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The Sustainability of Budget Deficit and Public Debt in Malaysian Economy: The Government Intertemporal Budget Constraint

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Abstract: Malaysia has been in a budget deficit for over a decade. Prolonged budget deficits may hinder Malaysia's economic growth and could expose the country to financial and economic instability. An excessive budget deficit could also continue to increase the Malaysian government debts over time. If the debt reaches the unsustainable level, this could lead to sharp adjustment, if not a crisis. This paper empirically evaluates the fiscal sustainability of Malaysia using intertemporal budget constraint framework. Specifically, this paper evaluates the capability of the Malaysian government in managing their budget deficit and public debt in the long run while remaining solvent using quarterly time-series data spanning the years 1990 and 2015. The estimation techniques (Unit root, Multivariate cointegration test, and OLS) were employed to ensure the robustness of the results. The findings from the analysis indicates that the fiscal stance in Malaysia is weak sustainability. This finding suggests that reducing the size of government spending may improve the fiscal budget deficit to undergo changes in the overall strategy. The findings suggest that this process has, in fact, been sustainable and point to prudent public sector policies by the fiscal authorities.

Keywords: *Budget Deficit Sustainability, Public Debt Sustainability, Economic Growth, Government Intertemporal Budget Deficit (GIBC), Malaysia*

1. Introduction

Issues of sustainability of deficits and debts are often raised as arguments for fiscal austerity. The issues that frequently debated included the meaning and importance of sustainability, the extent of the budget deficit creating unsustainable public debt and being detrimental to growth, the importance and the extent of the

inter-temporal budget constraint holding, and the extent that it is consistent with household behaviour. In general, fiscal sustainability is the ability of a government to sustain its current tax, spending, and other policies from defaulting its liabilities or promised expenditures, or in the long run without threatening government solvency (Burnside, 2005). In the other words, the concept of fiscal sustainability is related to the ability of the government to keep its present policies while remains solvent.

Fiscal sustainability is normally accessed by using government inter-temporal budget constraints, which is regarding the long-term relationship between government expenditure and revenue (GIBC). Fiscal sustainability is described by intertemporal budget constraints or static budget constraints. The static budget constraint is the ability of the public sector to finance the current expenditure with new borrowing and paying its rollover or its maturing liabilities. Meanwhile the intertemporal budget constraint is about solvency conditions that require the present discounted value of future primary budget balance must be as same as the value of the outstanding stock of debt (Akyüz, 2010)

In examining the intertemporal budget balance, the focus of empirical studies was on the sustainability of expenditures, tax revenue, and debt. For instant, a study by Hakkio and Rush (1991), and Wilcox (1989) for the U.S reject the inter-temporal budget balance. In contrast, Cunado, Gil-Alana, and de Gracia (2004), Hamilton and Flavin (1985), and Trehan and Walsh (1988) not rejected it. Baharumshah and Lau (2007) investigated the government inter-temporal budget constraint in East Asia. Their result demonstrated the weak sustainability for Malaysian and the Philippines, while South Korea and Thailand show sustainable fiscal finance during the sample period. The results also show that Singapore government revenue is growing faster than government spending

Recently Magazzino, Brady, and Forte (2019) investigated the sustainability of fiscal policy used panel data for the G-7 countries from 1980–2015. They found a clear cointegrating relationship between government debt and primary deficit. Therefore, these countries should pay attention to the equilibrium between expenditure and revenues, as a possible sources of fiscal insolvency. Park and Sung (2020) investigated the fiscal sustainability in 180 countries including OECD and non-OECD countries, used the data from 1980 to 2015. The results were: (1) fiscal sustainability increases in OECD countries due to better access to liquidity and international credit. Non-OECD countries were found more solvent than OECD countries, (2) better access to international liquidity does not improve non-OECD countries' fiscal solvency but increased the fiscal sustainability of OECD countries.

Goyal, Khundrakpam, and Ray (2004) used a co-integration methodology and found the unsustainable fiscal policies of the State and Central government in India. However, Bohn (1998) mentioned a serious problem with the co-integration analysis is that the accumulated debt and persistent budget deficit is not necessarily indicated that debt is unchangeable, thus, fiscal processes are unsustainable. Furthermore, Leachman, Bester, Rosas, and Lange (2005) mentioned that the co-integration approach may indicate that the fiscal process is not sustainable under the stochastic environment.

