.

2.5.3 Volatility

The standard deviation of trigonometric functions returns is a statistical indicator of the degree of variance of the currency exchange price series over time, which is commonly used to calculate volatility of the exchange rate. A time series of historical stock prices is used to calculate historic volatility. The higher risk the security and its yields are, the higher the volatility. The formula given as:

$$\sigma_T = \sigma\sqrt{T}$$

σ_T = volatility over a time horizon
σ = standard deviation of returns
T = number of periods in a time horizon

Since volatility raises exchange rate risk, volatile exchange rates make foreign trade and business decisions more difficult. The risk of losing money due to a change in exchange rate is known as exchange rate risk. Depending on how much it varies over time, a floating currency may or may not be unpredictable. Floating exchange rates, on the other hand, are expected to be more unstable since they are free to adjust.

Since the variables evaluated really aren't stationary at the ground, the current research uses cointegration and causality test instead of traditional regression analysis.

2.6 Summary

The relationship between the macroeconomic factors and the foreign exchange rates was further clarified in this section through the literature review of previous studies. Based on previous studies, is hypothesized that the nominal foreign exchange rate and the other three variables of foreign exchange reserves, export import ratio and loan interest rates, are closely correlated. The Foreign Direct Investment being an important element and determent to the exchange Rate vitality is evaluated. The influence of the extra ordinary global pandemic is accounted and evaluated. Analysis methods and techniques of data testing on the relationship between all variables will be discussed hereon, in the next chapter.

CHAPTER 3

RESEARCH METHODOLOGY

3.1 Introduction

To deepen the comprehension of readers in chapter 3, an overview of the methods used to obtain information was given. This chapter will present and explain the types of methods that researchers have chosen to introduce, consisting of research design, the method of data collection of variables, data process, sampling design and methodology.

3.2 Research Design

The research design is the "blueprint" that enables the investigator to come up with solutions to the problems and guides the researcher in the various stages of the research. The purpose of using the research design is to describe the processes involved in designing a study and to demonstrate how the specific research design that a scientist decides to use helps to structure the collection, analysis, and interpretation of data (Nachmias David Nachmias, 1972). The design study established a set of issues/phenomena that lead to systematic research. If the problem is identified, the goals/objectives of the research in the further research will be advanced. Next, the further discussion will be on the scope, the significant and the limitations of the study, determined to facilitate the process, carried out as in *Figure 1*. At this stage, a population and sampling technique is defined, and human constructions that create links with professionals and ethical behaviour are identified. The models, sampling techniques, cross-study and number of samples were then determined.

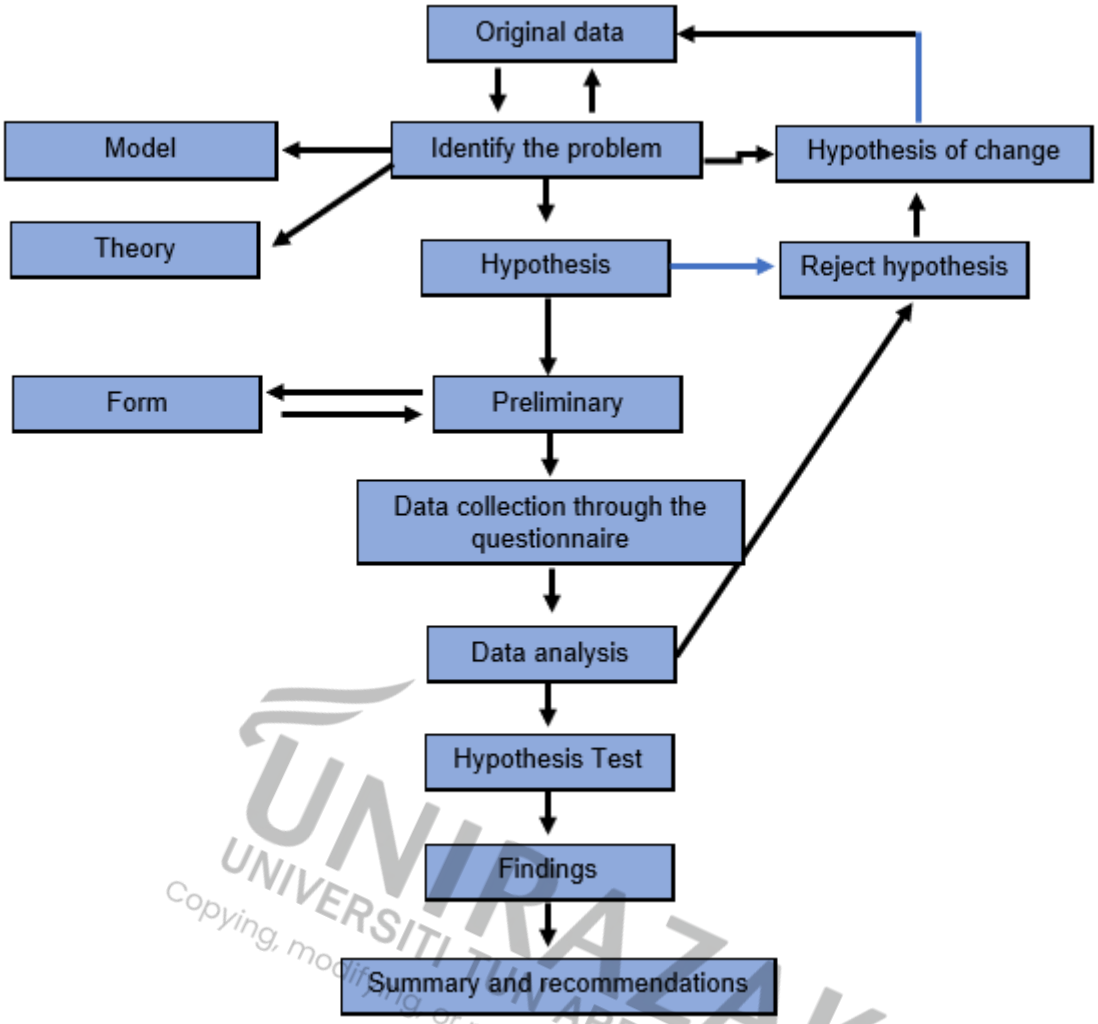


Diagram 4: Processes in Research Design Studies

In the selection of the examination study, researchers elect several respondents exposed to a population of sporadic (Selborn et. al., 2007). The selection of samples to be taken covers of the objective a) the Study; b) To identify the necessary sources of information; c) The identification of the target audience; d) Determination of the sample size taken; e) Define survey; f) Ensuring collection of instrument and data; g) Define the statistical data and hypotheses and h) Testing methods. It all would be general conclusions, summary and recommendations for the study.

In this study, the humanitarian element of cultural academic quality is limited. This includes spirituality, which apply to previous researchers. Studies were then built, and Cross-sectional study done to determine the reliability of every question of the issue built. Once the questionnaires are better is given to everyone, the selected respondents as the occasional respondents. Selected respondents are given a specific period that corresponds to each object in the questionnaire. Research design type can be distinguished to four majors:

i. Experimental design, individuals or other units of analysis are randomly assigned to the experimental group. Such design allows for comparison, control, manipulation, usually and generalizability.
ii. Quasi-Experimental design, also in cross sectional designs ordinarily include combinations of some of these elements but not all of them. Typically, these designs lack possibility for manipulation and randomization.
iii. Pre-Experimental design includes even fewer safeguard than quasi-experimental and cross-sectional designs, and in this sense, they provide the least credibility in determining whether two or more variables are causally related.
iv. Cross Sectional design is the most predominant design used in the social sciences. Variables are assayed once and the relationships between them are determined.

In this research, the Cross-Sectional design types were chosen. This design is often identified with questionnaire research, a method of data collection common in many social science fields. Though the cross-sectional design would allow to assess the relation (or correlation) between financial literacy, public awareness, ICT and technical tools, education and law enforcement to combating the threat of cybercrime. The main advantage of cross-sectional studies it permits researchers to employ random probability samples. Cross Sectional studies are also used to infer causation. Besides that, such studies are having subjects are neither deliberately exposed, treated nor not treated and hence there are seldom ethical difficulties.

Only one group is used, data are collected only once and multiple outcomes can be studied; thus, this type of study is relatively cheap. This research is supported by secondary data collected from the selected banking industry.

3.3 Study population and Sampling Procedures

The random sampling is use in this method to reduce the sampling error in a particularly small sample size. The term strata refer to a part of a group, or the sub-population covers several different categories and does not overlap known as cluster testing. Random sample were used when difficulties arise such as heavy getting a list of members in a population or not destined to go to any site review. Things like in samples are random people, events and so on. The selected samples represent other samples that arise from the study group randomly, not as an individual.

The sampling techniques used by researchers are the sampling of random. Random sampling is used when the population may divide units in each unit with the characteristics of the population. After a few units are selected randomly, elements of this unit are selected randomly to form a random sample. The study does not take any staff involved in large populations due to limitations on financial resources, intuitive work and a finite time complicates researchers.

3.3.1 Population

According to Denzin and Lincoln (2014), the population in the sample is a set of people or elements that are subject to a test to make inferences. The population would be based on group of respondents from two categories such as professional bodies who aware on finance industry and ACCA (Tax agents) which can give more picture of FDI and Pandemic Covid-19 to foreign exchange mobility.

3.3.2 Survey

Survey research has historically included large population-based data collection. The primary purpose of this type of survey research was to obtain information describing characteristics of a large sample of individuals of interest relatively quickly. Large census surveys obtaining information reflecting demographic and personal characteristics and consumer feedback surveys are prime examples. These surveys were often provided through the mail and were intended to describe demographic characteristics of individuals or obtain opinions on which to base programs or products for a population or group (www.ncbi.nlm.nih.gov).

Survey research is a useful and legitimate approach to research that has clear benefits in helping to describe and explore variables and constructs of interest. Survey research, like all research, has the potential for a variety of sources of error, but several strategies exist to reduce the potential for error. Advanced practitioners aware of the potential sources of error and strategies to improve survey research can better determine how and whether the conclusions from a survey research study apply to practice (www.ncbi.nlm.nih.gov).

Survey research is used as one of the tools to collect information for this research. Survey research is one of the most important areas of measurement in applied research. The broad area of survey research encompasses any measurement procedure that involves asking questions or respondents (www.slideshare.net). Survey research the process of data collection by distributing the questionnaire to the target population and give them time to return the questionnaire and obtain the respondent responses. The survey can be used for two main reasons such as to estimate the characteristics of the population and for hypothesis testing (Whiteley, 2002).

Information has been obtained from individuals and groups using survey research for decades. It can range from asking a few targeted questions of individuals on a street corner to obtain information related to behaviors and preferences, to a more rigorous study using multiple valid and reliable instruments. Common examples of less rigorous surveys include marketing or political surveys of consumer patterns and public opinion polls (www.ncbi.nlm.nih.gov).

3.4 Sample

The sample research is a type of selection process for primary study components and analysis is determined to address the research questions as identified by Gaylord and Galliher (2012). The analysis process of this subset is called sampling, namely research take several examples of population study named samples. Generally, a sample is the selected item or represent to population studies. Samples that will be selected must represent a population study so that the findings can be made revenue generation that is able to provide a comprehensive interpretation of the population.

This study using convenience sampling (non- probability random sampling) because the convenience method to ensure that the sample accurately represents the whole population. The number of respondents is wide including the regional countries through internet connectivity. There is no list of data on the respondents so non-probability random sampling techniques are a suitable approach in selecting the samples. The target participants for this research is 118 respondents who have experience and understanding on FDI, Foreign exchange rate mobility and macroeconomics responding by using google form of questionnaires.

Notifying from Levin and Rubin (1998) says that the sampling technique is the methods of collection of some elements of a sample population of reviewed from. A correspondence between the elements of the sample taken from the population, then the better the results obtained. The sample taken must represent the population and can provide an estimate of the value of the Inferential in the population (Yahya, 2006). Generally, the determination of sample size on schedule the determination of sample size studies submitted by cognitive styles on and Morgan (1970) can be used. The number of samples taken is 118 respondents as shown in *Table 3.4.1*.

