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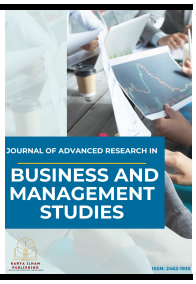

Financial Deepening and Its Significant Relationship to the Sustainable Development Pillars in Malaysia: A Conceptual Paper

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ABSTRACT

Financial deepening is believed to be crucial in various sectors for a country's development. The availability of financial deepening is deemed to enhance the country's Sustainable Development (SD) pillars that will lead to the attainment of the Sustainable Development Goals (SDGs) in 2030. The issue of SDGs is often discussed among the ASEAN leaders in the United Nations Summit; however, the unbalance SD pillars that consist of economic real GDP, environmental quality and income inequality is still ongoing. Malaysia's Economic real GDP, environmental quality and inequality in income each year are not in line with the requirements of the SDGs achievement. This situation created a gap in balancing the SD's three pillars, as the financial deepening in Malaysia led to a mixed relationship with them. Thus, this study aims to investigate the relationship between financial deepening and the three SD pillars in Malaysia. The time series analysis and several estimation techniques will be employed and the secondary data chosen is from 1970 to 2019 for this study. The implications of the study will help the policymaker to nurture the future of Malaysia SD pillars and overcome any unexpected coming issues in the realization of SDGs 2030.

1. Introduction

The financial deepening role is becoming more significant to the country's development, including ASEAN. Financial deepening has been utilized in many sectors to prolong their economic activities that will eventually assist in the economic growth and balance the social needs in the country and maintain the environmental quality [15]. Financial deepening has evolved since the year 1970 after the financial system has grown to support the country's expansion in many countries. In the past forty years ago, agricultural activities became the main local activities in ASEAN including Malaysia [16][61] Since then, it is believed that the financial deepening actively supports not only in agricultural activities but also many activities until today. Financial deepening in well-developed

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countries has become the benchmark for other developing countries because the financial deepening could lead to the Sustainable Development Goals (SDGs) 2030. Somehow, the realization of becoming 'outdated' and left behind brought many countries to escalate their development especially the ASEAN. In ASEAN, Malaysia is still known as a middle-income country and still holds the 'developing country' status [92,97]. With the unmatched income distribution and low environmental quality to the economic growth will make Malaysia stagnant to the status compared to other ASEAN countries such as Singapore. Surely, policymaker have established their policy in helping Malaysia to boost its economic growth, environmental quality and income inequality. Thus, the ongoing development is highly encouraged by a good mechanism such as strong financial deepening.

Financial deepening trend in Malaysia has existed since the year 1970 and has shown its significance to the growth along with the country's development [99]. But the financial deepening trends are volatile and they continue to be volatile after the global financial crisis that happened in 1999 as well. Even today, financial deepening remains unstable, resulting in mixed outcomes for Malaysia's development. The United Nations Conference on Trade and Development (UNCTAD) and many OECD countries admitted that financial deepening is vital to the country's growth [13]. However, the volatility of the financial deepening trend in Malaysia could undermine its potential to reflect a positive relationship with the SD pillars that are the economic growth, environmental quality and income inequality. The SD pillars should be equal or balanced to prove the country's development level has highly achieved as it would lead to the success of SDGs 2030 [66].

Fig. 1. Sustainable Development (SD) Pillars

Source: Sustainable Development 17 Goals [66]

Financial Deepening and Its Importance to the Sustainable Development Goals 2030

Financial deepening is known as the cumulative of financial assets supply to facilitate economic growth [21]. Not only that financial deepening very useful in assisting the income inequality (GINI coefficient) and lessening the carbon dioxide (CO_2) emissions in countries [17]. Thus, an increase in development is a good sign of financial services to enlarge their financial deepening supply in sectors and industries. Additionally, the occurrence of financial liberalization and deregulations has also allowed more countries including ASEAN to finance their industries and sectors' progression. The increment of financial deepening has been targeted at 'trillions' amount since the year 2014 and it continues when the SDGs 2030 blueprint is announced to all the member countries [28]. Financial

deepening proxies include broad money supply, credit to the private sector, foreign direct investment, domestic investment and trade openness which are very helpful as financial assets to the economic well-being [33,53]. Thus, it can be reckoned that financial deepening is needed to support the progression of SDGs 2030 to all countries including Malaysia [12].