Study by Irungu, Chevallier, and Ndiritu (2020) for Kenya used regime-switching model to examine the extend of fiscal policy affect the long run sustainability. The result were: (1) regime switching-model adequately show the fiscal policy regime in Kenya over years, (2) the average duration for each regime changes is four years, (3) the long-run debt to output ratio was unstable. Aldama and Creel (2019) investigated the sustainability of the United States in the long run. They test the sufficient condition of the regime-switching fiscal policy found a sustainable fiscal policy for the United States since 1940.

Celasun, Debrun, and Ostry (2006) suggested the probabilistic approach for fiscal sustainability. They authorised structural breaks in the data generation mechanism through the application of Markov-Switching models. These methodological modifications have significant impacts on the results for specific

country cases. Similarly, Budina, Wijnbergen, and Li (2009) used a stochastic simulation (Monte Carlo) for the high volatility of key variables for Turkey and developed a Value at Risk approach to fiscal sustainability analysis. The results suggested that an important fiscal adjustment, with primary surpluses, is relevant to a decline in public debt (as a share of GDP).

Malaysia: Amid Growing Deficit and Debt Worries

The fiscal position of Malaysia is sustainable based on a study by Abdullah et al. (2012). However, they recommended the need for improvement and a revival of the sustainability indicators to reinforce the role of long run estimates to design fiscal policy in the short run. They argued that reinforcing the short run fiscal policy design and improvements in fiscal sustainability would put Malaysia on the trajectory to a higher path of growth. In contrast, study by Sulaiman et al. (2015) that assess the fiscal sustainability of Malaysia using two fiscal sustainability indicators (primary gap indicator and recursive algorithm indicator) found that Malaysia's current fiscal policy is weakly sustainable.

In the 1970s, Malaysia's economy mainly relied on the export of commodities and natural resources. However, starting from 1980s, Malaysia has started is industrialisation programme, which has successfully changed its economy landscape with a diverse export of manufacturing products and services. Malaysia also aspired to achieve a high-income nation status by the year 2020. However, the nation's economic growth was affected by uncertainties in the global economy and external factors.

In the 1970s, Malaysia government had ventured above its traditional functionality by being actively and directly involved in the economic development of the country. In the 1980s, the Malaysian government vigorously promoted heavy industries and foreign direct investment. With rapid industrial development, the manufacturing sector has led Malaysia's economy's growth. As a result, Malaysia's economy has grown more than 7% per annum from the 1980s to the early 1990s (Figure 1).

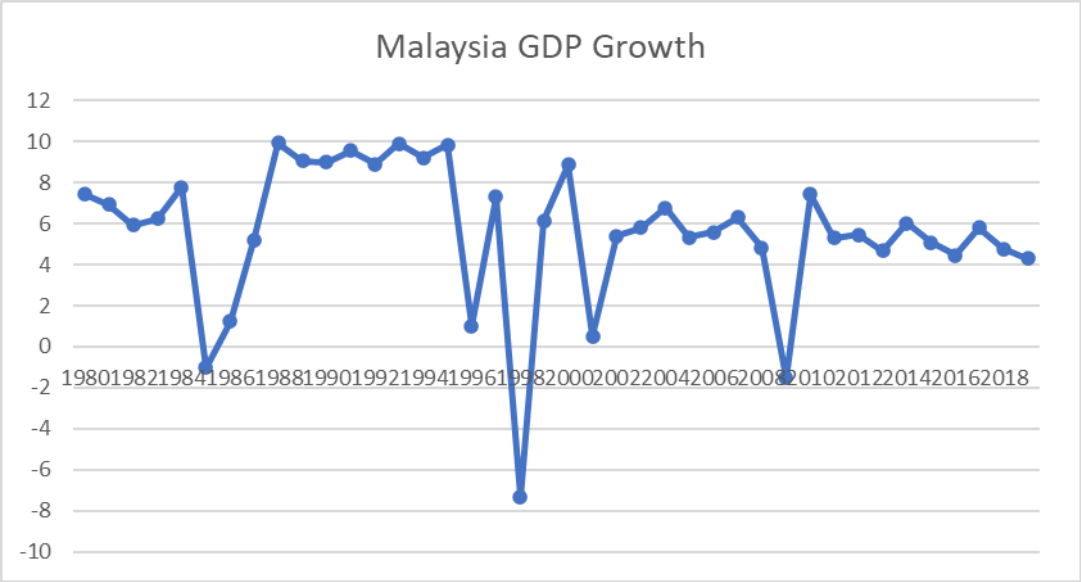
Asian Financial Crisis in 1997 has affect Malaysia's manufacturing sector seriously. Due to the crisis, Malaysia's Gross Domestic Product (GDP) growth has dropped to -7.2 % in 1998 compared to 7.3% in 1997 (Figure 1). In the year 2007, Global Financial Crisis has also led to the downturn in Malaysia's economy, which showed the vulnerability of the country's export-dependent growth. The real GDP growth rate shifted to -1.6% in 2009 compared to 4.8% in 2008, and Malaysia also suffered the biggest drop in exports in 2009 (Izwan, 2015).