Table 3.4.1

Population	Sample	Population	Sample	Population	Sample	Population	Sample
10	*10*	150	108	460	210	2200	327
15	14	160	113	480	214	2400	331
20	19	170	118	500	217	2600	335
25	24	180	123	600	226	2800	338
30	29	190	127	600	234	3000	341
35	32	200	132	650	242	3500	346
40	*36*	210	136	700	248	4000	351
45	40	220	140	750	254	4500	354
50	44	230	144	800	260	5000	357
55	48	240	148	850	265	6000	361
60	52	250	152	900	269	7000	364
65	56	260	155	950	274	8000	367
70	59	270	159	1000	278	9000	368
75	63	280	162	1100	285	10000	370
80	66	290	165	1200	291	15000	375
85	70	300	169	1300	297	20000	377
90	73	320	175	1400	302	30000	379
95	76	340	181	1500	306	40000	380
100	80	360	186	1600	310	5000	381
110	86	380	191	1700	313	75000	382
120	92	400	196	1800	317	100000	384
130	97	420	201	1900	320	250000	384
140	103	440	205	2000	322	500000	384

Table 3.4.1: Schedule of a Study Sample Size Determination

3.5 Data collections

3.5.1 Primary Data Collection

By definition, primary data collection is the collection of raw data at the source. It is the method of gathering original data gathered by a researcher for the specific purpose of a particular research project. It can be divided into two categories: qualitative analysis and quantitative data analysis techniques. Online platform, Google Form was used to develop sets of questionnaires in order to collect the data. The questionnaire survey been distributed to 170 respondents by social media and the return questionnaire obtained was 118 at cut off time, with valid answered. The raw data analysis interpreted using IBM Statistical Package for the Social Sciences (SPSS) and the results intended to determine the analysis

3.5.2 Secondary Data Collection

Secondary data collection, on either hand, refers to the collecting of data from a source other than the original user. It is the method of gathering information from previously published books, journals, and/or web portals. This is much less costly and simpler to collect in terms of convenience. The data are reliable and based on actual values compiled and tabulated by the regulators. Secondary data was also used to conduct comparative analysis. These data was extracted from among others, the International Monetary Fund (IMF), International Financial Services (IFS) data from the World Bank, Central Bank of Malaysia, Kuala Lumpur Stock Exchange, International Research and numerous other published monitoring issues. This research study used annual panel data analysis. In each region, the important factors differ. In all countries, industrial development is substantial. The explanation of exchange rate fluctuations does not contribute to all variables used in the model. In each country, the significant variables are not the same. The information was compiled from the website of the World Bank in most cases.

3.6 Process of Data Collection

Questionnaires may be in paper form and mailed to participants, delivered in an electronic format via email or an Internet-based program such as Survey Monkey, or a combination of both, giving the participant the option to choose which method is preferred (Ponto et. al., 2010). Using a combination of methods of Google form survey administration can help to ensure better sample coverage (i.e., all individuals in the population having a chance of inclusion in the sample) therefore reducing coverage error (Singleton & Straits, 2009). For example, if a researcher were to only use an Internet-delivered questionnaire, individuals without access to a computer would be excluded from participation. Self-administered mailed, group, or Internet-based questionnaires are relatively low cost and practical for a large sample (Check & Schutt, 2012).

The instrument is a cross-sectional self-administered google form questionnaire which distributed to the participants in the form of questionnaire. In designing the questions in this survey, the researcher using the close-ended question style, the questionnaire (Appendix B) consists of 18 items complied to the hypothesis and variables, represented in a Likert-scale formatting based on five categories (Strongly disagree, disagree, neutral, agree, strongly agree), the five categories are displayed in numerical form, to make the questionnaire easy and clear for the participants in the questionnaire as follows: 1 represented strongly disagrees, 2 represented disagree, 3 neutral, 4 represented agree, and 5 represented strongly agree.

The scale presents the respondents with a set of statements about a person, a thing or a concept and the respondents are required to indicate how strongly they feel, positively or negatively about the statements (Whitely, 2002).The results of Cronbach's Alpha test showed that the invariability degree of the data collection tool in general is 77.3% which is good while the reliability of the sample answers is 87.9% which indicates a high reliability of the results making it possible to generalize the results to the research population. *Table 3.7.1*, describes and classifies the questionnaires dimensions and number of items for each dimension in Part B.

Questionnaire Dimensions	No. of Items
Section A: Questionnaire for respondent's profile	6
Section B : General opinion on FDI and Pandemic Covid-19	7
Section C : Research Question Analysis	4
Section D : Other information	1
Total	**18**

Table 3.7.1: Questionnaire Dimensions and Number of Items in Part B

3.7 Research Data Instruments

Each proposal and improvement feedback on each item on the questionnaire derived from this study will be analysed and used. This is to get the degrees to be high reliability for each of the items on the questionnaire which was built. The instrument was drawn up in the form of questionnaire distributed to a cross-section of respondents. In preparing this survey questions, researchers have used a closed question. Survey questions using Likert scale format based on five categories. All categories are displayed in numerical form. This fun question and answer the respondent to the survey easily and clearly as follows:

Strongly disagree Neutral Strongly agree

1----------2----------3----------4----------5

Note: 1 – Strongly disagree
2 – Disagree
3 – Neutral
4 – Agree
5 – Strongly agree

Figure 3.8.1: Likert Scale

The scale provided are statements about people, things or concepts and respondents should indicate how their feelings, positive or negative about the given statement (Whitely, 2002).

3.8 Types of Analysis

The researcher has worked with a sample to generalization and prediction, the pattern of sample from the population, the sample must represent the characteristics of population. In order to ensure that it represents the researcher used a random selection procedure, the randomly sample selected who are responding by using Google form of questionnaire.

There are some guiding principles adhered to conventional social science researchers. For instance, the smaller the population under study, the larger the sampling ratio. If the study population is 1000 or under, the sample ratio would need to be 30% or 300 individuals. As the population for study increases, the sampling ratio decreases. For a population of 10,000 the sample size would be 1000 (about 10%); and for populations over 150,000, smaller sampling ratios (1%) are acceptable (Neuman, 1997). High degree of accuracy depends on the sampling ratio. For populations smaller than one thousand, a sampling ratio of 30 percent is required.

This research was carried out with the manager of the company, which the researcher has been working experience since 1991. This facilitated the process of distributing and receiving the reply Google from the respondents at each department using the banking online system frequently.

The different groups of the respondents were given one week from 19 May 2021 until 25 May 2021. Then data was coded and the statistical package for social sciences (SPSS) is used as it is one of the most standard and extensively available software packages for preparation and executing computerized data analysis.

3.8.1 Validity Test

Miller (1994) stated that the test effect on of each item is vital to the test seal constructs and items used in the questionnaire include content constructs and items appropriate of study. In this regard, any test validity that done for review based on the present-day instruments and construct is appropriate to measure variables used. If the instrument can measure the with right then the instrument has the degree of the validity of the high based on content, validity of prediction and concurrent validity. In the study, researchers have identified the existence of measurement errors on some items in constructs and questions in the interview. Improvements have been made so that Alpha's Cronbach value for each construct more than 0.65. Generally, general thinks

every election tactile item in the questionnaire is match in generalize an emerging threat to banking sectors in Malaysia.

3.8.2 Reliability Test

The pilot studies carried out among staff at Professional Bodies (audit firms) and staff of Tax Agency to assess the consistency and the degree of reliability of each item and construct in the questionnaire which was built. A total of 20 respondents are selected at random to get involved directly. The data obtained will be analysed using the measurement's Alpha (α), using Statistical Software Package for Social Sciences (SPSS).Alpha's Cronbach (α) can show the internal consistency of the test items in this survey with the range of 0 to 1 (SPSS Inc., 2004).

3.9 Pilot Test

The pilot study was to familiarize researchers with the review process prior to the actual study is carried out. The pilot study conducted by Salain (2002), intended to obtain feedback on the review instruments used as well as making improvements before the actual review is carried out. For qualitative research instruments, improvement can be done after gaining experience and feedback pilot study. While for quantitative studies on the other hand, in addition to feedback in the form of ideas, modifications can also be done with observation statistical.

Since this involves statistical analysis, arises the question of the number of required to pilot test quantitative study. Too many samples to study is not good, affect and interfere with the findings especially the storekeeper phoned researchers focus on data analysis to determine the reliability of the item. The number of samples shall be taken in accordance with the requirements of the pilot research that is not too little and not too much as well. As discussed earlier, between the purpose of the study is the analysis for estimating reliability (*reliability* research instruments, whether) the questionnaire or test items. Most popular method was by way of determining internal consistency (*internal consistency*). The SPSS package, internal consistency coefficient through predictable Cronbach *Alpha's*.

If the researcher using the number of data that many, the value of Cronbach Alpha's automatically can be increased, which means the increase was not due to the items the

questionnaire or test is good until the respondent consistent in response, but the level of consistency is obtained as the data. Researcher suggests the amount between 30 to 50 respondents is a reasonable number, ideal and accepted (acceptable). This proposal is in line with Connelly (2008) and Treece&Treece (2005), which suggests the number of samples for the study, is 10 percent of the actual respondents.

In addition, Isaac & Michael (1995) and Hill (1998) have suggested sample size for study is between 10 to 30 respondents. In this regard, based on the views and many more other opinions, researchers believe that total between 30 to 50 respondents were the most reasonable. The number of respondents in this study adequate because according to Cooper and Schindler (2011), the number of respondents who fit the study is 25 to 100 respondents. While Johanson and Brooks (2010) suggests the minimum number is a total of 30 respondents to study which goal is to study early or development scale (RuhizanMohd Yassin et.al., 2015).

Researchers need to complete an inventory of questions based on previous research studies before committing to the supervisor to see consistency between the statements of the problems and objectives of the study. Bogdan and Biklen (2003) says that review this verification by supervisors is also a form of reliability data. Bogdan and Biklen (2003) mention that one of the validities of qualitative data is confirmation of supervisors and references selected experts on the regularity of studies conducted. After the inventory of the questions certified by the supervisor and certified by individuals who specialize in the relevant field. Researcher conducted the first pilot at professional bodies (Audit firms) and Tax agencies. A total 20 respondents were selected at random labelled as "Pilot Study" sent random by google form of questionnaire.

The total 20 respondents (50%) provide feedback and seen by researchers several inventory questions unclear and difficult answer as needed by researchers. Therefore, the supervisor review has recommended being researchers coordinating items: studied by researchers in accordance with the objectives of the review built. According to Bougie (2010) that research should have conducted in each study quantitative patterned. Rationale for the study conducted is to ensure that the questions posed to respondents are good and can measure what is measured. While for qualitative research conducted because there were no study questions will be improved during the interviews conducted and can be interviews again if there is information that is less clear. Questions posed next revised. A review can

also be done by someone that specializes in quality management before field activities is performed. The survey was given out from 19 May 2021 until 25 May 2021 which took place one weeks' time.

Area	**Total Questionnaire Distributed (respondents)**	**Total Questionnaire Received (respondents)**
Professional Audit Firms and Tax agent Staffs		
Johore Bahru	*20*	*10*
Skudai	*20*	*10*
TOTAL	**40**	**20 (50%)**

Table 3.9.1: Total Pilot Test of Respondents of the Study

The total 20 respondents (50%) provide feedback and seen by researchers several inventory questions unclear and difficult answer as needed by researchers. Therefore, the supervisor review has recommended to be researchers coordinating items and studied by researchers in accordance with the objectives of the review built. According to Khalid, Abdullah and Kumar (2012), that research should have conducted in each study quantitative patterned. Rationale for the study conducted is to ensure that the questions posed to respondents are good and can measure what is measured. While for qualitative research conducted because there were no study questions will be improved during the interviews conducted and can be interviews again if there is information that is less clear. Questions posed next revised. A review can also be done by someone that specializes in quality management before field activities is performed. The survey was given out from 19 May 2021 until 25 May 2021 which took place one weeks' time.

3.10 Data Collections

Table 3.11.1 below show the total respondents of the study. In this study, the total respondents were 118 persons. The Google form of questionnaire survey is distributed from 19 May 2021 until 25 May 2021, there are 118 respondents are responding.

Area	Total Questionnaire Distributed (respondents)	Total Questionnaire Received (respondents)
Johore	*42*	*35*
Melaka	*15*	*5*
Negeri Sembilan	*8*	*4*
Selangor	*35*	*24*
Kuala Lumpur	*60*	*44*
International	*10*	*6*
TOTAL	**170**	**118 (70%)**

Table 3.10.1: Total Respondents of the Study

3.11 Data Analysis

Data obtained are analysed based on in statistic in a descriptive only applicable to the distribution of the frequency and the distribution of scores. For researchers an also, analysing data inferential involves the use of various statistical methods such as the equation regress simple and double (Bougie R., 2010). This allows the decision made an overview of the in general the study population.

3.12 Pearson Correlation Analysis

The Pearson product-moment correlation coefficient (Pearson's correlation, for short) is a measure of the strength and direction of association that exists between two variables measured on at least an interval scale. For example, a researcher could use a Pearson's correlation to understand whether there is an association between exam performance and time spent revising. A researcher could also use a Pearson's correlation to understand whether there is an association between depression and length of unemployment.

A Pearson's correlation attempts to draw a line of best fit through the data of two variables, and the Pearson correlation coefficient, *r*, indicates how far away all these data points are from this line of best fit (i.e., how well the data points fit this model/line of best fit).

3.13 Multiple Regression Analysis

Multiple Regression Analysis is to identify changes in two or more factors contributing to the change in an independent variable. Some examples of the test conditions need to be observed as follows:

i. **Linearity** - In order to meet this requirement, all independent variables should that of the correlation in liner with variables. It can be checked via graph scatterplot in the analysis of multiple regression test.

ii. **Multi-collinearity** - Such as statistical tests involving more than one other independent variables, multi-collinearity exists when the There is a very strong correlation (r >. 90) between variable-Change s. in the study. One way to overcome this problem is it increases the size of the samples. It can also be identified through the value Collinearity Statistics Tolerance in the Table Excluded Variable in SPSS output. Variables are not tally with the value Collinearity less than 0.1 problematic multi-collinearity.

iii. **Heteroskedasticity -** A statistic, a collection of random variables is heteroscedastic if there are sub-populations that have different variabilities from others. Here "variability" could be quantified by the variance or any other measure of statistical dispersion. Thus, heteroscedasticity is the absence of homoscedasticity.

iv. ***Autocorrelation test***- Autocorrelation, also known as serial correlation, is the correlation of a signal with a delayed copy of itself as a function of delay. Informally, it is the similarity between observations as a function of the time lag between them (eprint.utar.edu.my)

3.14 Summary

This is the research methodology has been employed and comprehensively discussed. The discussion encompasses, research design, sampling design, survey, pilot test, process of data collection, research data instruments, type of analysis and summary of the chapter. The data analysis and result findings will be presented in next chapter.