Previous studies have mostly mentioned that financial deepening significant relationship to economic growth in many countries. However, the financial deepening study was less covered in the other measurement of SD pillars in a comprehensive view that includes the effect of financial deepening on income inequality and carbon dioxide released in Malaysia. Even though, there were studies done regarding financial deepening in other developed countries, it resulted in different outcomes on each of the SD pillars [27,62]. Also, financial deepening has not been recognized as one of the major variables to achieve the SDGs 2030. The other SDGs 2030 key success factors that were found in secondary data have been evaluated comprehensively such as foreign direct investment and trade openness which are found to be the factors to the achievement of SD pillars in Malaysia [80]. Thus, this study aims to investigate the relationship between financial deepening and all three SD pillars that will fulfill the Sustainable Development Goals 2030 achievement in Malaysia.

Financial Deepening in Malaysia

Since the year 1970, Malaysia's real Gross Domestic Product (GDP) has generally recorded an upward trend until the year 2019. It amounted to US$12,487 GDP per capita in forty years [99]. However, the yearly increment was still at a moderate level and to financial deepening growth in Malaysia. The financial deepening was found in volatile movement since the year 1970 but it became a financial resource to the industries in Malaysia [59]. The growth of financial deepening was encouraging with the imposition of financial liberalization, deregulation and privatization policies by the government in the year 1980 [44]. Furthermore, the Malaysian government has also introduced the ceiling interest rate to stimulate the financial services that impacted the financial deepening as one of the important macroeconomic variables to the economic development during year 1980s [7,64]. Nonetheless, Malaysia was hit with inflation in the early 1990s and this became a disturbance to the local financial deepening supply. Not only that, the situation became worse during the global financial crisis that occurred from 1997 to 1999 which eventually recorded a high inflation to 5.3%, the real GDP dropped to 9.67% and the financial instability further deepened the supply as well [45]. The aftermath of the global financial crisis was that Malaysia's financial services became inefficient due to high interest rates to be paid and the lending and borrowing process also became difficult for the sectors and industries [102]. Thus, Malaysia's development has grown slowly.

As the year increases, many developments start to increase in various sectors. In the early 2000s or known as the 21st century, Malaysia's real GDP also started to gradually grow from year to year. Exactly ten years after the first global financial crisis, in 2007 there was another crisis that caused economic growth to slowly drop. It was a global recession that occurred until the year 2009 where Malaysia's development was disturbed and the real GDP dropped to negative 1.50% at the end of the year [98]. In this period as well financial deepening supply became more inefficient and the financial deepening growth trend also dropped [3]. This situation continues until the year 2010 onwards and Malaysia's financial deepening supply is still recorded in a volatile trend. However, the real GDP growth trend was opposite to the financial deepening growth trend. During the recession and after the recession had ended Malaysia was still able to catch up and stabilize the growth. This is because the government has introduced new incentives and strategies to build up the economy again [86]. The Malaysian government has implemented the new Overnight Policy Rate (OPR) that affects the

financial services to intensify the credit rates charged to sectors and industries. This strategy was effective for Malaysia's real GDP growth.

Besides, carbon dioxide (CO_2) emissions also increased during the development period from year to year. Since year 1970 to 2019 Malaysia released carbon dioxide along with the country's development. Even though the trend shows the ups and downs every year [30], carbon dioxide per capita was still released and affected the environmental health of countries. Due to the industry's expansion carbon dioxide emissions such as pollution and fossil fuels burning are harmful to the ecosystem of a country. It is also causing climate change to happen in a country [50]. Only in year 1997 to 1999 did Malaysia record a steady decrease in carbon dioxide emissions during the global financial crisis. Industries started to slow down their activities and had difficulties in obtaining financial funds to support their businesses. Also, during the global financial crisis happened the financial system in countries was vulnerable which led to high inflation occurring too [22]. Consequently, the financial assets supply was less in the industry and the credit offers were excessive especially the foreign credits [55].