In Malaysia, government spending is mainly financed through tax revenue. As a result, Malaysia's government has encountered huge budget deficits by implementing an expansionary fiscal policy to stimulate the economy during the Asian Financial Crisis. Thus, there is an increasing concern on the fiscal sustainability of Malaysia as it has been recording a fiscal deficit since 1970. The budgets deficit has increased dramatically from RM5,003 million in year 1998 to RM9,487 million in 1999, and to RM19,715 million in 2000 because of higher government spending in comparison to its revenue (Abdullah et al. 2012).

The Global Financial Crisis in 2008 had caused the Malaysian debt ratio to GDP to increase from 39.8% in 2008 to 50.8% in 2009. This was a result of the largest economic stimulus package unveiled by the government to mitigate the impact of the crisis; RM67 billion, causing the deficit to increase to 6.7% of GDP in 2009 from 4.6% in 2008. The debt ratio continued to increase until it reached 53% in 2013 before it reduced slightly to 52.7% in 2014. Consequently, this would limit the fiscal space for any economic stimulus package to counter future economic shocks (Sulaiman et al. 2015).

Malaysian government currently addressing the fiscal sustainability issue by ensuring compliance to the fiscal rules, which among others, the debt ratio should not exceed 55% of GDP, and borrowing is for development purposes only. The government fiscal consolidation programs also have managed to reduce the fiscal deficit from 6.7% in 2009 to 3.4% in 2014and are targeted to be reduced further to achieve fiscal balance by 2020. Malaysia's government is also determined to reduce the debt ratio to 45% by the year 2020 under the Eleventh Malaysian Plan (11MP).

The current approach used by the policymakers, however, is inadequate as it does not address the long-term fiscal sustainability issues. Large debt levels coupled with a widening fiscal deficit increase the risk of insolvency in Malaysia. Based on the current economic conditions, this country requires more fiscal space to safeguard and maneuverer its growth. The present fiscal conditions with high leverage and persistent deficit have increased concerns on Malaysia's fiscal sustainability if the trend continued.



Source: The World Bank

Figure 1: Malaysia GDP Growth Rate from 1980-2020

2. Method

This study uses quarterly data from 1990 – 2015, and the main source of data were from the Thomson Reuters DataStream. There are three main variables involved in this study: real output growth (RGDP), budget deficit and public debt. The output growth was computed as a change in the RGDP. In the estimation process, all data are transformed into logarithm.

Fiscal sustainability is commonly initiated from the intertemporal budget constraints of government (Elliott & Kearney, 1988). Studies on fiscal sustainability generally emphasize both the univariate properties of debt as studied by Hamilton and Flavin, (1985), and long-term relationship between expenditures and revenues (Hakkio & Rush, 1991). The government intertemporal budget constraints (GIBC) states that the long-term

relationship among government expenditure and government revenue can cover the overall spending of the government on products and, services, interest on debts and transfer payments.