CHAPTER 4

RESULTS AND DISCUSSION

4.1 Introduction

This chapter will explain the data analysis that has been gathered via SPSS and internet sources. The data was in response to the questions posted in Google form (see appendix A) for this study. The association between FDI, Covid-19, and Exchange Rate Movement will be shown as a result. The analytical relationship shall be illustrated as follows;

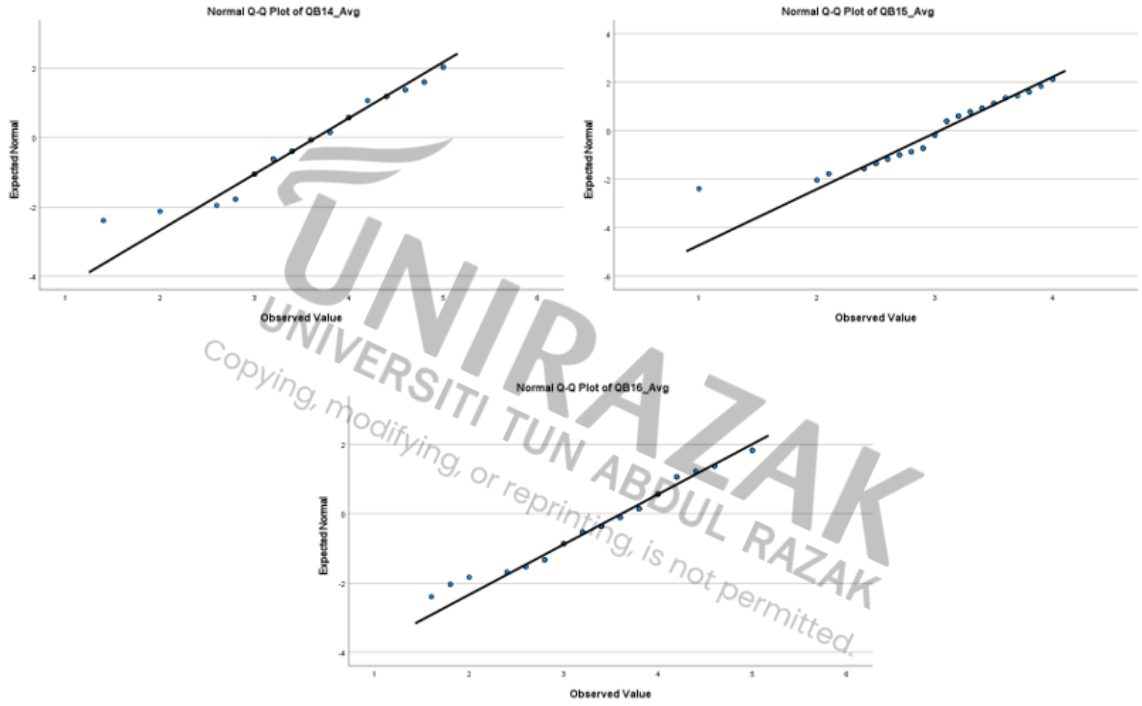


Figure 4.1.1

The above figures 4.1.1, shows the Normal Q-Q plot for Independent and Dependent Variables - Tests of Normality

4.2 Section A: Respondents Profile

Frequency table below display the values of a variable, weighted with the number of occurrences of each single value. In addition, percentages are displayed.

Frequency Table				
1. Gender	Frequency	Percent	Valid Percent	Cumulative Percent
Female	61	51.7	51.7	51.7
Male	57	48.3	48.3	100
Total	118	100	100	
2. Age	Frequency	Percent	Valid Percent	Cumulative Percent
Below 30	11	9.3	9.3	9.3
31 - 40	51	43.2	43.2	52.5
41 - 50	37	31.4	31.4	83.9
Above 50	19	16.1	16.1	100
Total	118	100	100	
3. Academic	Frequency	Percent	Valid Percent	Cumulative Percent
Secondary/High school graduate/Diploma	15	12.7	12.7	12.7
Bachelor' Degree	50	42.4	42.4	55.1
Post Graduate/Professional	53	44.9	44.9	100
Total	118	100	100	
4. Working Experience	Frequency	Percent	Valid Percent	Cumulative Percent
Below 5 years	7	5.9	5.9	5.9
5 - 10 years	21	17.8	17.8	23.7
10 - 20 years	51	43.2	43.2	66.9
Above 20 years	39	33.1	33.1	100
Total	118	100	100	
5. Monthly Income	Frequency	Percent	Valid Percent	Cumulative Percent
Below RM5,000	30	25.4	25.4	25.4
RM5,001 - RM10,000	54	45.8	45.8	71.2
RM10,001 - RM20,000	23	19.5	19.5	90.7
Above RM20,000	11	9.3	9.3	100
Total	118	100	100	
6. Employment Rank	Frequency	Percent	Valid Percent	Cumulative Percent
Clerical	5	4.2	4.2	4.2
Executive	45	38.1	38.1	42.4
Management	40	33.9	33.9	76.3
Senior Management	28	23.7	23.7	100
Total	118	100	100	

Table 4.2.1

The table is showing the output of the Statistics. This table displays how many valid cases (N) were processed and how many cases had missing values for each of our variables. Since we have no missing values, the number of valid cases is the full 118 respondents for the six variables as per below.

Statistics Table							
		QA1_Gender	QA2_Age	QA3_Academic	QA4_Work	QA5_Income	QA6_Rank
N	Valid	118	118	118	118	118	118
	Missing	0	0	0	0	0	0
Minimum		1	1	2	1	1	1
Maximum		2	4	4	4	4	4

Table 4.2.2

4.3 Section B: General Opinion

7. Foreign Direct Investments (FDI) has benefitted Malaysia.				
	Frequency	Percent	Valid Percent	Cumulative Percent
Strongly disagree	2	1.7	1.7	1.7
Disagree	1	0.8	0.8	2.5
Neutral	25	21.2	21.2	23.7
Agree	52	44.1	44.1	67.8
Strongly agree	38	32.2	32.2	100
Total	118	100	100	

8. The Malaysian economy has always been dependent on Foreign DirectInvestment (FDI).				
	Frequency	Percent	Valid Percent	Cumulative Percent
Strongly disagree	4	3.4	3.4	3.4
Disagree	11	9.3	9.3	12.7
Neutral,	51	43.2	43.2	55.9
Agree	41	34.7	34.7	90.7
Strongly agree	11	9.3	9.3	100
Total	118	100	100	

9. The pandemic has resulted in significant global social and economic disruption.				
	Frequency	Percent	Valid Percent	Cumulative Percent
Strongly disagree	4	3.4	3.4	3.4
Disagree	1	0.8	0.8	4.2
Neutral,	10	8.5	8.5	12.7
Agree	46	39	39	51.7
Strongly agree	57	48.3	48.3	100
Total	118	100	100	

Table 4.3.1

10. What would you strongly suggest during the Covid-19 pandemic?					
		Frequency	Percent	Valid Percent	Cumulative Percent
Facemask	Strongly disagree	6	5.1	5.1	5.1
	Neutral,	10	8.5	8.5	13.6
	Agree	27	22.9	22.9	36.4
	Strongly agree	75	63.6	63.6	100.0
	Total	118	100	100	
Sanitisers	Strongly disagree	4	3.4	3.4	3.4
	Neutral,	23	19.5	19.5	22.9
	Agree	38	32.2	32.2	55.1
	Strongly agree	53	44.9	44.9	100
	Total	118	100	100	
Exercise	Strongly disagree	4	3.4	3.4	3.4
	Disagree	3	2.5	2.5	5.9
	Neutral,	53	44.9	44.9	50.8
	Agree	36	30.5	30.5	81.4
	Strongly agree	22	18.6	18.6	100
	Total	118	100	100	
Therapy	Strongly disagree	9	7.6	7.6	7.6
	Disagree	9	7.6	7.6	15.3
	Neutral,	42	35.6	35.6	50.8
	Agree	33	28	28	78.8
	Strongly agree	25	21.2	21.2	100
	Total	118	100	100	
WFH	Strongly disagree	6	5.1	5.1	5.1
	Disagree	3	2.5	2.5	7.6
	Neutral,	27	22.9	22.9	30.5
	Agree	49	41.5	41.5	72
	Strongly agree	33	28	28	100
	Total	118	100	100	
FoodSupply	Strongly disagree	7	5.9	5.9	5.9
	Disagree	16	13.6	13.6	19.5
	Neutral,	53	44.9	44.9	64.4
	Agree	33	28	28	92.4
	Strongly agree	9	7.6	7.6	100
	Total	118	100	100	
Utility	Strongly disagree	9	7.6	7.6	7.6
	Disagree	7	5.9	5.9	13.6
	Neutral,	40	33.9	33.9	47.5
	Agree	41	34.7	34.7	82.2
	Strongly agree	21	17.8	17.8	100
	Total	118	100	100	
Moratorium	Strongly disagree	4	3.4	3.4	3.4
	Disagree	9	7.6	7.6	11
	Neutral,	42	35.6	35.6	46.6
	Agree	36	30.5	30.5	77.1
	Strongly agree	27	22.9	22.9	100
	Total	118	100	100	
Allowance	Strongly disagree	3	2.5	2.5	2.5
	Disagree	8	6.8	6.8	9.3
	Neutral,	39	33.1	33.1	42.4
	Agree	45	38.1	38.1	80.5
	Strongly agree	23	19.5	19.5	100
	Total	118	100	100	
Vaccination	Strongly disagree	6	5.1	5.1	5.1
	Disagree	2	1.7	1.7	6.8
	Neutral,	22	18.6	18.6	25.4
	Agree	39	33.1	33.1	58.5
	Strongly agree	49	41.5	41.5	100
	Total	118	100	100	

Table 4.3.2

11. The Exchange Rate and Foreign Direct Investment (FDI) are positively correlated.				
	Frequency	Percent	Valid Percent	Cumulative Percent
Disagree	3	2.5	2.5	2.5
Neutral,	30	25.4	25.4	28
Agree	61	51.7	51.7	79.7
Strongly agree	24	20.3	20.3	100
Total	118	100	100	

12. The Exchange Rate and Foreign Direct Investment (FDI) are negativelycorrelated.				
	Frequency	Percent	Valid Percent	Cumulative Percent
Strongly disagree	15	12.7	12.7	12.7
Disagree	38	32.2	32.2	44.9
Neutral,	44	37.3	37.3	82.2
Agree	20	16.9	16.9	99.2
Strongly agree	1	0.8	0.8	100
Total	118	100	100	

13. Foreign Direct Investment (FDI) and Covid-19 are affecting the exchange rate movement in Malaysia.				
	Frequency	Percent	Valid Percent	Cumulative Percent
Disagree	2	1.7	1.7	1.7
Neutral,	22	18.6	18.6	20.3
Agree	61	51.7	51.7	72
Strongly agree	33	28	28	100
Total	118	100	100	

Table 4.3.3

The above frequency tables (4.3.1, 4.3.2 & 4.3.3) show the summary of respondent's general opinion based on questionnaires under section B.

The percentage of results is from total participants, which is 118 respondents. These opinions are on scaling format as below:

Choose between 1-5, where 1 = Strongly disagree, 2 = Disagree, 3 = Neutral, 4 = Agree, and 5 = Strongly agree

4.4 Section C: Research Question Analysis

The below frequency tables (4.4.1- 4.4.4) show the summary of respondents under section C which refers to the research question analysis. This section will be contributed to the correlations test in the following part.