Not too long after that when the global recession happened from 2007 to 2009, Malaysia's carbon dioxide emissions peaked at a high level especially in 2008. This situation was different during the global financial crisis in 1997. After experiencing the heavy carbon dioxide emissions, Malaysia took a step to invest in green growth technology in July 2009. Green growth technology (GGT) or known as the green economy has encouraged Malaysia to keep progressing the development in a clean environment [2]. Financial deepening supply could be seen as a factor in the carbon dioxide emissions. Financial deepening could deteriorate the environmental health but also could assist in environmental quality of Malaysia. By looking into the financial deepening trend and carbon dioxide emissions trend, it is believed that the investment of GGT has improved the environmental health in Malaysia. However in the year 2014 onwards Malaysia's carbon dioxide emissions were highly increased significantly and were among the highest in Thailand and Indonesia. Due to the increasing financial deepening supply, Malaysia's development was getting better and the construction industry robustly increased. But, at the same it heavily released carbon dioxide to heavily released [68]. Until the end of 2019 carbon dioxide emissions and financial deepening were still significantly increased.

Income distribution or known as income equality is another important pillar in SD. Since the development has started in Malaysia the income distribution was uneven especially for the *Bumiputra*. The inequality in the income gap was seen in Malaysia. The rise in the GINI coefficient per capita from 1980 to 1989 showed the discrepancy in society compared to the years 1970 to 1979 [98]. Financial liberalization, deregulation and privatization in government policy have allowed foreign loans to be applied by industries, and many neo-liberal or free market policies have and less intervention from the government itself. However, the policy became adverse in the late 1980s when the Malaysian government had less power to control the free market industries' expansion which had impacted the local economy and society. The neo-liberal has made the local society lose job opportunities, weakened the employees' rights and social protection as well [96]. Hence, Malaysia's income distribution in this period was not impressive. Similar to real GDP and carbon dioxide emissions, income inequality during global financial crises has reached the highest point per capita. Malaysia's New Economy Policy (NEP) 1971 was introduced to eradicate poverty and social reform has helped Malaysia to improve the economy [84] but at the same the social income inequality was still happening [52].

Critical view on financial deepening and GINI coefficient trend during the global recession period in the year 2008-2009, both trends were simultaneously increased. This situation was dissimilar during the global financial crisis that occurred in 1997 when Malaysia's GINI coefficient recorded a decline in per capita income until the crisis ended. Thus, it is believed that because of free markets

the foreign workers were everywhere in sectors, and the agricultural and non-agricultural income growth rates have continuously increased Malaysia's income inequality [58][78]. As the development was rapidly growing, Malaysia realized that income inequality should be reduced to balance the society's income per capita. Thus, the New Economic Model (NEM) (2010-2020) was executed to enable society to receive an equal income distribution from the country's prosperity that would enable Malaysia to reach the high-income level country status [1]. NEM contributed to the society restructuring that ultimately reduced the poverty level and improved the income inequality in Malaysia [46]. Therefore, financial deepening supply involvement in Malaysia's development could help to balance the three SD pillars.

Issue

Financial deepening involvement has a high impact on the country's real economic GDP. The supply of financial deepening is believed to be a significant positive correlation to the escalation of a country's development. Previous researchers have found and proved that the role of financial deepening in OECD, SSA, the Middle East and parts of Asian countries is significantly correlated to economic growth [4,18,36]. It depicts that financial deepening is needed in developing countries as they developing countries are growing every year. However, it is contradictory to Malaysia's financial deepening, which has a mixed result for the economic growth. In some years financial deepening is a significant positive to the economic growth. But, financial deepening was also found to harm economic growth. Malaysia needs financial deepening like other well-developed countries do as it helps in many industries. Somehow, several studies claimed that foreign direct investment and trade openness are highly correlated with the Asian including Malaysia economic growth [67]. Hence, this posits a mixed relationship between financial deepening and economic growth in Malaysia.

In addition, financial deepening supply could also create a sustainable environment for development in countries [34]. The supply of financial deepening for GGT investment could help countries in the reduction of unhealthy carbon dioxide emissions [48]. The GGT function is to control the carbon dioxide emissions by reducing pollution, encouraging the renewable resources use and mitigating climate change. Malaysia has supported the idea of GGT and in 2009 Malaysia invested in GGT. However, the environmental quality in Malaysia has shown a volatile trend along with the development progression until the year 2019. Ultimately, the financial deepening supply brought a negative impact on environmental health when Malaysia was competitively developing the country [91]. In return, the carbon dioxide is still released even today. Financial deepening supply is believed to be more significantly positive for the country's environmental quality. However, looking at this issue, it is the opposite of what the empirical studies found.