GIBS shows budget constraints encountered by the government at period *t*. Specifically, if GE_t is real government expenditure,GR_t is the government revenue,PD_t is government debt, and IR_t is the (one period) interest rate, the budget constraint that government is encountering at period*t* could be defined as:

$$GE_t + (1 + IR_t)PD_{t-1} = GR_t + PD_t \qquad (1)$$

The factors in Equation (1) could be real or nominal and deflated by real GDP or population (Hakkio & Rush, 1991). The interest ratein Equation (1) depends on how GE and GR are evaluated. When the variables are nominal, $IR_t$is the nominal interest rate; when the variables are real,IR_t is the real interest rate (Hakkio & Rush, 1991). Since this budget constraint must be satisfied for all periods, the intertemporal budget constraint as suggested by Hamilton and Flavin (1985) can be rewritten as follows:

$$PD_t = \left[\sum_{i=1}^{\infty}\left\{\prod_{j=1}^{i}\left(\frac{1}{1+IR_{t+j}}\right)\right\}S_{t+i}\right] + \left[\lim_{i\to\infty}\prod_{j=1}^{i}\left(\frac{1}{1+IR_{t+j}}\right)PD_t\right] \qquad (2)$$

The first term in the Equation (2) shows that the present value of government debt $PD_t$is equal to expected current value of future main surpluses$\left[\sum_{i=1}^{\infty}\left\{\prod_{j=1}^{i}\left(\frac{1}{1+IR_{t+j}}\right)\right\}S_{t+i}\right]$. The second term in Equation (2) is crucial to check the fiscal sustainability (Takero, 2004). If the limit term is zero ($\lim_{i\to\infty}\left[\prod_{j=1}^{i}\left(\frac{1}{1+IR_{t+j}}\right)B_t\right] = 0$), thus, fiscal policy would remain sustainable. This implies that the deficit is sustainable if and only if the stock of debt held by the public is expected to grow no faster than the mean real rate of interest, which is viewed as a proxy for the growth rate of the economy.

The above Equation (2), however, is not an appropriate equation for testing the sustainability of fiscal deficit. The literatures (Hakkio & Rush, 1991; Husted, 1992)assume that the real interest rate is stationary around a meanr^* , then needs to rewrite it. Therefore, in order to estimate the model, the equation needs to further manipulation, hence, Equation (2) after simplification yields written as;

$$GGE_t - GR_t = \sum_{i=0}^{\infty}\frac{\Delta GR_{t+i} - \Delta GGE_{t+i} + r\Delta B_{t-1+i}}{(1+r)^{i-1}} + \lim_{i\to\infty}\frac{B_{t+i}}{(1+r)^{i+1}} \qquad (3)$$

Where GGE_t represent the total government spending on goods and services, transfer payments and interest on debts or $GGE_t = GE_t + rB_{t-1}$.Hakkio and Rush (1991), assume that GR_t and $GE_t + (1 + r)B_{t-1}$ are both nonstationary variables of $GR_t = \alpha_1 + GR_{t-1} + \varepsilon_{1t}$ and $GGE_t = \alpha_2 + GGE_{t-1} + \varepsilon_{2t}$, with ε_{it} it stationary processes. This provide a statistical framework for testing sustainability, consequently, Equation (3) can be conveniently rewritten as

$$GGE_t = \alpha + GR_t + \lim_{i\to\infty} \frac{B_{t+i}}{(1+r)^{i+1}} + \varepsilon_t \qquad (4)$$

Where $\alpha = \frac{1+r}{r}(\alpha_1 - \alpha_2)$ and $\varepsilon_t = \sum_{i=0}^{\infty} \frac{(\varepsilon_{1t} - \varepsilon_{2t})}{(1+r)^{i-1}}$. Equation (4) forms the basis for testing the hypothesis of sustainable fiscal deficit. Assuming that thetransversality condition for the budget constraint holds and the limit term in Equation (4) is zero, it arrived at the following cointegrating relationship

$$GR_t = \alpha + \beta GGE_t + \mu_t \qquad (5)$$

Equation (5) has been widely used as the basis for assessing the sustainability condition of government intertemporal budget constant, in which β is assumed to be unity and μ_t is a stationary process (see, for example, Trehan and Walsh (1988); Quintos (1995); Kalyoncu (2005)).In short, the two variables are said to be cointegrated with each other if by itself the variables are not stationary. The early tests of sustainability with cointegration methodsare provided byTrehan and Walsh (1988, 1991), Hakkio and Rush (1991), Haug (1991), Ahmed and Rogers (1995), however, the value that exeist for α and β are stationary regarding the combination of them, hence $GR_t - \beta GGE_t - \alpha = \mu_t$ is stationary as well. If the two variables are cointegrated, they cannot deviate from the cointegrating relationship beyond constant fluctuation bands, since μ_t has a constant variance. This is equivalent to saying that the deficit is sustainable if and only if the stock of debt held by the public is expected to grow no faster than the mean real rate of interest which is viewed as a proxy for the growth rate of the economy.

Regarding the available literature, this research analyzed four probable scenarios for sustainability situations as below (see, Quintos (1995); Martin (2000)):

- Deficit is sustainable strongly if *I (1)* processes of the GR and also GGE have cointegartion with the cointegrating vector [1, -1] or with the $\beta = 1$. Thus, the budget constraint of government holds intertemporarily and simultaneously the debt process which is undiscounted PD_t is $I(1)$.
  Deficit is sustainable weakly if GR and GGE have cointegration with $0 < \beta < 1$. According to Hakkio and Rush (1991), the $0 < \beta < 1$ would be a proper criterion for having a sustainable deficit. However, the $\beta < 1$ condition shows that expenditure of government always will be more than its revenue.
  In this limit, the undiscounted stock of debts will reach infinity and make the value of debt unbounded which provides incentives for the government to default on its debt. Therefore, this outcome is a less desirable option (Quintos, 1995).
- Deficit would be sustainable if $\beta \leq 0$. The unsustainable deficit shows that B_t explodes at a similar rate to or more than the economy's growth rate so limiting term in Equation (2) for GIBC will be violated.
- Lastly, the $\beta > 1$ demonstartes that revenue of the government is growing faster than government expenditure rate (Martin,2000).

For this, the common procedure is to examine the unit root for b_t(Hamilton & Flavin, 1985; Wilcox, 1989) and to apply cointegration tests to Equation 5(Ahmed & Rogers, 1995; Hakkio & Rush, 1991; Haug, 1991). However, one of the possible shortcomings of the outlined cointegration methodology above would be the fact that the relationship is considered invariant. Often the fiscal policy can be changed and encouraged by economic or political reasons, this might result in sustained deficits periods that can have

critical implications to the sustainability analysis, resulting in apparent global unsustainability, as shown inHaug (1995) and Quintos (1995).

3. Findings and Discussions

Unit Root Tests

In this research, the unit root tests were performed using the Augmented Dickey-Fuller (ADF) and Phillips-Perron (PP) tests. The use of two tests is to ensure that the results of the stationary test are conclusive. Table 1 shows the result from the two stationary tests for each series involved in this study.The results of unit root tests in Table 1 revealed that almost all the variablesare stationary at first difference. The unit root results of ADF and PP tests found that variables are stationary at the first difference, for both models, with intercept, and model with intercept and trend. The results suggest that all variables are stationary at first difference.

Table 1: Stationary properties of the data

		Level		First difference	
Variable	Test	Intercept	Intercept&Trend	Intercept	Intercept&Trend
GDP	ADF	-2.89 [5] (-2.58)	-3.45 [5] (-2.06)	-2.89 [4] (-5.64)**	-3.45 (-6.24)**
	PP	-2.88 [6] (-2.00)	-3.45 [7] (-2.67)	-2.89 [7] (-10.59)**	-3.45 [6] (-10.48)**
GDPGR	ADF	-2.89 [9] (-2.48)	-3.45 [9] (-2.74)	-2.89 [12] (-3.45)**	-3.46 [12] (-3.48)**
	PP	-2.88 [4] (-3.36)**	-3.45 [4] (-3.54)**	2.89 [25] (-5.73)**	-3.45 [25] (-5.67)**
BD	ADF	-2.89 [4] (-1.17)	-3.45 [3] (-3.34)	-2.89 [3] (-11.25)**	-3.45 [3] (-11.21)**
	PP	-2.88 [8] (-9.05)**	-3.45 [8] (-10.09)**	-2.89 [9] (-28.89)**	-3.45 [9] (-28.79)**
PD	ADF	-2.89 [9] (-2.62)	-3.45 [9] (-3.27)	-2.89 [8] (-3.73)**	-3.45 [8] (-2.10)
	PP	-2.88 [6] (-2.40)	-3.45 [4] (-2.21)	-2.89 [12] (-4.54)**	-3.45 [13] (-4.90)**
GR	ADF	-2.89 [9] -2.28	-3.45 [9] (-2.25)	-2.89 [8] (-3.00)**	-3.45 [8] (-3.05)
	PP	-2.88 [7] (-2.33)	-3.45 [7] (-2.26)	-2.89 [61] (-5.62)**	-3.45 [63] (-5.97)**
GE	ADF	-2.89 [9] (-2.71)	3.45 [9] (-3.09)	-2.89 [8] (-3.26)**	-3.45 [8] (-3.49)**
	PP	-2.88 [2] (-2.63)	-3.45 [2] (-2.95)	-2.89 [23] (-5.18)**	-3.45 [22] (-5.14)**

Note: ** significance at 5%. Figure in () is critical value. Figure in [ ] is lag length for ADF and bandwidth for PP test. Critical values for 5% is -2.889 for intercept analysis, while -3.454 is for intercept and trend analysis. All data are in logarithm. ***Source:*** Author's findings

Multivariate co-integration analysis

This study uses multivariate VAR Johansen cointegration tests to investigate the long-run relationship between the variables studied together with the control variables. The test provides the number of co-integrated vectors of the multivariate VAR model. Equation 6 presents the VAR model. In the model, the cointegration tests between budget deficit and economic growth.

$$V' = [BD\ GDPGR, GR, GE] \quad (6)$$

The result of the multivariate cointegration tests that presented in Panel A of Table 2was estimated with the optimum lag length of four based on the SIC. The trace tests show that there is one cointegration vector between the variables. The result suggests there is a long-run co-movement between these variables.

Meanwhile, Panel B of Table 2 presents the result for cointegration analysis between public debt (PD) and economic growth (GDPGR), together with the related control variables involved in the estimation (Equation 7).

$$V' = [PD\ GDPGRGRGE] \quad (7)$$

Based on the SIC, Equation 7 was estimated with the optimum lag length of one. The result from trace test shows there are three cointegration vectors between the variables at 5% critical values. The conclusion from maximum eigenvalue also found there are threecointegration vectors between the variables.

Table 2: Result from multivariate cointegration tests

PANEL A: Budget deficit and economic growth						
Variables	H_0	Trace Statistic	%5 Critical Value	Maximum Eigenvalue	%5 Critical Value	Conclusion
$\Delta GDPGR, \Delta BD, \Delta GR, \Delta GE,$	$r = 0$	**90.50****	47.85	**60.75***	39.37	Trace test indicates 3 cointegrating equation at 0.05 significant levels
	$r \leq 1$	**29.74****	25.79	13.61	33.46	
	$r \leq 2$	**16.12****	15.49	13.09	27.07	
	$r \leq 3$	3.02	3.84	3.02	20.97	
PANEL B: Public debt and economic growth						
Variables	H_0	Trace Statistic	%5 Critical Value	Maximum Eigenvalue	%5 Critical Value	Conclusion
$\Delta GDPGR, \Delta PD, \Delta GR, \Delta GE,$	$r = 0$	**152.90****	47.85	**112.66****	27.58	Trace test indicates 3 cointegrating equation at 0.05 significant levels
	$r \leq 1$	**40.23****	29.79	**23.04****	21.13	
	$r \leq 2$	**17.19***	15.49	**16.88****	14.26	
	$r \leq 3$	0.31	3.84	0.31	3.84	

Note: *Significant at 5% level. The *r* denotes the maximum number of cointegrating vectors. Δ denotes first difference. H_o is null hypothesis for trace test.

Sustainability of Budget Deficit

To examine the sustainability of Malaysia's fiscal deficit using government intertemporal budget constraint (GIBC), this study used the method developed by Stock and Watson (1993). The method allows for the (dynamic) estimation of cointegrating vectors for systems involving deterministic components. The results of the dynamic OLS method (Table 3) show that the estimated β is 0.174 indicating a weak sustainable path of fiscal deficit in Malaysia. The null hypothesis of $\beta = 1$was rejected at 5% significance levels (χ^2 = 10.585). However, $0 < \beta < 1$ implies that goverment revenue will always be lower than government expenditure (Hakkio & Rush; 1991).

This study also tests the stability of the estimated results by using CUSUMSQ. If the plot of the CUSUMSQ sample path moves outside the critical region (at the 5% significant level), the null hypothesis of stability over time of the intercept and slope parameters is rejected. Figure 2 displays the result of CUSUMSQ. The result implies the instability path for the deficit in Malaysia during the sample period.

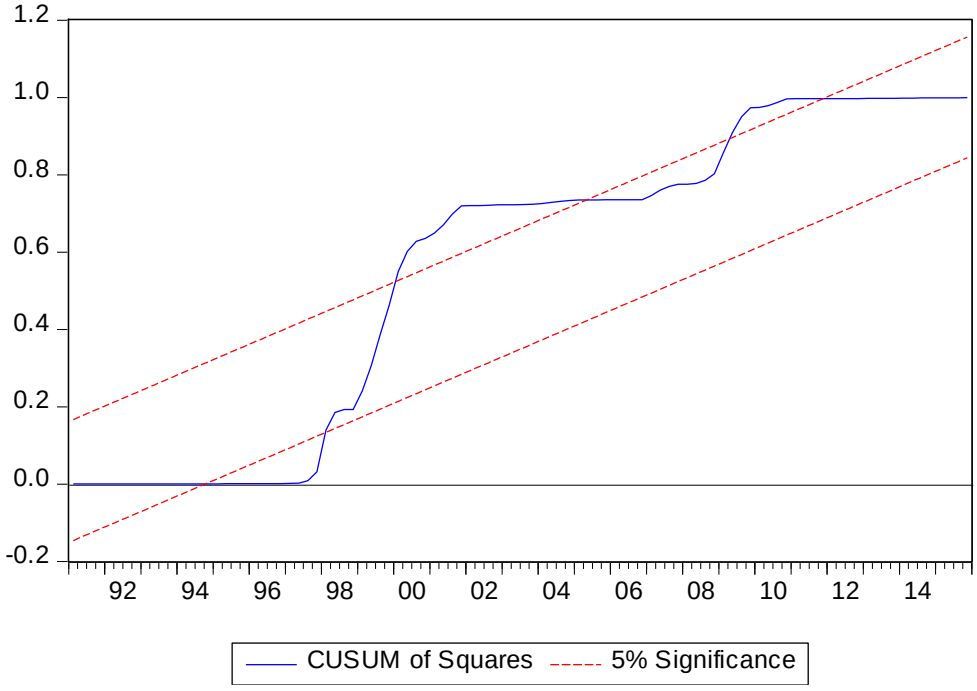
The results from OLS estimation suggest that for every ringgit spends by the government, the revenue generated is around 0.174 cents. However, based on CUSUMSQ, this study found evidence that the sample period is not stable. Therefore, there is a danger that the budget deficit could explode if the government's revenue is not improved or if a large portion of government expenditure is going towards unproductive investment. To avoid this, Malaysia should rebalance its financial structure by reducing the size of budget spending especially in the non-development spending.

Table 3: Dynamic OLS estimation for Budget Deficit

Data from 1990 – 2015	
Coefficient of $\boldsymbol{\beta}$	0.174
t-statistics	0.687 (0.494)
H0: $\boldsymbol{\beta}$ =1	10.585 (0.001)

Note: Parenthesized indicate the probability (p-value)

Figure 2: CUSUM square test result from 1990 to 2015



Sustainability of Public Debt

This study also used government intertemporal budget constraint (GIBC) to examine the sustainability of Malaysia's public debt. As in the case of the budget deficit, this study used the method proposed by Stock and Watson (1993) that allows for the (dynamic) estimation of cointegrating vectors for systems involving deterministic components. Equation (5) has been employed to determine whether the cointegration coefficient is in the strong form of sustainability or not.