14. Foreign Direct Investment (FDI) affects the Exchange Rate Movements in Malaysia from the following factors:

		Frequency	Percent	Valid Percent	Cumulative Percent
GDP	Strongly disagree	1	0.8	0.8	0.8
	Disagree	1	0.8	0.8	1.7
	Neutral,	30	25.4	25.4	27.1
	Agree	68	57.6	57.6	84.7
	Strongly agree	18	15.3	15.3	100
	Total	118	100	100	
International Reserves	Strongly disagree	1	0.8	0.8	0.8
	Disagree	3	2.5	2.5	3.4
	Neutral,	52	44.1	44.1	47.5
	Agree	52	44.1	44.1	91.5
	Strongly agree	10	8.5	8.5	100
	Total	118	100	100	
		Frequency	Percent	Valid Percent	Cumulative Percent
Government debts	Strongly disagree	1	0.8	0.8	0.8
	Disagree	2	1.7	1.7	2.5
	Neutral,	51	43.2	43.2	45.8
	Agree	52	44.1	44.1	89.8
	Strongly agree	12	10.2	10.2	100
	Total	118	100	100	
		Frequency	Percent	Valid Percent	Cumulative Percent
Government budget	Strongly disagree	2	1.7	1.7	1.7
	Disagree	2	1.7	1.7	3.4
	Neutral,	49	41.5	41.5	44.9
	Agree	51	43.2	43.2	88.1
	Strongly agree	14	11.9	11.9	100
	Total	118	100	100	
		Frequency	Percent	Valid Percent	Cumulative Percent
Government Incentives	Strongly disagree	1	0.8	0.8	0.8
	Disagree	9	7.6	7.6	8.5
	Neutral,	40	33.9	33.9	42.4
	Agree	53	44.9	44.9	87.3
	Strongly agree	15	12.7	12.7	100
	Total	118	100	100	

Table 4.4.1

15. To what extend you believe the pandemic Covid-19 affected Exchange ratemovement in Malaysia?					
		Frequency	Percent	Valid Percent	Cumulative Percent
Increase in economic growth	Strongly disagree	17	14.4	14.4	14.4
	Disagree	61	51.7	51.7	66.1
	Neutral,	22	18.6	18.6	84.7
	Agree	9	7.6	7.6	92.4
	Strongly agree	9	7.6	7.6	100
	Total	118	100	100	
Decline in economic growth	Strongly disagree	8	6.8	6.8	6.8
	Disagree	10	8.5	8.5	15.3
	Neutral,	22	18.6	18.6	33.9
	Agree	63	53.4	53.4	87.3
	Strongly agree	15	12.7	12.7	100
	Total	118	100	100	
Increase in medical expenditure	Strongly disagree	5	4.2	4.2	4.2
	Disagree	5	4.2	4.2	8.5
	Neutral,	16	13.6	13.6	22
	Agree	47	39.8	39.8	61.9
	Strongly agree	45	38.1	38.1	100
	Total	118	100	100	
Decrease in medical expenditure	Strongly disagree	24	20.3	20.3	20.3
	Disagree	57	48.3	48.3	68.6
	Neutral,	25	21.2	21.2	89.8
	Agree	8	6.8	6.8	96.6
	Strongly agree	4	3.4	3.4	100
	Total	118	100	100	
Increase in industry growth	Strongly disagree	18	15.3	15.3	15.3
	Disagree	54	45.8	45.8	61
	Neutral,	28	23.7	23.7	84.7
	Agree	12	10.2	10.2	94.9
	Strongly agree	6	5.1	5.1	100
	Total	118	100	100	
Reduce in industry growth	Strongly disagree	4	3.4	3.4	3.4
	Disagree	9	7.6	7.6	11
	Neutral,	24	20.3	20.3	31.4
	Agree	66	55.9	55.9	87.3
	Strongly agree	15	12.7	12.7	100
	Total	118	100	100	
Increase in Foreign Direct Investment	Strongly disagree	18	15.3	15.3	15.3
	Disagree	43	36.4	36.4	51.7
	Neutral,	40	33.9	33.9	85.6
	Agree	13	11	11	96.6
	Strongly agree	4	3.4	3.4	100
	Total	118	100	100	
Decline in Foreign Direct Investment	Strongly disagree	6	5.1	5.1	5.1
	Disagree	9	7.6	7.6	12.7
	Neutral,	46	39	39	51.7
	Agree	45	38.1	38.1	89.8
	Strongly agree	12	10.2	10.2	100
	Total	118	100	100	
Increase in stimulus packages	Strongly disagree	4	3.4	3.4	3.4
	Disagree	14	11.9	11.9	15.3
	Neutral,	32	27.1	27.1	42.4
	Agree	46	39	39	81.4
	Strongly agree	22	18.6	18.6	100
	Total	118	100	100	
Decrease in stimulus packages	Strongly disagree	19	16.1	16.1	16.1
	Disagree	40	33.9	33.9	50
	Neutral,	41	34.7	34.7	84.7
	Agree	14	11.9	11.9	96.6
	Strongly agree	4	3.4	3.4	100
	Total	118	100	100	

Table 4.4.2

16. The exchange rate movement in Malaysia is affected by Foreign DirectInvestment (FDI) and Covid-19 pandemic due to the following:					
		Frequency	Percent	Valid Percent	Cumulative Percent
Money Supply	Strongly disagree	1	0.8	0.8	0.8
	Disagree	5	4.2	4.2	5.1
	Neutral,	41	34.7	34.7	39.8
	Agree	56	47.5	47.5	87.3
	Strongly agree	15	12.7	12.7	100
	Total	118	100	100	
Interest Rate	Strongly disagree	2	1.7	1.7	1.7
	Disagree	5	4.2	4.2	5.9
	Neutral,	32	27.1	27.1	33.1
	Agree	64	54.2	54.2	87.3
	Strongly agree	15	12.7	12.7	100
	Total	118	100	100	
Inflation Rate	Strongly disagree	2	1.7	1.7	1.7
	Disagree	5	4.2	4.2	5.9
	Neutral,	35	29.7	29.7	35.6
	Agree	56	47.5	47.5	83.1
	Strongly agree	20	16.9	16.9	100
	Total	118	100	100	
Efficient Pandemic Management by the Government	Strongly disagree	4	3.4	3.4	3.4
	Disagree	8	6.8	6.8	10.2
	Neutral,	42	35.6	35.6	45.8
	Agree	48	40.7	40.7	86.4
	Strongly agree	16	13.6	13.6	100
	Total	118	100	100	
Attractive Government Investment policies	Strongly disagree	5	4.2	4.2	4.2
	Disagree	12	10.2	10.2	14.4
	Neutral,	47	39.8	39.8	54.2
	Agree	40	33.9	33.9	88.1
	Strongly agree	14	11.9	11.9	100
	Total	118	100	100	

Table 4.4.3

17. What strategic plans should the government implement to overcome the Foreign Direct Investments (FDI) and covid-19 pandemic affecting Malaysia's exchange rate movement?

		Frequency	Percent	Valid Percent	Cumulative Percent
Initiate to retain and attract new investments	Strongly disagree	3	2.5	2.5	2.5
	Disagree	4	3.4	3.4	5.9
	Neutral,	22	18.6	18.6	24.6
	Agree	61	51.7	51.7	76.3
	Strongly agree	28	23.7	23.7	100
	Total	118	100	100	
Strategies to sustain long term investments from global leading players	Strongly disagree	3	2.5	2.5	2.5
	Disagree	3	2.5	2.5	5.1
	Neutral,	25	21.2	21.2	26.3
	Agree	55	46.6	46.6	72.9
	Strongly agree	32	27.1	27.1	100
	Total	118	100	100	
To be competitive within the Asian region	Strongly disagree	3	2.5	2.5	2.5
	Disagree	5	4.2	4.2	6.8
	Neutral,	33	28	28	34.7
	Agree	49	41.5	41.5	76.3
	Strongly agree	28	23.7	23.7	100
	Total	118	100	100	
Fully efficient implement Covid-19 pandemic management team	Strongly disagree	2	1.7	1.7	1.7
	Disagree	5	4.2	4.2	5.9
	Neutral,	22	18.6	18.6	24.6
	Agree	51	43.2	43.2	67.8
	Strongly agree	38	32.2	32.2	100
	Total	118	100	100	
Expedite Covid-19 vaccination schedules	Strongly disagree	2	1.7	1.7	1.7
	Disagree	2	1.7	1.7	3.4
	Neutral,	22	18.6	18.6	22
	Agree	46	39	39	61
	Strongly agree	46	39	39	100
	Total	118	100	100	
Expedite Covid-19 vaccination schedules	Strongly disagree	3	2.5	2.5	2.5
	Disagree	4	3.4	3.4	5.9
	Neutral,	21	17.8	17.8	23.7
	Agree	46	39	39	62.7
	Strongly agree	44	37.3	37.3	100
	Total	118	100	100	
All dependent homes should be adopted by the Government	Strongly disagree	3	2.5	2.5	2.5
	Disagree	17	14.4	14.4	16.9
	Neutral,	55	46.6	46.6	63.6
	Agree	35	29.7	29.7	93.2
	Strongly agree	8	6.8	6.8	100
	Total	118	100	100	

Table 4.4.4

4.5 Section D: Others, please specify

Question 18, which was considered under section D, allowed respondents to give their feedback or suggestions based on the research title. 12 out of 118 respondents, have given their personal views, which show in figure 4.5.1 (as chart form) and table 4.5.1 the details of view as below:

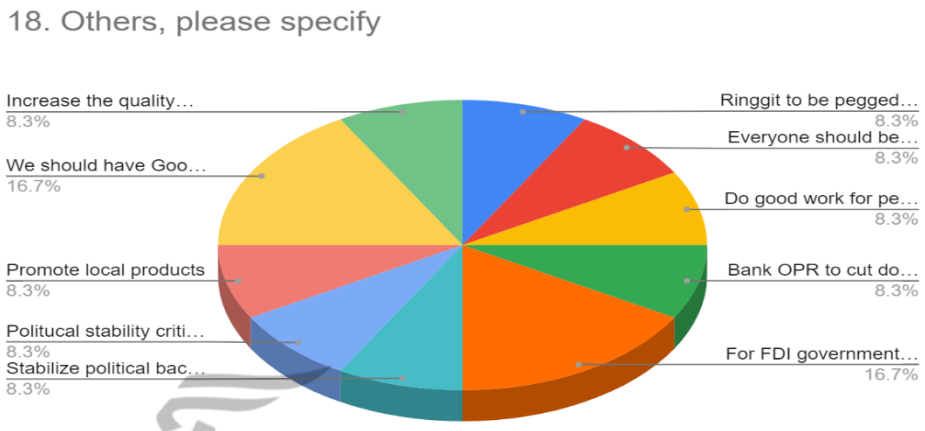


Figure 4.5.1

ID	18. Others, please specify
2	Ringgit to be pegged during pandemic crisis
11	Everyone should be more careful, it better to have lockdown 2.0 due the cases been increased
12	Do good work for people
54	Bank OPR to cut down further to boost for spending rather than savings.
65	For FDI government should provide open, transparent and dependable conditions.
82	For FDI government should provide open, transparent and dependable conditions.
83	Stabilize political background.
84	Politucal stability critically necessary
85	Promote local products
86	We should have Good Governance@Goverment without any Political Agenda to transform and over ome this Pandemic effectively without seeing race and parties.
92	We should have Good Governance@Goverment without any Political Agenda to transform and over ome this Pandemic effectively without seeing race and parties.
101	Increase the quality of education in order to bring up the younger generations for better understanding of the current and future situations

Table 4.5.1

4.6 Pearson's Correlation Analysis

Correlations

		QB14_Avg	QB15_Avg
QB14_Avg	Pearson Correlation	1	.388**
	Sig. (2-tailed)		<.001
	N	118	118
QB15_Avg	Pearson Correlation	.388**	1
	Sig. (2-tailed)	<.001	
	N	118	118

**. Correlation is significant at the 0.01 level (2-tailed).

Table 4.6.1

In this example, the Pearson correlation, r is 0.388 and 1 indicates a perfect positive linear relationship between variables. As resulted correlation is significant at the 0.01 level.

A Pearson product-moment correlation was run to determine the relationship between FDI and Covid-19 affecting exchange rate movement. There was a strong, positive correlation between these variables, which was statistically significant (r = 0.388, n = 118, p = <.001).

The Pearson Correlation Coefficient is used to identify the strength of a linear interrelation between two variables; we don't need to measure if there is no linear relation between two variables. It's also called a product-moment correlation coefficient (PMCC) and denoted by "r" and is frequently used as a statistical measure. The correlation coefficient for continuous data scales lies between -1 to +1.

If the value is near to positive 1, this means there is a perfect positive interrelation between the two variables; it indicates that if one variable increases positively, the other variable also increases in the same direction. On the other side, if the value is near to negative 1, this means that there is a perfect negative correlation. This indicates that if one variable increases positively, the other one will decrease perfectly in the opposite direction and vice versa. If the value is 0, then there is no interrelation between the two variables. Formula,

$$\text{Pearson Correlation Coefficient} = \rho(x,y) = \Sigma[(xi - \bar{x}) * (yi - \bar{y})] / (\sigma x * \sigma y)$$

Where, $\bar{x}$ = Mean of x variable $\bar{y}$ = Mean of y variable

4.7 Multiple Regression Analysis

Descriptive Statistics

	Mean	Std. Deviation	N
QB16_Avg	3.6119	0.6910	118
QB14_Avg	3.6525	0.6190	118
QB15_Avg	3.0400	0.4321	118

Table 4.7.1

The above table 4.7.1 shows the descriptive statistics performed based on two independent variables (FDI & Covid-19) and one dependent variable (Exchange Rate Movement).

Correlations

		QB16_Avg	QB14_Avg	QB15_Avg
Pearson Correlation	QB16_Avg	1.000	.365	.427
	QB14_Avg	.365	1.000	.388
	QB15_Avg	.427	.388	1.000
Sig. (1-tailed)	QB16_Avg	.	<.001	<.001
	QB14_Avg	.000	.	.000
	QB15_Avg	.000	.000	.
N	QB16_Avg	118	118	118
	QB14_Avg	118	118	118
	QB15_Avg	118	118	118

Table 4.7.2

The above table 4.7.2 shows the correlations between FDI, Covid-19 and Exchange Rate Movement.

The below table 4.7.3 given, gives the model summary for the three hypothesis that were selected for this research project.

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.479[a]	.229	.216	0.6120

a. Predictors: (Constant), QB15_Avg, QB14_Avg

b. Dependent Variable: QB16_Avg

Table 4.7.3

The above table presents findings related to three research projects. This model was related to influence of the affecting exchange rate movements in Malaysia. The evaluation of influence of transactional of exchange rate, the value of R square was 22.9 per cent, which means that around 23 per cent change in exchange rate because of the FDI and Covid-19 pandemic.