An equal income distribution is highly crucial for countries. Financial deepening is needed to improve income inequality and lessen the poverty gap in society [26]. Having a consistent financially deepening supply could assist in the business expansion and create more job opportunities. In contrast, few studies found that FDP does not relate to the reduction of income inequality. Financial deepening is found to harm the GINI coefficient even in the countries that are actively growing their economies [85]. It could be that the financial deepening supply does not impact the income inequality but is related to the poverty gap for most countries [20]. Nonetheless, in Malaysia the GINI coefficient trend was volatile while the financial deepening supply was increasingly volatilely year by year. This posits the undesirable relationship between financial deepening and GINI coefficient when the financial deepening is supposed to help the development but the income inequality is still happening in Malaysia [81]. The NEM (2010-2020) could be the possible reason Malaysia is distressed to lessen the income inequality while focusing on building a high-income country. Financial deepening supply

is supposed to encourage Malaysia's growth but surprisingly Malaysia is still having an income inequality in the society [52].

2. Literature Review

2.1 Financial Deepening Proxies (FDP)

Credit to private sector (CTPS) and broad money supply (M2) are the probable proxies of financial deepening to be investigated in this study. For years, many scholars have widely used these proxies because of their high correlation to economic growth [6]. Besides, it is believed that these two proxies would also play its important role in the environmental quality and the income distribution of a country. CTPS and M2 were first found by King and Levine (1993) mentioned that these two proxies were widely used in measuring the country's economic real GDP [90]. This is supported by other studies that also mentioned CTPS and M2 are highly encouraging the country's development and these two proxies are suitable indicators to improve the economic growth as well as the economic well-being of a country [53,75]. Also, most of the previous studies revealed that CTPS and M2 are related to the well-developed countries, the Middle East and African regions that support the country's growth in all aspects to balance the three SD pillars [11,60,73]. Thus, it is suggested that CTPS and M2 are suitable proxies of financial deepening in the developing countries [40].

2.2 Economic Growth (GDP)

Economic growth is the economic transition process that includes the use of fiscal and monetary policy, labor force, efficiency in production and technological advancement in a country [5]. Economic growth shows the country's development level year by year in competitive ways. The real gross domestic product (GDP) is the measurement of economic growth that is universally used in the world. The real GDP is being used by policymakers to ascertain any new policies to enhance economic sustainability [29]. Not only that it will also increase human welfare and the country could control inflation elasticity. Most previous research has found the relationship between economic growth with foreign direct investment, trade openness and domestic investment [19,24]. However, financial deepening is less mentioned as an economic growth success factor especially in Malaysia compared to OECD, Middle-East and African countries.

Financial deepening proxies used in this study are credit to private sector (CTPS) and broad money (M2) supply as these two proxies are believed to assist the economic growth in many countries. Some scholars agreed that the CTPS is widely used in many sectors that eventually impact the country's economic growth [94]. Somehow, a few scholars also found that M2 is most significant and positive in the long run to the economic growth as it supports the financial services and assets visibility in a country than CTPS [74][76]. Likewise, [93] also investigated that M2 has a significant positive impact on the economic growth, while, CTPS is found to have a significant negative impact on the economic growth. However, [93] recommended that both CTPS and M2 are vital to the economically balanced solution for countries.

2.3 Environmental Quality (CO2 Emissions)

After many years of development, carbon dioxide emissions are unstoppable in many countries. Carbon dioxide is the greenhouse gas that is trapped in the atmosphere and contributes to climate change. This happened due to the rigorous industries that actively increase their economic activities to support the country's real GDP [66] Indeed, the country's economic enhancement is crucial to

ensure the country is not left behind other countries. But, the increment of carbon dioxide would be harmful to humans and the other creatures that would eventually create environmental degradation. Several studies found the factors to carbon dioxide emissions that lead to environmental degradation especially in well-developed countries. The factors include financial deepening, foreign direct investment, trade openness, green technology and urbanization that led to the environmental degradation [10,41].

Financial deregulation and liberalization have allowed the financial deepening supply everywhere in the countries. The rise of financial deepening is ongoing in line with the country's development. Paramati, *et al*., [77] examined the factors contributing to the carbon dioxide emissions in OECD countries and financial deepening is found to be one of the factors that led to the increment of carbon dioxide released. Specifically, the CTPS and M2 are the financial deepening proxies that have highly contributed to the OECD countries' carbon dioxide emissions. It depicts that both are correlated and significantly positive to the increment of carbon dioxide released. Another study also found that CTPS has a higher effect to the carbon dioxide emissions in developing countries compared to other financial deepening proxies [49]. This shows that CTPS is significantly correlated and positively to the increase of carbon dioxide emissions in developing countries. However, the M2 is found to be insignificant and positive to the carbon dioxide emissions especially in China and EU countries [47,100].