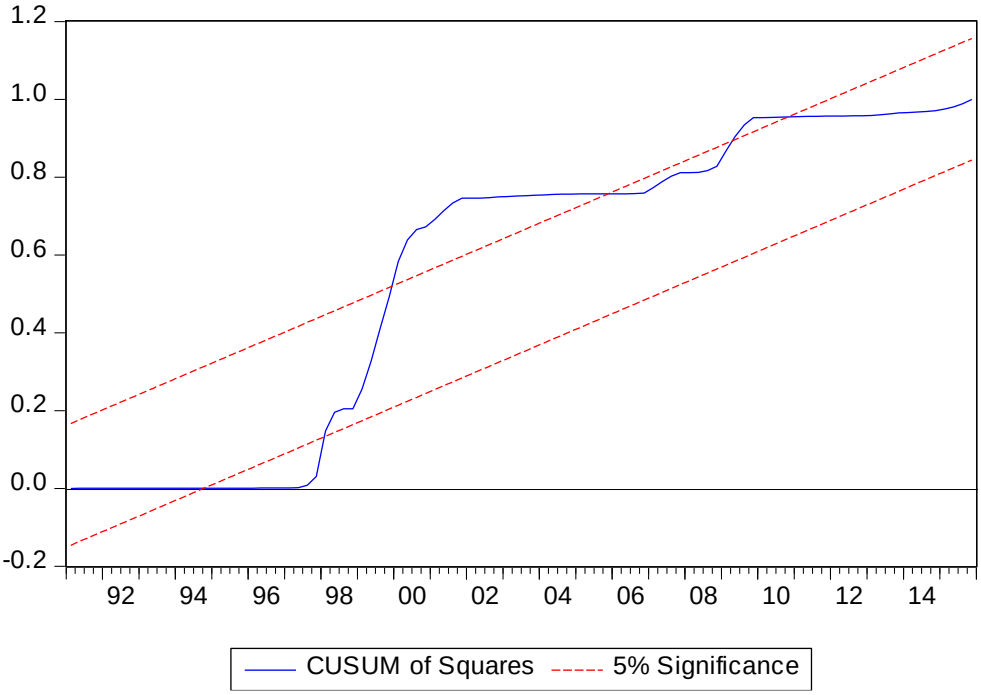
The result of the dynamic OLS method (Table 4) shows that the estimated β is 0.064, indicating there is a weak sustainable path for public debt in Malaysia. In addition, the plot of CUSUMQ is also outside the critical region, which means the slop parameters is rejected by CUSUMQ at 5 percent significance. The result implies the unstable path for public debt in Malaysia during the sample period. The result of CUSUMQ is also consistent with the result in Table 4.

Table 4: Dynamic OLS estimation (DOLS) for Public Debt

Data from 1990 – 2015	
Coefficient of $\boldsymbol{\beta}$	0.064
t-statistics	0.0175 (0.986)
H0: $\boldsymbol{\beta}$ =1	0.065 (0.799)

Note: Parenthesized indicate the probability (p-value)

Figure 3: CUSUM square test result from 1990 to2015



4. Conclusion

This study examined the sustainability of budget deficit and public debtin Malaysia using quarterly data from 1990 to 2015. Based on the government intertemporal budget constraint (GIBC), this study used Ordinary Least Square (OLS) for short-run dynamic analysis, and multivariate cointegrations for long-run analysis. The findings from the analysis lead to the following conclusions. First, there is a significant long run cointegration relationship between main variables. Second, there is evidence of weak form sustainability condition in the samples, suggesting that Malaysia is on the sustainable path in governing their fiscal performance. The results suggest that for every ringgit spends by government, the revenue generated is around 0.174 cents. However, the CUSUMSQ experiment showed that t is not stable. This is due to the decade of deficit in the budget of Malaysia. There is a danger that the budget deficit could explode if the government's revenue performance is not improved or if a large portion of government expenditure is going towards unproductive investment. Whilst the gap between government expenditure and government revenue has not exploded, we caution that Malaysia should adopt a more ambitious fiscal framework to rebalance its financial structure. This would include reallocation of its spending to the development expenditures which will increase the productive capacity and the state GDP as whole. With the introduction of the idea of balance regional development. Towards this end, monitoring, maintaining and sustaining stable fiscal position are important for the macroeconomic stability towards long run economic growth in Malaysia.This study amplifies the urgency for fiscal restraint to ensure sustainable economic growth in Malaysia.

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