The next table is related to the analysis of variance. From this table, value of F statistics and level of significance is important. For there search hypothesis, that were mentioned earlier, findings are given here in table 4.6.4.

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	12.793	2	6.397	17.079	<.001[b]
	Residual	43.070	115	.375		
	Total	55.863	117			

a. Dependent Variable: QB16_Avg

b. Predictors: (Constant), QB15_Avg, QB14_Avg

Table 4.7.4

Table 4.7.4 presented value of F statistics and level of significance for the selected models. It can be seen that for all the three models (Exchange Rate - FDI - Covid-19 Pandemic). Value of F statistics and level of significance were as per the required norms. So, research decided to proceed further with the analysis of the findings of the research project.

In the next step, the analysis of evaluated the value of coefficients for these models. The values are given in table 4.7.5.

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	1.023	.447		2.290	.024
	QB14_Avg	.262	.099	.235	2.647	.009
	QB15_Avg	.536	.142	.335	3.774	<.001

Table 4.7.5

Table4.7.5 presents coefficients of FDI and Covid-19 models. According to the modal in which independent variable is FDI and Covid-19 Pandemic and dependent variable is Exchange Rate Movement. From the above reading for FDIis23.5% significant and Covid-19 is 33.5% positive influence on the exchange rate movements a significance level less than 0.01. Thus, our hypothesis is accepted. It can be seen in the above table that FDI and Covid-19 have positive influence on the affecting exchange rate movement in Malaysia. As a ***large positive correlation,*** the below figures depict a correlation of almost +1. The scatterplots are nearly plotted on the straight line. The slope is positive, which means that if one variable increases, the other variable also increases, showing a positive linear line. This denotes that a change in one variable is directly proportional to the change in the other variable. As summary of a large positive correlation would be – as Exchange Rate Movements grow, so do FDI and Covid-19.

Below figures (charts) were extracted from SPSS from Multiple Regression Analysis based on the Independent and Dependent Variables

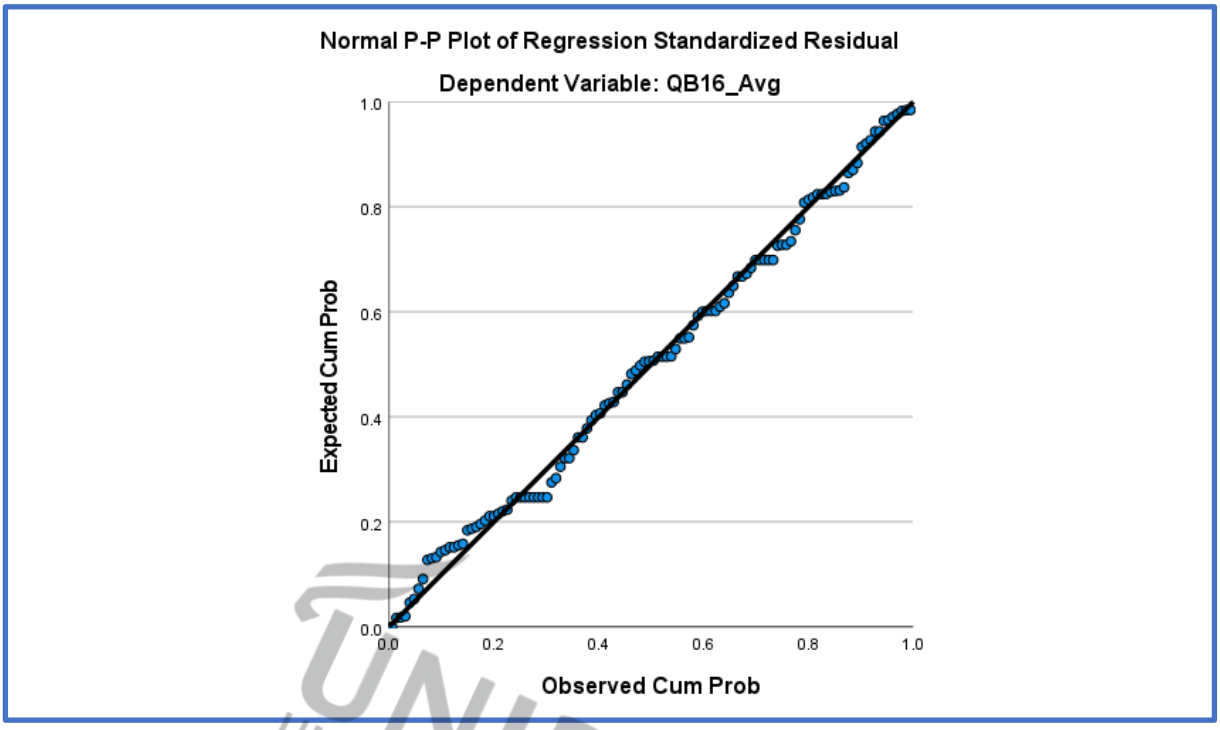


Figure 4.7.6

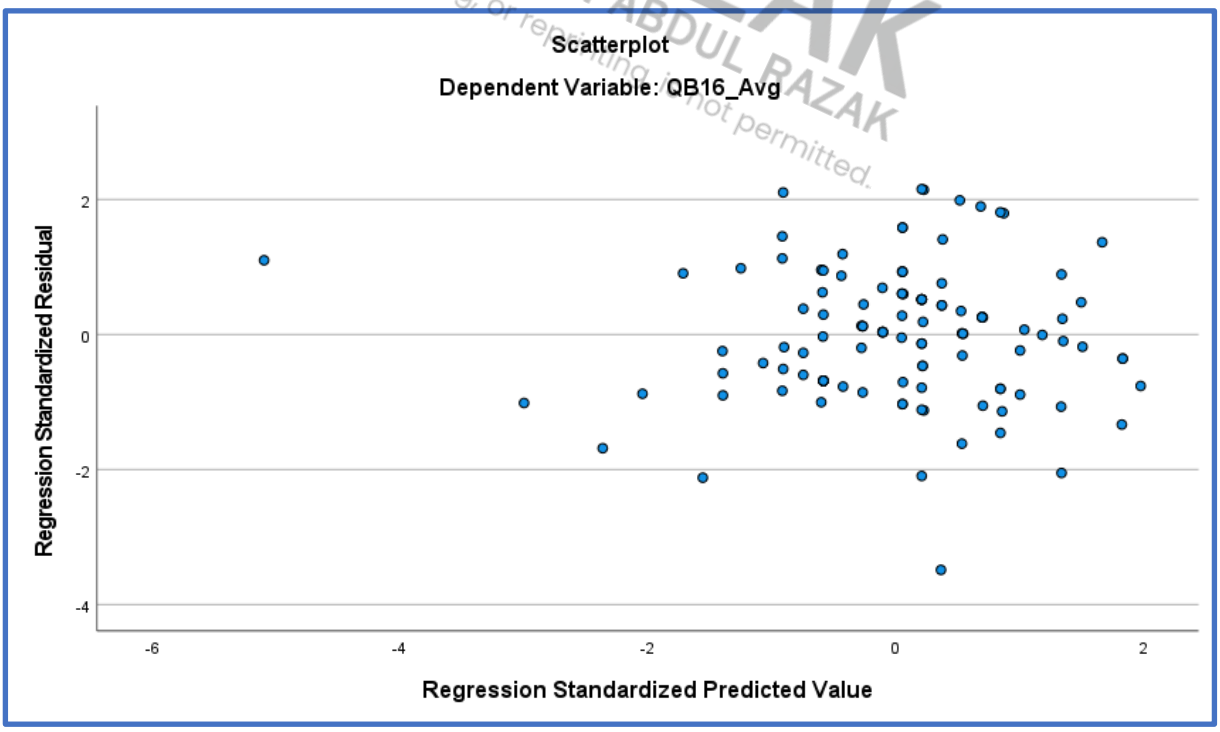


Figure 4.7.7

4.8 The Multi-collinearity Test

Based on the results of Multi-collinearity test with SPSS Location Statistics for MAC version 24, refers to the value of *Tolerance* than VIF.

Table 4.8.1: Multi-collinearity Test (Coefficient)

Model	Collinearity Statistics	
	Tolerance	**VIF**
(Constant) The foreign direct investment (FDI) and Pandemic Covid-19 have a significant relationship to foreign exchange are mobility in Malaysia		
The foreign direct investment (FDI) have a significant relationship to foreign exchange are mobility in Malaysia	0.849	1.178
The Pandemic Covid-19 have a significant relationship to foreign exchange are mobility in Malaysia	0.849	1,178

Table 4.8.1 that refers to the two independent variables that were examined found that all a value Tolerance and VIF is between 0.1 and 10.0 then there is no Multi-collinearity problem for each of the independent variables.

4.9. Hypothesis Testing Summary

In these cases, the influence was positively significant. Thus, the provided research is sufficient basis to accept alternative hypothesis. This can be seen here under table 4.9.1:

Summary of Hypotheses

Hypotheses	Variable	Significant Level	Hypothesis
H1	Perceived factors of Foreign Direct Investment (FDI) are positively related to exchange rate movement in Malaysia	.009	Accepted alternate hypothesis (H1)
H2	Perceived factors of pandemic Covid-19 is positively related to exchange rate movement in Malaysia	.000	Accepted alternate hypothesis (H1)
H3	Perceived factors of Foreign Direct Investment (FDI) and pandemic Covid-19 are positively related to exchange rate movement in Malaysia	1.000	Accepted alternate hypothesis (H1)

Table 4.9.1

Table 4.9.1 displays the Summary of Hypotheses for all independent variables that have had their significance level assessed in relation to dependent variable. Because all of the variables are significant at p-value 0.000, it is possible to conclude that all of the analysed data are accepted and all null hypotheses are rejected based on the SPSS output. As a result, all of the independent variables in this study have a significant impact on the dependent variable.

4.10. Discussion of Results

In this chapter, it's presented the result and findings of the research project. The chapter started with analysis of the frequency, correlation and regression of the research project, which was followed by presentation of contextual findings of the research. In addition to these, researcher presented primary findings (related to research aim and objectives) along with discussion on these findings and supported by the secondary data.

4.11. Secondary Data Collection

The additional secondary data collection is to support the research to cover the impact of market of Malaysia and the proven result according to the authorities and regulators. It also serves as a comparative analysis to the impact of the variables.

Source: Department of Statistics, Malaysia

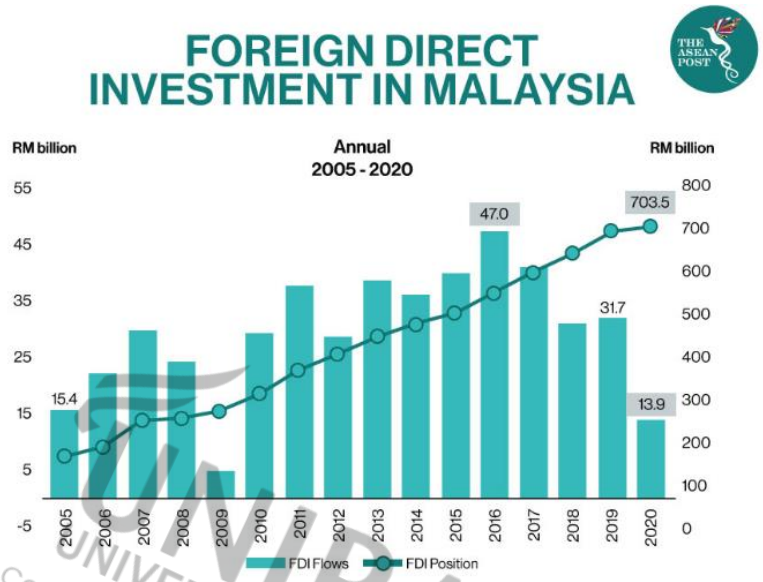


Figure 4.11.1

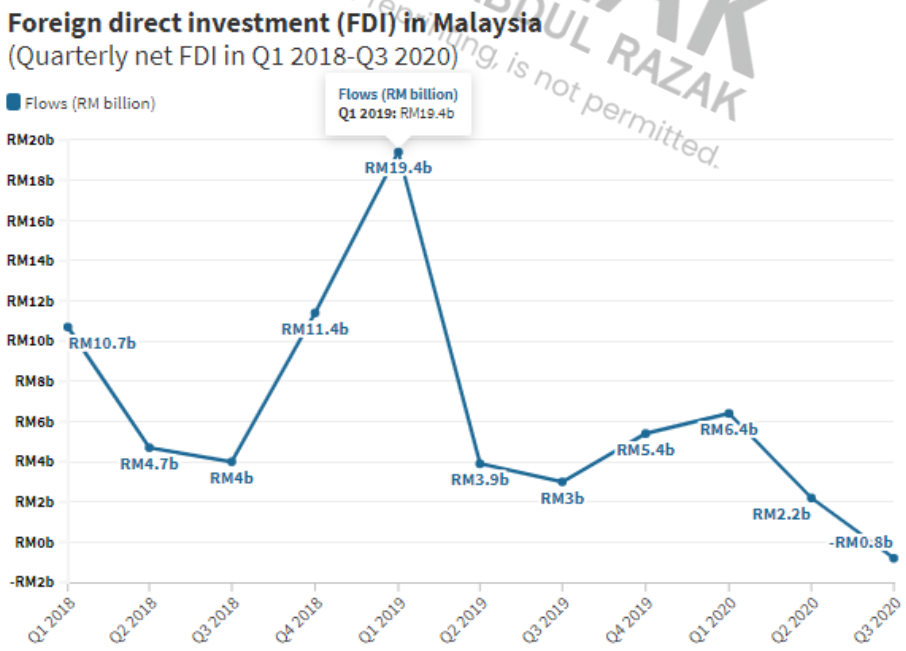


Figure 4.11.2

Source: Malaysia Economic Statistics Review-Vol_8_2020

The Asian Development Bank (ADB) forecasted that economic growth of Developing Asia to contract 0.4 per cent in 2020. The economies in all sub-regions are expected to be remained sluggish except for East Asia which is projected to grow 1.6 per cent in 2020 as China recovers more quickly than expected. In 2021, the growth of Developing Asia is forecasted to rebound to 6.8 per cent with the level of GDP will be substantially below pre-COVID-19 expectations. As for Southeast Asia, the economy is forecast to shrink 4.4 per cent in 2020 and grew 5.2 per cent in 2021. Meanwhile, Malaysia's economy outlook is projected to fall by 6.0 per cent this year and bounce back by 7.0 per cent in 2021 (**Table 1**).