2.4 Income Distribution (GINI Coefficient)

Equal income distribution is hugely important for society. Income distribution is the salaries received by society in equal amounts without jeopardizing any race in a country. It is also the equal earning of capital and labor in the market share [35]. Income distribution unit measurement is the GINI coefficient per capita. GINI coefficient per capita helps to measure the income inequality level that occurs in a country [38]. When the development is increasing, the GINI coefficient per capita is expected to be lower. With that, the income inequality in society will be reduced. The income distribution with ample resources is equal for all in society and the poverty gap can also be decreased.

Financial deepening of supply possibly helps to increase productivity in many industries. Industries could create job opportunities that will lead to the economic growth of countries. Society could also have a balanced income distribution with the job opportunities that it can have in the country and thus, the poverty gap can be reduced. But it is still uncertain whether the financial deepening supply is related to the decreasing amount of income inequality per capita in Malaysia since the data on the Gini coefficient were volatile. Several scholars found that financial deepening assists in bridging the poverty gap but not the income inequality in countries. The financial deepening supply worsens the income inequality that eventually increases the GINI coefficient index per capita of countries [63,72]. In a details investigation CTPS and M2 are found to be significantly positive to the income inequality in the American country [63]. Nevertheless, Nurazi *et al*., [72] found that CTPS is of the main contributor to the income inequality that occurred in 5 ASEAN countries. Contrary, another study found that CTPS is insignificant to the income inequality as CTPS is proven to reduce the income inequality and also the poverty gap in 143 countries all over the world [70]. Not only that, but M2 is also found to be significant to the income inequality reduction in 4 ASEAN countries excluding Singapore [82].

3. Methodology

To further investigate the relationship between financial deepening and the three SD pillars in Malaysia, the time series analysis and several estimation techniques will be employed in this study. This study will also use a quantitative method to examine, describe and construct the relationship among the variables tested. Quantitative methods are suitable for economic factors, economic development studies, and knowledge and education studies that will eventually provide a new theoretical foundation to comprehend the variables studied [88]. In fulfilling the aim of this study, the availability secondary data is collected from various sources such as the World Bank database, World Development Indicator, Emissions Database for Global Atmospheric Research, University of Texas Income Project, Global Consumption and Income Project, and Our World in Data. The data collected is from 1970 to 2019.

Estimation Techniques
Autoregressive Distributed Lag (ARDL)

The Autoregressive Distributed Lag (ARDL) test is used in a study to formulate an econometric model between variables in a single equation of time series data. The ARDL test, or also known as the Bound test, is an effective technique that has been used by many researchers to investigate the cointegration among variables in the long run. The ARDL method was formulated by Pesaran Shin and Smith (2001) to reprimand any error correction (EC) process while doing the cointegration analysis on the variables tested. The formulated model will then show the cointegration or long-run equilibrium relationship between the variables tested [71]. With that researcher can construct an estimation conclusion based on the model without knowing whether the variables are cohesive in order zero I(0) or one I(1) or a combination of both [57]. This is to provide the unbiased estimation parameters in a regression.

Thus, the hypothesis to conduct the ARDL bound testing is as follows:

$H\_n:\delta\_1=\delta\_2=\delta\_n=0$
$H\_a:\delta\_1\neq\delta\_2\neq\delta\_n\neq0$

Principal Component Analysis (PCA)

Before using the ARDL method test, this study will employ the Principal Component Analysis (PCA) method to resolve any dataset problem and to simplify the dataset into key components when the variables are highly linearly correlated to one another. This technique will also reduce the redundancy in the variables tested. PCA is appropriate for macroeconomics studies to determine and give a better understanding that will explain the independent variables as the proxies to the macroeconomics growth [65]. Using the PCA method can also assist a study to examine the regression model relationship in the long and short run [87].

Unit Root Test

The unit root test is suitable for an econometrics model to dictate the variables' correlation in generating the linear regression model of the data study [30]. Unit root test can assist researchers to determine the unstable behavior of the series data that will lead to the null hypothesis on the

variables tested and accept the non-stationary behavior of the variables. Thus, the unit root test is crucial for this study to refrain from making any factitious regression model in the study. The unit root tests that will be used in this study are Dickey-Fuller (DF) and Augmented Dickey-Fuller (ADF) and Phillips-Perron (PP).