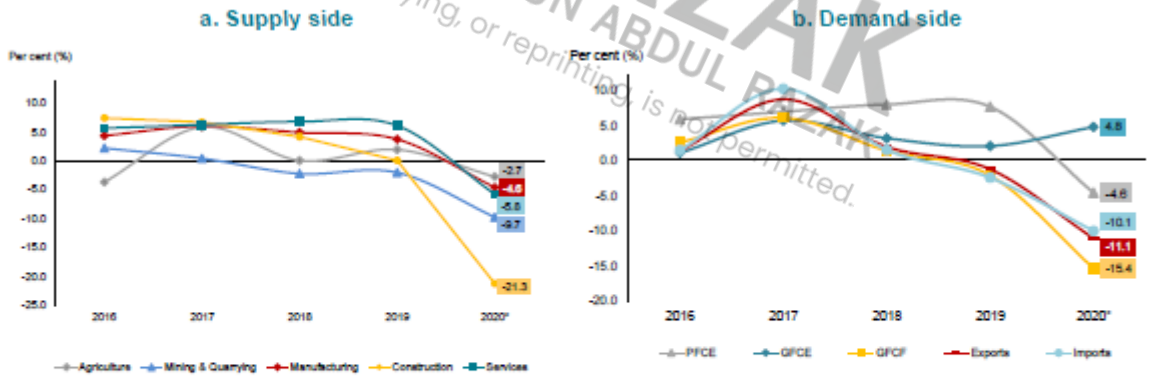
Table 1: GDP Growth Rate in Developing Asia by Sub-regions, 2019 - 2021

	GDP growth (%)		
	2019	2020	2021*
Central Asia	**4.9**	**-2.1**	**3.8**
Kazakhstan	4.5	-3.2	2.8
East Asia	**5.4**	**1.6**	**7.0**
Hong Kong, China	-1.2	-5.5	5.1
People's Republic of China	6.1	2.1	7.7
Republic of Korea	2.0	-0.9	3.3
Taipei, China	3.0	1.7	3.3
South Asia	**4.3**	**-6.1**	**7.2**
India	4.2	-8.0	8.0
Southeast Asia	**4.4**	**-4.4**	**5.2**
Indonesia	5.0	-2.2	4.5
Malaysia	4.3	-6.0	7.0
Philippines	6.0	-8.5	6.5
Singapore	0.7	-6.2	5.1
Thailand	2.4	-7.8	4.0
Viet Nam	7.0	2.3	6.1
The Pacific	**3.5**	**-6.1**	**1.3**
Developing Asia	**5.1**	**-0.4**	**6.8**
Developing Asia excluding the NIEs	**5.6**	**-0.3**	**7.2**

Source: Asian Development Outlook
Note : * forecast

Figure 4.11.3

Chart 2: Real GDP growth, 2016-2020*



Source: Department of Statistics, Malaysia

Notes:
The real GDP growth or percentage change of the preceding year is calculated based on GDP at constant prices 2015.
(*) Percentage change from Sum of 3 quarters
GFCE: Government Final Consumption Expenditure
GFCF: Gross Fixed Capital Formation
PFCE: Private Final Consumption Expenditure

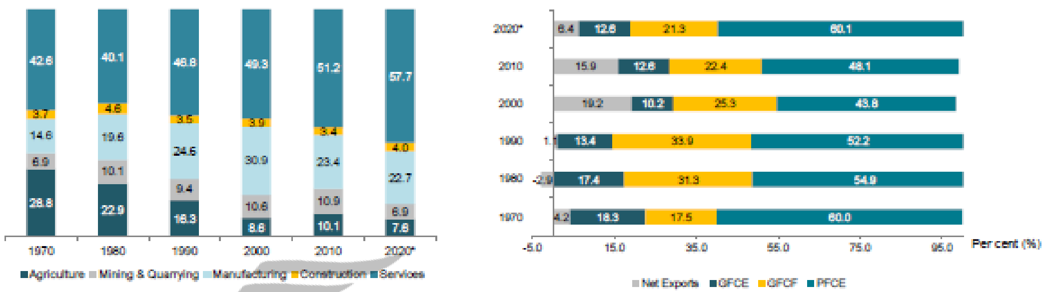
Figure 4.11.4

Economy Growth

The year 2020 comes to the end and the COVID-19 pandemic has adversely impacted the economy across the globe including Malaysia. Prior to the COVID-19 pandemic, Malaysia's economy rose by 4.8 per cent per annum for a period of 2015 to 2019. Based on nine months performance in 2020, the country's economy decelerated to negative 6.4 per cent as compared to a positive growth of 4.3 per cent in 2019. During the period, the share of Services and Construction sectors expanded to 57.7 per cent and 4.0 per cent respectively while the share of Mining & Quarrying and Agriculture reduced (**Chart 1**). The Manufacturing sector which was the second contributor to economy sustained its share above 20 per cent. On the demand side, Private Final Consumption Expenditure (PFCE) or household spending increased its share to 60.1 per cent while share of Gross Fixed Capital Expenditure (GFCE) or domestic investment hovering 20 per cent to the total economy. In terms of total trade, the share to GDP accounted for 115.6 per cent (9 months of 2020) against 120.4 per cent in 2019. Openness to trade (reflected in total trade to GDP) and investment (reflected by GFCF) has been the instrument of employment creation and income growth in Malaysia.

Chart 1: Malaysia's Economic Structure in Decades

a. Supply side **b. Demand side**



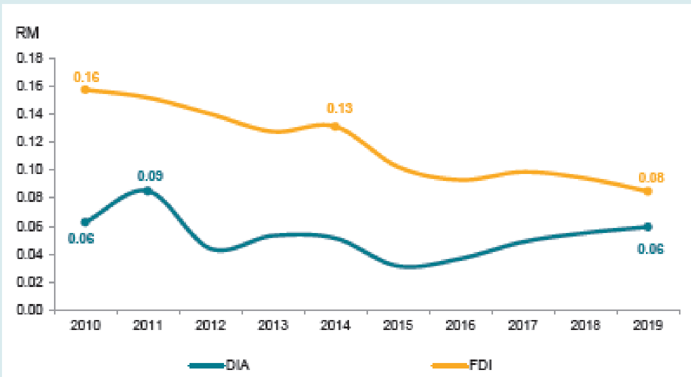
Source: Department of Statistics, Malaysia

Notes:
A total economic structure may not add up to 100 per cent due to the exclusion of FISIM (1970-2000), import duties and inventory components.
The economic structure is calculated based on GDP at constant prices of various base year.
(*) nine (9) months of 2020
GFCE: Government Final Consumption Expenditure
GFCF: Gross Fixed Capital Formation
PFCE: Private Final Consumption Expenditure

Figure 4.11.5

By looking at the time series shown in **Chart 1a**, the quality of foreign investment that Malaysia requires to assist and compliment the economic growth of the country is still uncertain. Does the current FDI to Malaysia brings in the required quality, i.e. transfer of technology, management and skills enhancement as well as other opportunities? With GDP estimates to be unfavourable in 2020, government may need to find a quick solution in gaining more dynamic investments, plus the COVID-19 pandemic that had just begun late last year may make it more challenging to boost foreign investments into the country. Thus, all the relevant agencies have crucial responsibilities to bring in quality foreign investors that could assist in elevating Malaysia's economy to be back on track.

Chart 1a: Return on Investment (ROI) for FDI and DIA, 2010 – 2019



Source: Department of Statistics, Malaysia

Figure 4.11.6

Supportive Secondary Data Analysis: Impact of Covid-19 reaction to the equity market (KLSE) and currency exchange rate

To illustrate further data from reliable sources were validated for use as secondary data to determine the relationship in the impact of initial Covid-19 reaction to the dynamic behaviour of equity market and currency exchange rate. The purpose was to validate data distribution during outbreak of Coronavirus disease (COVID-19) for KLSE index (example of equity market, sourced from KLSE) and currency exchange rate (sourced from BNM). Therefore, this analysis performed statistical test namely normality test and correlation analysis. The sampling period is starting from January 2020 until March 2020 with total of 63 trading days

Data characteristics of KLSE Index

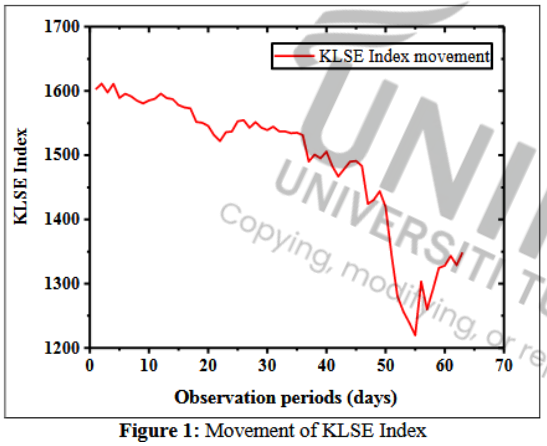


Figure 1: Movement of KLSE Index

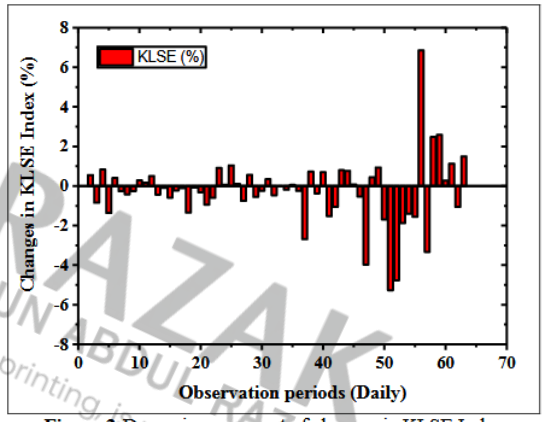


Figure 2: Dynamic movement of changes in KLSE Index

Figure 1 shows changes of KLSE index for each of observation with previous movement value. Figure 2 indicates negative value is significant during peak of outbreak of COVID-19 in March 2020 (around 50th observation periods). The negative value indicates stocks in KLSE experienced decrement in stock price

Statistical test for data normality of changes in KLSE Index data

Table 1: Descriptive statistics

Data distribution characteristic	Statistics value	Standard error
Mean	-0.264	0.215
Skewness	0.345	0.304
Kurtosis	5.880	0.599

Table 1 indicates descriptive statistics for data distribution of changes in KLSE index. Mean is -0.264, skewness is 0.345 and kurtosis is 5.880. These values indicate leptokurtic kurtosis distribution. Next, this also validated the normality characteristics of data distribution using numerical and graphical statistical test.

Table 2: Tests of Normality

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
KLSE_change	.148	62	.002	.867	62	.000

a. Lilliefors Significance Correction

Table 2 shows normality test for changes in KLSE index using Shapiro-Wilk statistical test. The result indicates significant value is 0.000 that is less than alpha 0.05. Therefore, the numerical test indicates the data distribution of changes in KLSE index is not following normal distribution. The findings concluded that data distribution follows non-normal distribution because the existence of outliers.

Data characteristics of currency exchange rate

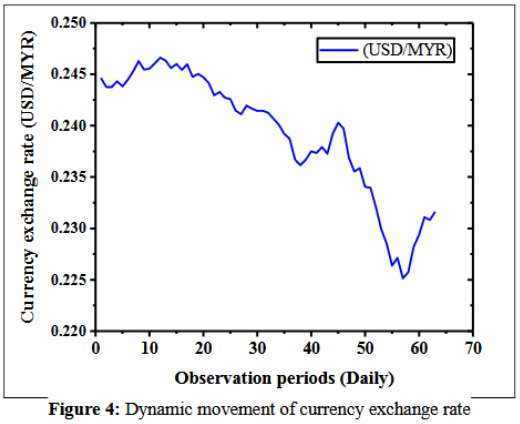


Figure 4: Dynamic movement of currency exchange rate

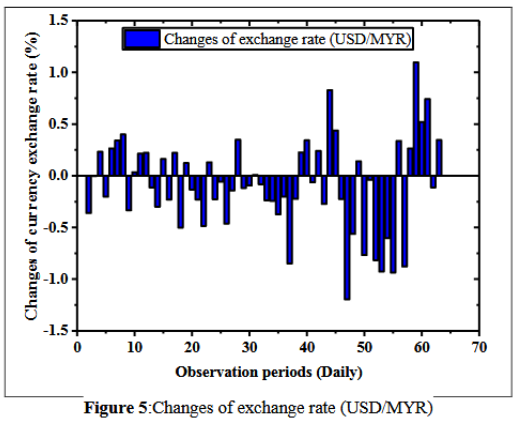


Figure 5:Changes of exchange rate (USD/MYR)

Figure 4 shows the dynamic movement of currency exchange rate during coronavirus disease outbreak period. The initial value of currency exchange (USD/MYR) is 1 Malaysian Ringgit (MYR) is valued at 0.2446 United States Dollar (USD) on 2ndJanuary 2020.

The value of exchange rate keep fluctuated and reach minimum value on 23rdMarch 2020 (57thobservation) with value of 0.2251 USD for each MYR. At minimum point, it is indicating the value of MYR is very weak in term of international currency exchange. This is one of the impact COVID-19 to economic landscape in Malaysia.

Figure 5 shows the dynamic movement of changes for currency exchange rate of USD to MYR. The mean of changes is -0.087% that concluded in average the changes is in negative value because of the COVID-19 pandemic. The outbreak of coronavirus creates an unstable currency exchange that show more negative spike as shown in Figure 5

Statistical test for data normality of changes in currency exchange rate

Table 3: Descriptive statistics for changes of currency exchange rate

Data distribution characteristic	Statistics value	Standard error
Mean	-0.087	0.057
Skewness	-0.106	0.304
Kurtosis	0.360	0.599

Table 3 shows the descriptive statistics that indicates the mean value is -0.087, skewness is -0.106 and kurtosis is 0.360. All three values indicate the data distribution is following normal distribution. Then, this study performed statistical testing using Shapiro-Wilk test to prove the normality distribution.

Table 4: Statistical normality test for changes of currency exchange rate

	Kolmogorov-Smirnov			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Changes of currency exchange rate	.089	62	.200	.982	62	.508

Table 4 shows the statistical normality test for data distribution of changes in currency exchange rate. From Shapiro-Wilk normality test, the probability value is 0.508 that is larger than chosen alpha 0.05.

The findings of this study are described as follows:

1. The selected observation periods are involving January 2020 until March 2020 because of outbreak COVID-19. There are 63 daily observations for KLSE Index and currency exchange rate of one MYR to USD.
2. The outbreak of COVID-19 creates uncomfortable feeling among investors in equity market. Therefore, KLSE index shows significant decrement of index value starting from January 2020 until March 2020. The initial value of KLSE index in January is 1602.5 decreasing to 1348.72 in March 2020. There is decrement of 253.78 point during these three months of COVID-19 outbreak.
3. In the similar manner, the currency exchange rate also shows similar pattern of decrement because of market sentiment. Market sentiment is the general feeling about the climate of the market as expressed by the direction of market prices.The initial currency exchange rate for one MYR is 0.2446 USD, the final observation in March 2020 shows currency exchange rate is 0.2316 USD for each MYR. The decrement of 0.013 USD in currency exchange rate.
4. Next, this study evaluated the associated between two variables namely changes in KLSE Index and currency exchange rate in period of COVID-19 outbreak. Both of these variables show mean of negative value of changes during outbreak of COVID-19. In addition, statistical test proved that both of the variables are affected during COVID-19 outbreak period. The important of this finding will help government body to understand the current condition during COVID-19 outbreak. In addition, the findings will assist policy makers to develop solution in stabilizing economic situation in COVID-19 outbreak.

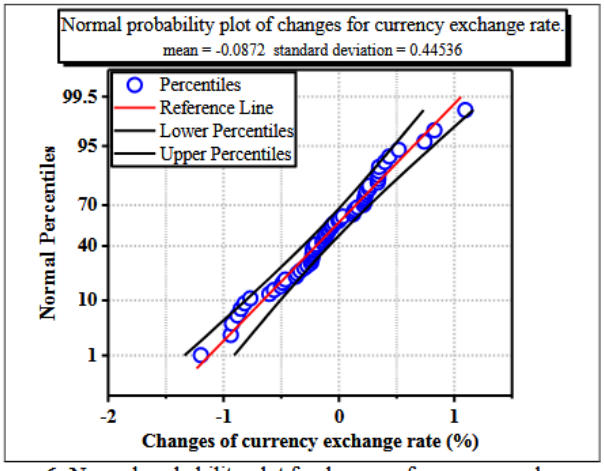


Figure 6: Normal probability plot forchanges of currency exchange rate

Therefore, the data distribution for changes of currency exchange rate follows normal data distribution. In addition, this study performed graphical testing using normal probability plot in Figure 6. The distribution of data is distributed near to normal distribution line. Therefore, data distribution follows normal distribution characteristics.

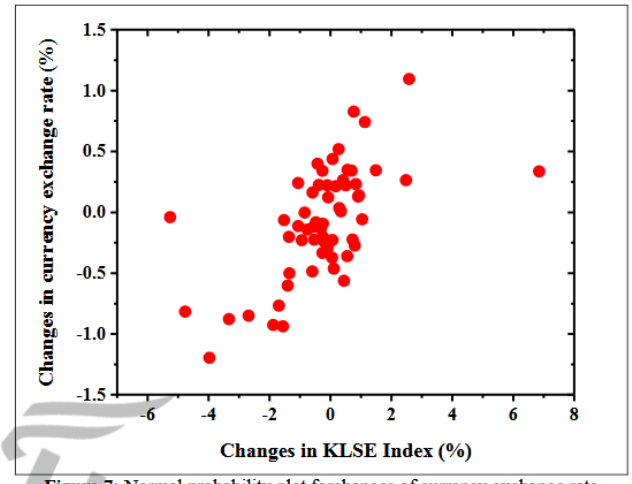


Figure 7: Normal probability plot forchanges of currency exchange rate

Table 5: Non-parametric correlation analysis

Correlation analysis			Changes in currency exchange rate
Spearman rho	KLSE Index Changes	Correlation coefficient	0.575
		Significant value (two-tailed)	0.000
		Number of observation	62
Kendall tau b	KLSE Index Changes	Correlation coefficient	0.401
		Significant value (two-tailed)	0.000
		Number of observation	62

Statistical test of Spearman's rank-order correlation among changes in KLSE Index and currency exchange rate.

This section describes correlation between changes in KLSE index and currency exchange rate. Figure 7 show the scatter plot between these two variables. Then, this analysis performs statistical test using Spearman's rank-order correlation to evaluate the relationship between these two variables. Spearman correlation analysis is non-parametric approach to detect relationship between two variables namely changes in KLSE Index and currency exchange rate.

Table 5 shows two non-parametric correlation analyses namely Spearman rho and Kendall tau b. Both of the non-parametric analysis was selected for variables with non-normal data

distribution. Spearman correlation analysis shows the significant value is 0. 575. This indicates moderate positive relationship between changes of KLSE Index and currency exchange rate. Next, the significant value is 0.000 that is less than chosen alpha 0.05. Therefore, this value rejected null hypothesis of Spearman test. As the conclusion, there is significant and moderate positive monotonic association between changes in KLSE Index and currency exchange rate. Thus, this study validated the statistical findings with performing another non-parametric correlation test namely Kendal Tau-b.

A Kendall's tau-b correlation was run to determine the relationship between changes in KLSE Index and currency exchange rate amongst 63 observation periods. There was a moderate, positive correlation between changes in KLSE Index and currency exchange rate, which was statistically significant ($\tau b = .401$, $p = .000$).

4.12. Summary

Based on the calculated variables, the researcher can obtain a thorough analysis of the data collected and the analysis from the IBM SPSS. The researcher would like to study the relationship of all the IVs towards DV. The researcher also made known which IVs that have significant influence towards the DV. To answer the first research objective, the researcher had conducted the regression analysis to see the coefficient correlation analysis in determining the relationship between the independent variables towards dependent variable. From here, the researcher managed to identify that all the relationship are in good and strong position as the correlations significance, thus the relationships are positively good and strong. To add, all of the IVs are significant (*p*-value) at <0.001. This has indicated that the first Research Objectives and Research Questions are answered. Therefore, with all the above results, the researcher may conclude that the results derived from the study were addressed by both research objectives and research questions in this analysis.

CHAPTER 5

CONCLUSION

5.1 Introduction

After the data was collected and analysed, it was possible to assess the object's reliability, the importance of the factors, and the sample's most prominent factors. As a result, in this chapter, we'll go over the outcomes and discoveries from Chapter 4. Then, depending on the findings of the IBM SPSS results analysis, summarize the results and offer insights into the recommendations. Furthermore, the research implications aid in demonstrating the value of exploring answers to the identified problem as well as the study's relevance to other parties. The analysis' limitations have also been discovered and explored. Finally, feasible recommendations were given, and the study was concluded with suggestions for future research.

5.2 Conclusion

The impact of the rates of exchange on economic determinants is a critical aspect that aside from evaluating elements that influences exchange rates between countries it also determines the MNE from evaluating their sustainability. In addition, it will help them decide which the priorities are for political issues need to be provided, particularly in the framework of both fiscal and monetary policy.

The current factors, FDI and Covid-19 affecting movements in exchange rates. For economists around the world, has always been of high significance to understand the mechanism next to exchange rate fluctuations. The pandemic had brought a slowdown to the country and various stimulus packages had been introduces to boost the FDI and to economic sustainability.

This research studied the Foreign Direct Investments (FDI) and Covid-19 Pandemic affecting Exchange Rate Movement in Malaysia. Based on the major findings, this research found that Foreign Direct Investment and Covid-19 pandemic having positive relationship in affecting Exchange Rate Movement in Malaysia. As a result, this study may be valuable to government officials, policymakers, investors, and foreign traders in carrying out their obligations, duties,

and trading activities. In this chapter, the limits that were encountered during the study process were discussed, and advices for future researchers were made.

It is clear now that this pandemic will have adverse damaging effect to the Malaysian macro economy and to the well-being of the economic welfare of the rakyat. The twofold sources of economic damage are mainly the knock-on effect from the impacts of the coronavirus abroad and the domestically generated due to the imposed movement control measures.

Since January 2020 there were 24 Covid-19 cases in Malaysia. The ringgit path shows Covid-19 pushed it from the average of RM4.10 before the pandemic to RM4.35 per US dollar by April 2020. This is a 6.1 percent depreciation, however it bounce back to the pre pandemic exchange rate and holding within sustainability.

In 2020, Malaysia saw its GDP contract by 5.6%, the negative value indicates the impact of the uncertainty of the pandemic. The economic growth was projected by BNM at between 6% to 7.5% in 2021 due to the key factors supporting its growth recovery and especially the Covid-19 vaccine roll out measures.

Unlike the Asian financial crisis in 1997 and the global financial crisis in 2008, the Malaysia's Covid-19 crisis at present is another factor that influences the movement of the ringgit. The Covid-19 pandemic is first a public health crisis and then only an economic crisis. The government and the economist agree that economic policy should focus on the priority of bolstering public health efforts in handling the pandemic while ensuring the welfare of the rakyat and the businesses. Government deficit budget will have to be overshot and billions worth of stimulus packages were introduced to sustain the health, economy and the general well-being of the rakyat and the nation, although the effectiveness are still in scrutiny.

This is not an easy task and an intense amount of political determination will be required. As much as the research finds that through theoretical and empirical analyses, the number of confirmed Covid-19 cases further intensifies exchange rate movements. Overall the regression results have a restraining effect on exchange rate movement.

The regression analysis results of economic policies and FDI policies indicate also the role in restraining exchange rate movements. The policymakers have made positive interventions and restrictions on internal movements and public information which can effectively reduce

the uncertainty and panic caused by the pandemic. This can send positive signals to the market and investors. Stimulus packages and economic support policies and fiscal measures intensify consumption, trigger changes in capital flows and curb exchange rate volatility.

The positive outlook of the research illustration that the continued spread of Covid-19 does significantly raise exchange rate movements. For government responses, the existing literature believes that intervention policies during the pandemic may have had a counterproductive effect on stock returns and caused poverty and inequality (Bonaccorsi et al., 2020, Tisdell, 2020). However when the government implements intervention policies for Covid-19, it also should consider the resultant impacts to the overall economy. The Covid-19 crisis can be conquered through health care efforts but without a substantial and forceful fiscal response, it will take a momentous task for pulling back the well-being. The policymakers should be bold and the government must be stable and make firm decisions to implement these policies. Productive incentives and policies must be introduced to attract greater FDI and enhance the economic growth while keeping the ringgit afloat. The government should not succumb to petty demands but look at the competitive global effect during this period of adjustments at post Covid-19 pandemic. Meanwhile, efforts of sustainability can keep the exchange rate movement within manageable means. The Nation must pull through this pandemic to recover and stay competitive and further excel in its endeavour to reminiscence the great tiger it once was respected for.