Dickey-Fuller (DF) and Augmented Dickey-Fuller (ADF)

Since this study is using time series data analysis, the Dickey-Fuller (DF) test and Augmented Dickey-Fuller (ADF) statistical tests are suitable to determine the reliability of the data tested and to estimate the data problem in the data series [69]. Besides determining the data reliability and the data problem, the advantage of employing the DF and ADF statistical tests is that these two tests will assist in rectifying the non-stationary problem in the data series [51]. Therefore, the DF and ADF statistical tests can assist researchers in rectifying any data problem between financial deepening and the three SD pillars in Malaysia.

The DF and ADF statistical tests hypotheses can be expressed as follows:

$H0$: $\beta 1=1$
$H1$: $\beta 1 <1$

Phillips-Perron (PP)

The Philips-Perron (PP) test is similar to DF and ADF which are used to describe the long-run relationship of the non-stationary variables tested in a study. The PP test is used for the autocorrelation corrections and non-constant variance of the error terms in the equation that arise from the DF and ADF test [42]. In detecting the autocorrelation and non-constant variance error terms, the nonparametric adjustment will be used in the regression model's variance. Thus, the PP test will help to detect the variance of dependent and independent variables and describe the cointegration of the variables tested.

The PP test hypothesis can be expressed as follows:

Ho: The process has a unit root.
$H1$: The process does not have a unit root.

Diagnostic Test

A diagnostic test is another estimation technique that is very useful in detecting problems in parameters that are incorrectly explained in a regression model. The diagnostic test will illustrate the appropriate parameters for every misspecified regression model [32]. Diagnostic tests consist of several test methods that are the autocorrelation test, normality test, heteroscedasticity test and Ramsey RESET Test Cumulative Sum (CUSUM) and Cumulative Sum of Square (CUSUMSQ) Stability test.

Autocorrelation Test

The autocorrelation test can help researchers to analyze and comprehend the cause of the econometric regression model's problems to occur. The best autocorrelation test is by Breusch–Godfrey (1978) which considers the regressors that include the dependent variable lags and are more elastic to the autocorrelation in higher orders [95]. The simple regression model equation made by Breusch–Godfrey is expressed as follows:

$Yt=\beta 1+\beta 2Xt+ut$

The equation is formulated by ordinary least squares (OLS) to obtain a set of sample residuals $\hat{u}t$.

Before conducting the Breusch–Godfrey test, the Durbin-Watson (Durbin W) test is needed to observe the data series behavior. Using the Durbin-W test, will help to recognize the serial correlation of the data observed in the regression model of this study. The rule of thumb of the Durbin-W ranges from zero to four.

Therefore, the Durbin-W test hypothesis for this study is as follows:

H0: There is no pure autocorrelation in the model
H1: There is pure autocorrelation in the model

Normality Test

The second diagnostic test for this study is a Normality test that is crucial to reviewing the normal distribution of financial and economic data in a study. Jarqua-Bera (JB) found that this test is appropriate based on the ordinary least squares (OLS) error terms of a linear regression with an intercept error. JB also suggested that the normal skewness and kurtosis squares rule is combined in a single statistical model [25][54].

Thus, the statistical model of JB can be seen as follows:

JB = [n⁄6][S^2 +(K-3)^2 / 4]

It is noted that the skewness (S) value is 0 and the kurtosis (K) value is 3 for a normal distribution. Then, the consistent asymptotic adjustments for the JB test are 6/n and 24/n respectively. Hence, if the JB value is significantly large the normality assumption will be rejected when the p-value is very low. Ultimately, the hypothesis can be rejected.

Heteroscedasticity Test

The heteroscedasticity test is the third diagnostic that will be used to further investigate the variance of the variables tested in this study. The heteroscedasticity test can analyze the variables' residuals in a statistical model that does not have constant variance across all the independent variables [14,43]. This test was used to detect any violation of homoscedasticity in regression models. As a result, the correlation matrix between independent and dependent variables can be reprimanded among the parameter estimates for this study [83].

Ramsey RESET Test

The Ramsey Regression Error Specification test was created by Ramsey (1969). This test is also known as the Ramsey RESET test and it is a misspecification model regression test. Ramset RESET test is suitable to examine any omitted variables partiality in a model regression [23,31]. Thus, the Ramsey REST test will be applied in this study to find any error term of independent variables that have been omitted. As a result, the reprimand omitted variables will show proof of correlation to the dependent variable.

To reprimand the omitted regressors bias, Ramsey (1969) has suggested improving some regressors' functions in the model regression. This is to develop the misspecification test to detect the error term of the other omitted variables. The suggested regressor function can be seen as follows:

$$(\hat{Y}_i^2, \hat{Y}_i^3, \hat{Y}_i^4, \ldots, \hat{Y}_i^k)$$

The suggested regressor function is power Ŷ to be added to the linear model regression. Thus, the new model estimated will be:

Y= β_(0)+ β_1 X_1+β_2 X_2+δ_1 Ŷ^2+δ_2 Ŷ^3+u

The Ramsey RESET test hypothesis can be expressed as follows:
H_0: δ_1=0,δ_2=0
H_1: δ_1≠0,δ_2≠0

Which means that:
H0: the model has no omitted variable(s)
H1: the model has omitted variable(s)

Cumulative Sum (CUSUM) and Cumulative Sum of Squares (CUSUMSQ) Stability Test

The last diagnostic test employed in this study is the Cumulative Sum (CUSUM) and Cumulative Sum of Squares (CUSUMSQ) Stability Test. The CUSUM and CUSUMSQ Stability test is widely used in economic and finance studies. This test is beneficial to approximate any structural break in the variables tested by using the ordinary least squares method. With the CUSUM and CUSUMSQ Stability test run, researchers can produce more results on the econometrics model such as the cointegration between money supply and real GDP in the error-correction model context [89].

The CUSUM and CUSUMSQ stability test is also based on a repetitive procedure that merges both short-run and long-run regression to look at the differences between observed and predicted values. This helps to understand the error predictions in models and to detect the variations and variability of independent variables and extend the dependent variables predicted value. The critical significant value of CUSUM and CUSUMSQ is 5% which will accept the stability of the coefficient in a model regression [37].

Data Collection Method

Since the secondary data method is selected for the study and due to the availability of data, all data needed is collected from the World Bank database, the World Development Indicator and other sources mentioned earlier. Thus, a 49-year series of analysis from year 1970 to 2019 will be conducted with the appropriate techniques mentioned to provide the answer to the research aim.

4. Conclusion

Malaysia is committed to attaining the Sustainable Development Goals in year 2030. The financial deepening supply could positively impact Malaysia's SD pillars. However, since the global financial crisis happened the financial deepening supply has impacted the three SD pillars growth in different outcomes when both the financial deepening supply and SD pillars trend were volatile for more than forty years in the record. This resulted in a mixed relationship between financial deepening and economic growth, environmental quality and income inequality in Malaysia. In the SDGs 2019 assembly report had mentioned the importance of financial supply and industry support is needed to further develop the local and international cooperation in countries. This is to fill the financial gap during the SDGs progression [13]. Policymakers should fully utilize the financial deepening supply to facilitate the country's development. The higher level of financial deepening supply could stabilize the three SD pillars of Malaysia by the increment of economic growth real GDP, low level CO2 emissions and GINI coefficient per capita as well as year by year.

Malaysia can have a benchmark to significantly increase the country's growth. Well-developed countries such as OECD and Norway, the Middle East, and China have shown a rise in SD pillars with good economic growth, high environmental quality and income distribution performance with the use of financial deepening supply in the country [79]. This benchmark could lead Malaysia to keep progressing the three SD pillars that ultimately will fulfill the SDGs objective. Thus, the progression needs more attention from the financial sector, policymakers, national plan and best strategies to exhibit the SDGs success [101]. The financial deepening supply and economic real GDP are always in concurrent studies, however financial deepening supply with CO2 emission and GINI coefficient in developing countries were lacking in studies as it is understood that these three SD pillars are highly interconnected and important to the SDGs attainment [9,49,79]. Until today Malaysia is still under developing country and is also known as a middle-income country.

Curiously, the issue mentioned needs to be clarified by investigating Malaysia's financial deepening supply relationship with economic real GDP, CO2 emission and the GINI coefficient to prove the topic of the study. Additionally, the implications of the study will help the policymaker to nurture the future of Malaysia SD pillars and overcome unexpected coming issues in the realization of the SDGs 2030. Also, with the availability data found will lead to the continuation of the future study.

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