5.3 Recommendation for the Research

Drawing from observations and studies in economic development and FDI globally, four policy imperatives could be powerful in accelerating FDI growth and capturing greater benefits in Malaysia:

1. ***Reassess FDI strategy and priority sectors***. The government could rethink its FDI strategy and chart a deliberate path for long-term benefits. The strategy should focus on sectors that have strong growth and employment prospects, that exploit Malaysia's natural strengths, and that promise demonstrable economic benefits, including those that are less tangible, such as technological adoption. Singapore's evolving yet explicit focus over the past decades—export-oriented industries in the 1970s, technology-intensive manufacturing in the 1980s, knowledge-based manufacturing

and services in the 1990s, and innovation-driven enterprises now—is an example of how this strategy can be set, executed, and refreshed over time.

2. ***Build unique, deal-focused value propositions***. Companies invest in deals, not in countries. Beyond offering typical incentives, the government could present a strong value proposition to targeted investors. The proposition needs to include infrastructure and access to readily available talent and supply-chain ecosystems that meet the investor's specific requirements. Essentially, each investment prospect should be treated as a deal, with concessions tailored to the targeted investor's needs. This does not need to mean a higher quantum of incentives. It rather means taking a long-term view in designing incentives in a way that ensures the long-term benefits largely compensate for the cost of incentives—as well as the impact from profit repatriation.

3. ***Focus investment-promotion activities***. A more proactive approach can increase the impact of agencies tasked with promoting FDI. High-caliber officers at these agencies must be able to build and maintain lists of targeted investors, monitor relevant sectors, and gather the intelligence needed to understand when and how to approach individual companies. Agencies must also foster clear ownership and accountability for attracting targeted companies—in practice, shifting to much more of a B2B-sales approach.

4. ***Ensure end-to-end support for committed investments***. Globally, more than half of approved investment projects are abandoned, and this tendency is likely echoed in Malaysia. To help bring more investment plans to fruition, it is important to provide support throughout the project. End-to-end support would include investor-relationship management, help in navigating regulatory procedures, and assistance in securing land, among other activities. In addition, unsuccessful deals should be routinely analyzed to understand how they were derailed and how to mitigate any problems uncovered.

Drawing from observations and studies in economic development and Pandemic Covid-19 globally, four policy imperatives could be powerful in overcome the pandemic Covid-19 and capturing greater benefits in Malaysia:

1. Certainly, none of this will be easy. For starters, it will be costly. Government budget deficit targets will need to be overshot. Difficult decisions will need to be made later on how to boost tax revenues–though as Emmanuel Saez and Gabriel Zucman observe, with progressive income and wealth taxes these costs need not be borne by the middle or lower classes.

2. Additionally, intense amounts of political determination will be required. As mentioned above, some policy responses may require the circumvention or amendment of certain laws via a special or emergency parliamentary session (see: restrictions on government borrowing to fund operational expenditures, and restrictions via the Employment Insurance System Act). Lastly, there will be huge financial pressures on the banking sector, demanding action from our monetary policymakers.

3. Besides, even with comprehensive and valiant efforts at cushioning the blow to the rakyat and businesses, some amount of job losses and business closures will be unavoidable. Yet, the economic, social and political cost of inaction–or even insufficient action–is far greater and far more frightening. Surely, this is no time to be timid. In light of the emerging risks, it is clear that the fiscal policy needs to go further beyond the February stimulus package in safeguarding the livelihoods of the rakyat.

4. After all, the current COVID-19 crisis will eventually be conquered through vigorous public health efforts, but without a sufficiently large and forceful fiscal response, the economic scars it leaves behind will be viciously long-lasting.

5.4 Recommendation for the Future Researchers

There are some recommendations to the future researchers such as:

1. The researcher can propose to the future researchers to take into consideration of independent variables such as private sectors involvement, government stability, private synergy, Fiscal and monetary policies and law enforcement to influencing foreign exchange rate mobility.

2. The future researchers can increase the number of respondents which including the East, West, Northern, Sabah and Sarawak that represent the total population of Malaysian. In extent, the other researchers can also take into consideration that included the ASEAN countries in similar of research. Its can give a big overview on the implication of FDI and pandemic Covid-19 into foreign exchange rate and economy development of ASEAN countries.

3. In order to attract more investment countries need to generate a favorable investment climate. Reforms aimed at creating a climate for political decision-oriented investment play an important role in this regard. In addition to the investment climate being key to economic growth, it is also important an important determinant how globalization is affecting domestic customers. The specific circumstances and enforcement practices were cited in the research. The strategies and stimulus packages that use by the government can promote the increasing of FDI and reducing the impact of Pandemic Covid-19.

4. The innovation of this study is that it builds on previous research and synthesizes strategies designed to attract foreign direct investment. The findings suggest that government officials working in the scope of FDI should create and implement policies which are facilitating FDI. Together with the other determinants which the study identified a favorable environment for foreign direct investment can be created. The different of contribution by different of industry and sector also can take into consideration in economics development.

5. It suggests a future study is conducted which would test the impact of these determinants and strategies on FDI and overcome of pandemic Covid-19 in a specific context of a country, region or city. Its look on the impact of changes in FDI and Pandemic Covid19 from ASEAN Countries perspective.

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APPENDICES

About Vijaya Subramaniam

Vijaya started her career with a Diploma in Accounting from University Tun Abdul Razak (UNITAR). Over the 15 years working experiences she switched jobs to fulfill her appetite for a variation in industrial exposures and experiences in accounting and finances, namely with tax and audit consultants, construction, manufacturing, production and with multinational companies that had kept her mindful and dealt with a competitive approach.

Vijaya consider herself a novice, is fuelled by her passion for understanding the nuances of career growth. She was eager to build on her academic strength in her desired field that was once deprived in her younger days. She commenced her Bachelor in Accounting with the Wawasan Open University, at Johor Bahru campus in 2019 and had achieved very well in being nominated in the dean's list. Her desire to fast track her academic achievements and determination encouraged her to attempt the MBA majoring in Finance in 2019 at her alma mater Universiti Tun Abdul Razak, now called as UNIRAZAK. She coped tirelessly and rewarded her sheer hard work with distinctions. This gave her all the energy to finally complete her MBA with the submission of this thesis. It is indeed a power achievement to attempt in a Bachelor's degree and a MBA simultaneously.

Vijaya was born and bred in Johor and now lives with her family in Kota Tinggi, Johor. She is a very soulful energetic person and ensures a balance work-life. She believes mindfulness is the key to success in her daily routine - a tenet she lives out through her interests in meditation, spirituality, family outing, gardening, and pets.

Vijaya is currently working as an Assistant Finance Manager at URC Snack Foods (M) Sdn Bhd. Upon completion of the MBA in Finance this year and the Bachelor in Accounting next year, she believes that she had set the path to her professional career growth.

Live your dreams; you are the Artist of your life

Dear Respondents,

Thank you for your participation in this survey.

This is my research dissertation for my MBA, Majoring in Finance at Universiti Tun Abdul Razak, Kuala Lumpur, entitled "**FOREIGN DIRECT INVESTMENTS (FDI) AND COVID-19 PANDEMIC AFFECTING EXCHANGE RATE MOVEMENT IN MALAYSIA".**

The main objective of the study is to examine and evaluate the factors influencing the movements and volatility of the Malaysia's exchange rates and to relate the current factors and variables affecting these movements. This paper also analyses the relationship between Foreign Direct Investment (FDI) and the exchange rate in determining the economic growth in Malaysia, taking into account the uncertainties during the current Covid-19 pandemic. The pandemic had brought a slowdown to the country and various stimulus packages had been introduced to boost the economic sustainability.

The main objective of this survey is to elucidate the most theoretically and statistically accurate factor structure to develop the conceptual framework model and to examine the research findings. Your feedback and comments are highly valuable and needed for this study. There are no right or wrong answers, only your personal opinion. For your information, the respondents' identities and feedback with regard to this survey are strictly confidential and will be used for academic research purposes only.

Your response and invaluable feedback is essential and important to the successful completion of the study and my dissertation. Your kind cooperation is greatly appreciated.

Thank you.

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Supervisor;
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Bank Rakyat School of Business & Entrepreneurship
Universiti Tun Abdul Razak, Kuala Lumpur

* Required

Section A: Demographic Analysis

1. Indicate your gender *

Mark only one oval.

- ◯ Female
- ◯ Male

2. Indicate your age *

Mark only one oval.

- ◯ Below 30
- ◯ 31 - 40
- ◯ 41 - 50
- ◯ Above 50

3. Indicate your highest academic / professional qualification *

Mark only one oval.

- ◯ Below secondary
- ◯ Secondary/High school graduate/Diploma
- ◯ Bachelor' Degree
- ◯ Post Graduate/Professional

4. How many years of working experience? * *Mark only one oval.*

- ◯ Below 5 years
- ◯ 5 - 10 years
- ◯ 10 - 20 years
- ◯ Above 20 years

5. What is your average monthly income? * *Mark only one oval.*

- ◯ Below RM5,000
- ◯ RM5,001 - RM10,000
- ◯ RM10,001 - RM20,000
- ◯ Above RM20,000

6. What is your employment rank in the organisation? * *Mark only one oval.*

- ◯ Clerical
- ◯ Executive
- ◯ Management
- ◯ Senior Management

SectionB:
General opinion

Choosebetween1-5,where1=Stronglydisagree,2=Disagree,3=Neutral,4=Agree,and5=Stronglyagree

7. Foreign Direct Investments (FDI) has benefitted Malaysia. *

Mark only one oval.

1	2	3	4	5
◯	◯	◯	◯	◯

8. The Malaysian economy has always been dependent on Foreign Direct Investment (FDI). * *Mark only one oval.*

1	2	3	4	5
◯	◯	◯	◯	◯

9. The pandemic has resulted in significant global social and economic disruption. *

Mark only one oval.

1	2	3	4	5
◯	◯	◯	◯	◯

10. What would you strongly suggest during the Covid-19 pandemic? *

Mark only one oval per row.

	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
Compulsory use of face mask and social distancing					
Free supply of sanitisers for home and public areas					
Exercise and yoga					
Hot water and steam therapy					
Encourage working from home					
Distribution of free food supplies to all homes during MCO					
Free utility services during MCO					
Bank moratorium for first three years					
Social fixed allowance for retrenched employees					
Increase vaccination to 50,000 per day (2 years for all residents in Malaysia)					

11. The Exchange Rate and Foreign Direct Investment (FDI) are positively correlated. *

Mark only one oval.

1	2	3	4	5

12. The Exchange Rate and Foreign Direct Investment (FDI) are negatively correlated. *

Mark only one oval.

1	2	3	4	5
◯	◯	◯	◯	◯

13. Foreign Direct Investment (FDI) and Covid-19 are affecting the exchange rate movement in Malaysia. * *Mark only one oval.*

1	2	3	4	5
◯	◯	◯	◯	◯

Section C: Research Question Analysis

14. Foreign Direct Investment (FDI) affects the Exchange Rate Movements in Malaysia from the following factors: *

Mark only one oval per row.

	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
Gross domestic product (GDP) growth	◯	◯	◯	◯	◯
International Reserves	◯	◯	◯	◯	◯
Government debts	◯	◯	◯	◯	◯
Government budget	◯	◯	◯	◯	◯
Government Incentives	◯	◯	◯	◯	◯

15. To what extend you believe the pandemic Covid-19 affected Exchange rate movement in Malaysia? *

Mark only one oval per row.

	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
Increase in economic growth					
Decline in economic growth					
Increase in medical expenditure					
Decrease in medical expenditure					
Increase in industry growth					
Reduce in industry growth					
Increase in Foreign Direct Investment					
Decline in Foreign Direct Investment					
Increase in stimulus packages					
Decrease in stimulus packages					

16. The exchange rate movement in Malaysia is affected by Foreign Direct Investment (FDI) and Covid-19 pandemic due to the following: *

Mark only one oval per row.

	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
Money supply (M2)	◯	◯	◯	◯	◯
Interest rate	◯	◯	◯	◯	◯
Inflation Rate	◯	◯	◯	◯	◯
Efficient Pandemic Management by the Government	◯	◯	◯	◯	◯
Attractive Government Investment policies	◯	◯	◯	◯	◯

17. What strategic plans should the government implement to overcome the Foreign Direct Investments (FDI) and covid-19 pandemic affecting Malaysia's exchange rate movement? *

Mark only one oval per row.

	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
Initiate to retain and attract new investments	◯	◯	◯	◯	◯
Strategies to sustain long term investments from global leading players	◯	◯	◯	◯	◯
To be competitive within the Asian region	◯	◯	◯	◯	◯
Fully efficient implement Covid-19 pandemic management team	◯	◯	◯	◯	◯
Expedite Covid-19 vaccination schedules	◯	◯	◯	◯	◯
Improve and increase public awareness of the stimulus package benefits	◯	◯	◯	◯	◯
All dependent homes should be adopted by the Government	◯	◯	◯	◯	◯

Section D: Others, please specify

18. Others, please specify

APPROVAL PAGE

TITLE OF PROJECT PAPER	**:**	**FOREIGN DIRECT INVESTMENTS (FDI) AND COVID-19 PANDEMIC AFFECTING EXCHANGE RATE MOVEMENT IN MALAYSIA**
NAME OF AUTHOR	**:**	**VIJAYA SUBRAMANIAM**

The undersigned is pleased to certify that the above candidate has fulfilled the condition of the project paper prepared in partial fulfilment for the award of the degree of Master of Business Administration.

SUPERVISOR

Signature : _____

Name :

Date :

ENDORSED BY:

_____

Dean

Graduate School of Business

Date: