Fiscal Deficits and Macroeconomic Performance in Malaysia

Eu Chye Tan*[1]

The primary purpose of this paper is to examine whether any correlation exists in Malaysia between fiscal deficits on the one hand and inflation, real interest rates, private consumption and investment, external balances and real exchange rates on the other. Attention is also paid to the mode of deficit financing in this study as the way deficits are financed would dictate the macroeconomic effects of fiscal policy. Amongst the findings of this study include, fiscal deficits could be associated with a current account surplus, contrary to general expectations; an increase in fiscal deficits could cause real exchange rate depreciation; and the possible crowding-out of private sector investment and consumption via the liquidity rather than interest rate channel.

1. Overview

The primary objective of this paper is to establish whether any correlation exists between fiscal deficits on the one hand and inflation, real interest rates, private consumption and investment, external balances and the real exchange rate on the other in Malaysia based on correlation analyses. Deficits may be inimical to economic growth especially if capital accumulation is disrupted. Prudent fiscal policies would place a country on a stable economic growth path. The results of the correlation analyses can be taken as broadly suggestive of any relationship that prevails. This mode of analysis may be preferred to the more sophisticated econometric techniques owing to the limited sample period, involving the inevitable use of

annual data only from the 1970s. Data of some variables prior to the 1970s are either not compatible or not available. Annual rather than quarterly data have to be used due to the absence of quarterly data of certain variables. It is widely acknowledged that the use of the Ordinary Least Squares technique would give rise to the problem of spurious regression as macroeconomic data commonly possess at least one unit root and hence, some cointegration technique should be deployed. However, the Engle-Granger and Johansen cointegration tests are highly inappropriate for small samples. Thus, it is felt that correlation analyses that could yield broadly suggestive results may serve the objective of this study better. In the course of the analysis, attention will also be devoted to the mode of deficit financing as the macroeconomic effects of fiscal policy hinge crucially on how deficits are being financed.

A priori, systemic public sector deficits are usually due to unwise policy decisions that yield undesirable macroeconomic consequences such as high inflation, low inflation but with low investment and growth, financial and price instability and perennial current account deficits (Easterly, Rodriguez & Schmidt-Hebbel, 1994). Linkages amongst fiscal deficits, monetary growth and inflation have long been central to the "orthodox" view of the inflationary process (Agenor & Montiel, 1996). However, increased attention has also been given to issues related to the role of alternative financing options in the determination of real interest rates and the sustainability of fiscal deficits; the impact of public sector imbalances on the current account and the real exchange rate; the role of expectations about future fiscal and monetary policies in the dynamics of prices; and the extent to which private agents regard bonds as "net wealth" or more generally, the Ricardian equivalence proposition.

The rest of the paper is arranged as follows. Section II provides a more elaborate review of the literature while Section III reviews the behavior of some Malaysian fiscal policy variables. Empirical analyses and results are discussed in Section IV. Given that the 1997 financial crisis and

its aftermath remains hitherto a subject of interest, Section V is devoted to a discussion of the Malaysian fiscal policy experience in recent years. The paper concludes with remarks in Section VI.

2. Literature Review

Owing to political and administrative constraints on tax collection and the limited scope for issuing domestic debt, developing countries tend to rely heavily on seigniorage for deficit financing with highly inflationary consequences. Seigniorage may be decomposed into two components, namely, one that is attributable to real changes in the money base and the other to inflation tax. A low degree of association between accelerations in inflation and bursts of seigniorage may be envisaged if seigniorage is chiefly driven by real money balances. It is possible to secure a temporary increase in seigniorage revenue via raising reserve requirements or via exploiting exogenous increases in the demand for money instead of by indiscriminate printing of money (Easterly & Schmidt-Hebbel, 1994).

A government may of course finance its spending by simply printing paper money. Through this means, it can secure command over resources which are just as real as those derived from taxation (Agenor & Montiel, 1996). So long as there is a demand for money by the public, there is scope for the government to harness resources via inflation generation. It represents an implicit tax levied by the government and is generally the amount of real resources appropriated by the government via base money creation. Following Agenor & Montiel (1996), seigniorage revenue may be computed as follows:

$$S_{rec} = \overset{o}{m}_t + \pi_t \, m_t$$

i.e. as the sum of the increase in the real stock of money ($\overset{o}{m}_t$) and the change in the real money stock that would have transpired given a constant nominal stock due to inflation ($\pi_t \, m_t$). The last expression may be referred

to as the inflation tax component (I_{tax}) of seigniorage. In a stationary state when $\overset{o}{m_t}$ = 0, seigniorage would amount to the inflation tax. Hence to the extent that inflation is generated by money creation, seigniorage may be perceived as a tax on private agents' domestic currency holdings. Nevertheless, de Haan and Zelhorst (1990) find that the correlation between fiscal deficits and seigniorage tends to prevail only in high-inflation countries.

The relationship between fiscal deficits and inflation may be viewed in terms of Milton Friedman's assertion that inflation is always and everywhere a monetary phenomenon. However, governments usually print money for the purpose of financing fiscal imbalances. In this respect, rapid inflation may be rather viewed as almost always a fiscal phenomenon (Fischer & Easterly, 1990). There are at least two other possible explanations for the inflationary consequences of fiscal deficits, namely, lack of development of the domestic capital market that could absorb new government debt instruments (Shahin, 1992) and direct controls of the central bank by the central government. Such controls may result in passive financing of the latter's fiscal deficit by the former via money creation.

However, the following factors may contribute to a negative or weak correlation between fiscal deficits and inflation:

(1) Deficit-financing by the issuance of domestic bonds (which may be feasible in the short-run) instead of money or foreign borrowings. While the latter may increase overall liquidity in the economy, sales of bonds in the domestic financial market may not;

(2) Wage and price inertias in the domestic economy that render wage and price levels irresponsive to changes in inflationary pressures;

(3) Public expectations about the future direction of fiscal policy. If the government is expected to eventually reduce its deficit through inflation, current inflation may be higher as a result. However, if a subsequent scale-down in government spending is expected, inflationary expectations may be revised downwards and a lower current inflation is probable

(Drazen & Helpman, 1990);

(4) There may be other more fundamental causes of inflation such as oil price hikes and exchange rate depreciation or devaluation; and

(5) The prevalence of Ricardian equivalence.

To a large extent, the strength of the macroeconomic impact of fiscal policy would depend on the invalidity of the Ricardian equivalence proposition. According to the Ricardian equivalence hypothesis, debt-financing and taxes are equivalent in terms of their impact on consumption (Barro, 1974). A tax cut that simply substitutes debt-financing for tax-financing of government expenditure may yield no positive impact on private consumption if it induces a rise in savings of similar magnitude. With perfect foresight, consumers would perceive the eventual need of the government to raise taxes to settle the new debts that it currently incurs. Thus, to brace for an impending increase in tax burden, consumers may instead decide to trim their current consumption in favor of higher savings. This also implies that if the government decides to bolster the economy by increasing its spending through debt-financing, the effect on the economy would be fully offset by a reduction in private spending. The Ricardian equiva-lence proposition would rule out the impact of fiscal deficits on aggregate saving or investment and hence on the external current account.

For Ricardian equivalence to hold; however, a number of condi-tions have to prevail. They include infinite planning horizons, certainty about future tax burdens, perfect capital markets that cast aside borrowing and lending constraints, rational expectations and non-distortionary taxes (Agenor & Montiel, 1996). The stringency of the assumptions has made this proposition and its debt neutrality implications difficult to withstand empirical scrutiny (see e.g. Seater, 1993; Haque & Montiel, 1989; Veidya-nathan, 1993; Corbo & Schmidt-Hebbel, 1991 and Easterly & Schmidt-Hebbel, 1994).

Domestic debt financing of fiscal deficits may result in higher real interest rates in countries with a relatively developed financial system that

allows market-determination of interest rates (Easterly & Schmidt-Hebbel, 1994; Guidotti & Kumar, 1991). The effect of large domestic public debts may be transmitted to the real interest rate via an increased risk of default that triggers a loss of private sector confidence in the sustainability of the government's fiscal position. This could be a potentially destabilizing mechanism as the upward pressure on the interest rate exerted by private sector pessimism could worsen the fiscal position (Fishlow & Morley, 1987). However, the empirical evidence of this effect is weak and an inverse relationship between real interest rates and fiscal deficits remains prob-able (Agenor & Montiel, 1996). There are at least three plausible explana-tions for the tenuous relationship, namely, the regulation of interest rates by central banks that prevents the nominal interest rate from edging towards the market-clearing level or financial repression (Easterly, 1989; Giovannini & de Melo, 1993); the relevance of expectations about future rather than the current actual fiscal policy in the determination of real interest rates; and a high degree of substitutability between public debt and other assets held by the private sector (Easterly & Schmidt-Hebbel, 1994).

Private investment and output may be dampened if real interest rates do indeed rise in tandem with domestic debt-financed fiscal deficits. Even if interest rates are regulated, private sector expenditure could still be crowded out as increased lending to the government could imply reduced availability of funds to the private sector. However, the adverse impact of large fiscal deficits particularly on growth may be averted or minimal if the deficits are primarily due to an increase in public investment, e.g. in infrastructure development that complements private investment. Hence, whether fiscal deficits would reduce private sector economic initiatives and thus economic growth could only be determined by sources of deficit financing and the direction of government expenditure.

While it may be more probable that high interest rates would ad-versely affect private investment, it is less certain that a hike in interest

rates would dampen private consumption (Easterly & Schmidt-Hebbel, 1994). The ambiguity arises from the operation of the offsetting substitution, income and wealth effects of an interest rate rise. While the substitution effect would discourage present consumption in favor of future consumption, both income and wealth effects would permit greater consumption in the present and in the future. If the substitution effect predominates, an inverse relationship between real interest rates and present private consumption may be envisaged. The converse is true if the income and wealth effects outweigh the substitution effect. There is little empirical evidence, however, to suggest that real interest rates have a positive effect on private saving and by implication, a negative impact on current private consumption. Notwithstanding this, as in the case of private investment, private consumption could still be influenced by increased government deficit even if interest rates remain unchanged due to reduced availability of credit as the public sector borrows more domestically.

Private consumption and hence private saving may also be affected by fiscal policies via changes in disposable income (Easterly & Schmidt-Hebbel, 1994). Based on the standard Keynesian hypothesis, a tax cut could potentially boost private consumption as it raises the disposable income of consumers. However, the permanent income hypothesis would suggest that only a permanent rather than a temporary tax cut that matters. The prevalence of Ricardian equivalence would however invalidate these hypotheses.

Generally, the fiscal approach to balance of payments would perceive fiscal imbalances as the main source of external imbalance. However, the effects of fiscal deficits or broadly the fiscal policy on the current account and the real exchange rate would depend on both the level and composition of public expenditure (Montiel, 1986; Khan & Lizondo, 1987). If public sector expenditure is more import-intensive and Ricardian equivalence does not hold, a strong association between fiscal and external deficits may be expected. Available empirical evidence seems to

suggest more a correspondence between fiscal and current account deficits (Easterly and Schmidt-Hebbel, 1994).[2]

A high degree of correlation between real exchange rates and fiscal deficits in developing countries existed in the 1980s. While fiscal deficit reductions could result in real exchange rate depreciation, increased fiscal deficits tend to lead to real exchange rate appreciation. According to Rodriguez's two-sector dependent-economy model with optimal capital accumulation (Easterly & Schmidt-Hebbel, 1994), an increase in public spending for a given trade deficit could imply a corresponding decline in private spending. If the public sector's propensity to import is greater than that of the private sector, an increase in public spending vis-à-vis private spending would thus imply a shift of demand towards imports instead of domestic goods. Consequently, a real exchange rate depreciation can be anticipated. Tests of this Rodriguez's hypothesis against a number of countries yield mixed results with certain countries displaying an inverse relationship between the real exchange rate and government spending while others, a direct relationship.

3. The Behavior of Malaysian Fiscal Policy Variables

There has been a reduction in the fraction of output absorbed by both the public sector as a whole and the federal government. Prior to the implementation of the New Economic Policy (NEP), the share of the overall public sector in nominal GDP was about 28% whilst that of the federal government was approximately 24% (Table 1). Subsequent to the

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[2] Fiscal deficits may also be associated with current account surpluses whenever there is output contraction. A contraction in GDP may result in both a decline in the tax revenue and imports if the demand for imports is income elastic. Hence for given exports and government spending, current account surpluses and fiscal deficits could co-exist in an economic downturn. Moreover, as consumers revise downward their expected income, savings may increase instead. Investors too may not be willing to borrow during a recession and banks may also be conservative in their lending owing to greater probability of default. Thus, despite burgeoning public sector deficit, a surplus in the current account remains probable.

implementation, the government played a much more active role in the economy in the 1970s until the mid 1980s when the overall public sector absorbed about 41% of nominal GDP while the federal government about 32%. However, with the structural adjustment program undertaken by the government following the economic crisis of the mid 1980s, and with the private sector being designated as the engine of growth, the share of the public sector slackened considerably to 36.5% in 1987-99 and that of the federal government to 25.8%.

The federal government occupies the integral position in the public sector though the share of the federal government in the total public sector expenditure has contracted somewhat from 85% towards the end of the 1970s to 70.7% in 1987-99. While the federal government accounted for about 70% of total development expenditure of the public sector in earlier years, it only accounted for about 48% in 1987-99. However, there has not been any drastic change in its operating expenditure position as its share in the total operating expenditure has consistently been maintained at above 80%.

The main source of federal government revenue is taxation though its significance as a source of revenue has waned from about 81.1% in 1970-86 to 75.1% in 1987-99 (Table 2). The significance of non-tax revenue has increased from 17.1% in 1970-86 to about 22.8% in 1987-99. Within the ambit of taxation, direct taxes have overtaken indirect taxes as a major source of tax revenue of the federal government in recent years. The share of direct taxes in total tax revenue expanded from 44.6% in 1970-86 to 54.1% in 1987-99. On the other hand, the share of indirect taxes slackened from 55.4% to 45.9%.

Of the different taxes, both corporate and personal income taxes have assumed increasing significance as sources of tax revenue with their shares rising from about 22.7% and 10% respectively in 1970-86 to 26.9% and 13% respectively in 1987-99. Both export and import duties have witnessed a reduction in their significance as sources of indirect tax

revenue in tandem with the government's pursuit of external trade liberalization. The share of export duties in total tax revenue diminished from 15.8% in 1970-86 to 5.3% in 1987-99 while that of import duties from 20.1% to 14.1%. Other indirect taxes have instead become more important sources of tax revenue, with their share expanding from 19.5% to 26.5%.

The diminishing share of taxation in total revenue has not been due to administrative capacity failures and political constraints but due to the deliberate policy of the government to relieve companies and individuals of tax burden. However, Malaysia has reached the norm of industrial countries where direct taxes specifically corporate and income taxes commanded the largest share in total tax revenue instead of taxes on foreign trade after the mid 1980s. Conventionally, direct taxation plays a much more limited role in developing than in industrial nations (Agenor & Montiel, 1996). Direct taxes, taxes on domestic goods and services and taxes on foreign trade constitute equal shares of total tax revenue in developing countries. Malaysia has also departed from the norms of developing countries where the share of personal income taxes in total tax revenue is significantly larger than that of corporate taxes. Nevertheless, she does retain a developing country feature that import rather than export duties form the bulk of trade taxes collected.[3]

4. Some Evidence on Relationships

Table 3 indicates that seigniorage has grown in significance as a source of fiscal revenue in Malaysia. The share of seigniorage in GDP expanded from 1.4% in 1976-86 to 3.5% in 1987-97.[4] These figures would place Malaysia in the ranks of developing countries as a vast majority of

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[3] This could imply a tendency for fiscal deficits to be larger whenever there is an economic slowdown as imports and thus, tariff revenue would be reduced then.

[4] In this and subsequent analyses, the period of review essentially ends in 1997 as extending the sample period through 1999 tends to give a distortionary picture of the actual underlying situation for most of the aspects under study. The year, 1998 is an outlier when the Malaysian economy unprecedentedly plunged by 7.4%.

them enjoy seigniorage revenue equivalent to more than 1% of GDP as opposed to industrial countries where it constitutes less than 0.8% of GDP (Agenor & Montiel, 1996).[5]

Nevertheless, the inflation tax component of seigniorage as a percentage of GDP averaged out to be relatively constant at around 0.6-0.7% from the period prior to the end of 1986 to the subsequent period. Despite higher seigniorage in the latter period, the rate of inflation averaged out to be lower than in the preceding period. In fact, Table 4 suggests that higher seigniorage (based on normalization and non normalization with respect to real GDP) did not translate into higher inflation in Malaysia during 1987-97, given the statistical insignificance of the estimated coefficients of correlation between seigniorage and inflation for this period though there was some positive correlation between the two earlier in 1976-86.[6]

Table 5 suggests that prior to 1987, government fiscal imbalances did not make any impact on inflation given the statistical insignificance of the estimated coefficients of correlation between overall public sector and federal government deficits on the one hand and inflation on the other. However, the situation somewhat changed after 1986 with the federal government deficit displaying a positive relationship with inflation. The statistically significant estimated correlation coefficient of 0.7 implies that inflation was potentially influenced by federal government deficits in 1987-97. The influence of the government fiscal position on inflation does not appear to have been transmitted through movements in reserve money as the table suggests no linkages between reserve money (or generally the monetary base) and inflation at all.

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[5] The question of whether the Malaysian Government does adopt any seigniorage-maximization strategy may not arise as according to Tan (1997), the demand for money (M0 and M1) in Malaysia is inelastic to inflation. This is explicable by Malaysia's low-inflation track record.

[6] All significance tests in this section refer to one-tailed tests of Student's t-distribution at the 0.05 level.

There is no evidence of a potential crowding-out of private sector investments via lending rate adjustment by fiscal deficits as Table 6 reveals no correlation between government fiscal deficits with lending rates, be they nominal or real. The evidence of the absence of such crowding-out effects is corroborated by the absence of positive correlations between government net domestic borrowings and lending rates. Thus, the government's policy of relying more on domestic rather than external borrowings since the mid-1980s has not implied a positive relationship between domestic borrowings and lending rates.[7]

Notwithstanding this, a direct linking of government fiscal deficits to private investment would suggest that government fiscal deficits could yield an adverse impact on private investment particularly after the mid-1980s. Table 7 indicates a strong negative correlation between overall public sector and federal government fiscal deficits on the one hand and private investment on the other with the correlation coefficients estimated at -0.8999 and -0.9086 respectively in 1987-97. This is further corroborated by the findings of strong negative correlations between government net domestic borrowings and private investment. The table reports negative correlation coefficients of -0.9491 and -0.8092 based on the overall public sector and the federal government net domestic borrowings respectively. It is also interesting to note that while government domestic borrowings would dampen private investment, external borrowings would not, given the estimated non-negative coefficient of correlation between public sector net external borrowings and private investment. This underscores the point that private capital accumulation could be jeopardized by fiscal deficits if they are being chiefly financed by domestic instead of external borrowings though interest rate movements are inconsequential.

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[7] The importance of interest rates in the determination of private investment is also ruled out by the absence of any statistically significant negative correlation between real private investment and real lending rates. This may be consistent with the notion of 'animal spirit' in investment decision-making where it is the economy's prospect that matters rather than the cost of borrowings.

The examination of the relationships between government fiscal deficits and its net domestic borrowings on the one hand and private investment on the other has highlighted a change in their directions since the mid-1980s. Specifically, there has been a switch in the relationship between government deficits and private investment from positive in the pre-1986 period to negative in the subsequent period. The same is true in respect of government domestic borrowings. This coincides with the structural adjustment measures then undertaken by the government that involved policies that favor domestic financing of its deficits against external financing, enhance private sector participation in the domestic economy and that strive for a balanced budget.

Though fiscal deficits may undermine private capital accumulation and thus long-term economic growth via the liquidity effect, it is interesting to note that positive correlations do exist between government development expenditure and private investment. Table 7 for example reports a positive coefficient of correlation between federal government development expenditure and private investment of 0.5466 in 1987-97.

Table 8 shows that fiscal deficits do seem to adversely affect private consumption particularly in 1987-97, given the estimated correlation coefficients of -0.8604 and -0.9242 with respect to the overall public sector and the federal government deficits respectively. Moreover, an increase in domestic borrowings by the government is projected to have a dampening influence on private consumption given the estimated negative correlation coefficients of -0.9203 in the case of the overall public sector and -0.8528 when only the federal government is concerned.[8]

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[8] Though real lending rates do not appear to have any bearing on real private investment, they do seem to have an inverse relation with real private consumption throughout the sample period, 1976-97 with estimated correlation coefficients of around -0.7. However, the impact of fiscal deficits on consumption might not have been transmitted through the interest rate channel as it was observed earlier, neither fiscal deficits nor government domestic borrowings could effectively influence these interest rate movements.

However, the adverse fiscal deficit situation could possibly be ameliorated by resorting more to external borrowings, as net external borrowings, particularly of the overall public sector are shown to correlate positively with private consumption. It is also noteworthy that there had been a switch in the pattern of relationships between fiscal deficits and government net domestic borrowings on the one hand and consumption on the other since the mid-1980s akin to private investment noted earlier.

Generally, fiscal deficits can be expected to yield a deficit in the current account of the balance of payments of a country. However, Table 9 would suggest that this does not accord with the experience of Malaysia after the mid-1980s. While fiscal deficits could be associated with a current account deficit prior to 1987, in subsequent years, they could correspond with a current account surplus instead. This is based on the estimated coefficients of correlation between government fiscal deficits and the external trade balance on goods and services which are negative to the order of -0.8 for 1976-86 and positive at around 0.5 and 0.7 for 1987-97.

Notwithstanding this, the possibility that increased government expenditure would contribute to an external trade deficit cannot be ruled out as the table also displays consistently negative correlations of total government expenditure, and government development and operating expenditures with external trade balances throughout the sample period. Such results would highlight the importance for one to examine the government expenditure movements as well rather than just its overall fiscal position when studying the impact of government fiscal behavior on the external current account of a country.

Table 10 would allude to real exchange rate depreciation as a consequence of an increase in fiscal deficits particularly of the Federal Government, given the estimated positive coefficients of correlation between government fiscal deficits and real exchange rates. Nevertheless, increases in government expenditure, be it the total or the sub-categories of operating and development expenditures could possibly result in a real

exchange rate appreciation particularly during the 1987-97 period given the estimated correlation coefficients of around -0.6. Such results also underscore the need to carefully distinguish between increases in government expenditure and in fiscal deficits when discussing the fiscal policy impact on the real exchange rate.

5. Malaysian Fiscal Policy Experience, 1998-2001

The adoption of the orthodox macroeconomic policies à la IMF as a response to the 1997 Asian financial crisis has aggravated its adverse macroeconomic impact on the Malaysian economy, leading to its contraction by 7.4% in 1998. As the economy showed no signs of reacting positively to the orthodox policies pursued, the Malaysian government drafted and implemented the National Economic Recovery Plan that culminated in the imposition of selective capital controls and the pegging of the Malaysian ringgit to the US dollar at RM3.80 in September 1998. This was purportedly to provide the breathing space for resuscitating the economy through the implementation of expansionary monetary and fiscal policies while in the process of addressing the long-term need for a financial and corporate reform in the economy.

After the 1998 macroeconomic policy initiatives, Malaysia generally appears to have adopted more expansionary fiscal policies than the other crisis afflicted-countries based on fiscal balances as a percentage of GDP. Table 11 reveals that the fiscal deficit of Malaysia increased from 1.8% of GDP in 1998 to 5.8% in 2000 before moderating somewhat to 5.5% in 2001. As a result of deficit budgets, outstanding debt of the Federal Government rose to about 7.9% of GNP (or 7.3% of GDP) in 2001 from 4.9% (4.6%) in 1997. However, the external debt service ratio stood merely at 0.5% due to the cautious overseas borrowing policy of the government.

Deficit fiscal policy contributed to economic growth in 1999 due to restored confidence amongst consumers and investors. Though growth was fuelled by the robust performance of export-oriented industries, a fiscal

deficit boost was still needed due to weak domestic demand and the prevalence of excess capacity in certain sectors of the economy. This called for the continuation of the deficit fiscal policy in 2000 in order to strengthen the economic recovery process. In the year 2000, economic growth was driven both by buoyant external demand and internal demand due to the fiscal stimulus package and accommodative monetary policy. However, the impending slowdown of the U.S economy and hence the global economy did not warrant a switch to a restrictive macroeconomic policy stance in 2001 and strengthening the domestic demand remained the focus of the government. Indeed, the global economy did slow down in 2001, precipitating a decline in manufacturing output and export growth. However, a major economic downturn was averted as domestic demand, boosted by the deficit fiscal policy was sufficient to offset the slack in external demand. Economic growth was then sustained at a marginal rate of 0.4% with unemployment contained at below 4%. Given the continued need to promote economic growth and the fragile recovery of the global economy, the need to prop up domestic demand via an expansionary fiscal policy remains.

As officially pronounced, the deficit fiscal policy over these years was to be implemented in such manner that:

(1) promotes sustainable growth by enhancing efficiency and international competitiveness in the quest for the development of a knowledge-based economy;

(2) does not yield any undesirable side-effect on domestic inflation;

(3) emphasizes quality and efficiency in public spending by hastening the implementation of and disbursement for projects in order to enhance policy effectiveness;

(4) an operating surplus in the Government's budget prevails and the deficit is to be sustained only through development spending;

(5) priority is granted to socioeconomic development projects;

(6) the private sector is not crowded out;

(7) the external current account position is not strained by implementing projects with strong linkages with other sectors of the domestic economy and that are not import-intensive;

(8) financing of the increased expenditure is mainly from non inflationary domestic sources such as the Employees Provident Fund, insurance companies and subscriptions to the Malaysian Government Securities;

(9) ensures a sustainable external debt position and external debt service ratio;

(10) reduces the cost of business operations in the country; and

(11) that enhances merchandize and services exports while inducing import substitution.

Though it cannot be denied that the adoption of the deficit fiscal policy did aid in the turnaround of the Malaysian economy, it is certainly not the case of economic growth varying directly with the scale of fiscal deficit. Instead, Table 11 shows that Korea with a relatively smaller fiscal deficit managed to sustain higher economic growth than Malaysia in 1999 through 2001. While the empirical analysis in the preceding section suggests that fiscal deficits could potentially contribute to inflation, inflation was, however, not a serious problem for Malaysia in 1999-2001. Inflation was contained at 2.8% in 1999, 1.6% in 2000 and 1.4% in 2001. These rates are in fact slightly lower than those recorded prior to 1988 when there were surplus budgets. However, this does not invalidate the earlier empirical findings as the relative price stability was attained in an economic environment characterized by excess capacities in the economy.

Despite maintaining more expansionary fiscal policies, Malaysia appears to record relatively greater current account surpluses than the other crisis-afflicted countries. This is somewhat consistent with the earlier empirical results that fiscal deficits could coexist with a current account surplus, though real exchange rate depreciation could also have stimulated

exports and thus contributed to the greater surplus.[9] Finally, the question of the potential crowding out of private sector investments when deficits are largely financed by domestic sources does not arise in a lacklustre economic environment.

6. Summary and Conclusions

This paper has explored for the possible relationships between fiscal deficits on the one hand and inflation, real interest rates, private consumption and investment, external balances and the real exchange rate on the other in Malaysia. The Malaysian government appears to have participated less in the economy after the mid 1980s in terms of its expenditure share in GDP. Though taxation is the largest source of federal government revenue, non-tax revenue has gained significance as a source of federal government revenue. This is in line with the deliberate policy of the government to alleviate the tax burden of firms and individuals under its broad pro-private sector policy. Direct taxation has also gained more importance over indirect taxation as a major source of tax revenue while taxes on foreign trade have lost their significance after the mid-1980s as the government liberalized the current account.

Though the significance of seigniorage as a source of fiscal revenue for Malaysia has increased over time, it does not appear to have any bearing on inflation after the mid- 1980s. The non-correlation between seigniorage and inflation may be due to the fact that seigniorage has been drawn chiefly from real money balances. The other possible explanation is that Malaysia is a low-inflation country. Other salient findings include:

(1) The potential influence of federal government deficits on inflation after the mid 1980s which may rule out the prevalence of Ricardian equivalence in the Malaysian economy;

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[9] However it must be borne in mind that the other crisis-afflicted economies also did experience a serious devaluation of their currencies.

(2) Fiscal deficits could be associated with a current account surplus after the mid- 1980s and this contradicts the general expectation that fiscal deficits would exist alongside deficits in the current account of the balance of payments. This could be due to the crowding-out of private sector expenditure by fiscal deficits, particularly investment expenditure as the government has switched its preference towards domestic borrowings after the mid-1980s. Nevertheless, increased government expenditure, be it operating, development or total expenditure could be associated with a current account deficit;

(3) An increase in fiscal deficits of the federal government could give rise to real exchange rate depreciation. This is inconsistent with the general empirical establishment that fiscal deficit reductions could cause real exchange rate depreciation while increased fiscal deficits could cause an appreciation. Nonetheless, increases in government expenditure could correspond with a real exchange rate appreciation especially after the mid-1980s. This does not accord with Rodriguez's hypothesis that a real exchange rate depreciation could correspond with government expenditure increases;

(4) Private sector investment activity and consumption could be crowded out by fiscal deficits since the mid-1980s though only by virtue of liquidity rather than interest rate considerations. This is no surprise given the increased dependence of the government on domestic rather than external borrowings. The central bank's policy of leaving interest rate adjustments to market forces and the removal of financial repression in the course of domestic financial liberalization have not precipitated a situation where real lending rates would necessarily rise with fiscal deficits or domestic borrowings by the government.

In the light of (2) and (3) above, one has to carefully distinguish between increases in government expenditure and in fiscal deficits when discussing the fiscal policy impact on the real exchange rate and the current account. This study has highlighted possible twists in the direction and magnitude of relationships amongst fiscal policy variables and

between these variables and some other macroeconomic variables after the mid-1980s. This coincides with an apparent change in the orientation of the Malaysian government fiscal policy following the 1985 economic recession. Hence, this study also points to the need for exercizing caution when examining the macroeconomic impact of fiscal policy over a long period of time.

References

Agenor, P.R. and P.J. Montiel (1996) *Development macroeconomics.* Princeton, N.J.: Princeton University Press.

Bank Negara Malaysia (2001) *Annual Report.*

Barro, R.F. (1974) Are government bonds net wealth? *Journal of Political Economy*, 81 (December), 1095-1117.

Corbo, Vittorio and Klaus Schmidt-Hebbel (1991) Public policies and saving in developing countries. *Journal of Development Economics*, 36 (July), 89-115.

de Haan, J. and D. Zelhorst (1990) The impact of government deficits on money growth in developing countries. *Journal of International Money and Finance*, 9, 455-69.

Drazen, Allan H. and Elhanan Helpman (1990) Inflationary consequences of anticipated macroeconomic policies. *Review of Economic Studies*, 57 (January), 147-66.

Easterly, William (1989) Fiscal adjustment and deficit financing during the debt crisis. In: Ishrat Husain and Ishac Diwan (eds) *Dealing with the debt crisis. A world bank symposium.* Washington, D.C.: World Bank.

_____ ,and K.S.-Hebbel (1994) Fiscal adjustment and macroeconomic performance: a synthesis. In: William Easterly, Carlos Alfrado Rodriguez and Klaus Schmit-Hebbel (eds) *Public sector deficits and macroeconomic performance.* Washington, D.C.: World Bank.

_____ , C.A. Rodriguez and K.S.-Hebbel (1994) Overview. In: William Easterly, Carlos Alfredo Rodriguez and Klaus Schmidt-Hebbel (eds) *Public sector deficits and macroeconomic performance.* Washington, D.C.: World Bank.

Fischer, Stanley and William Easterly (1990) The economics of the government budget constraint. *World Bank Research Observer*, 5(2), 127-42.

Fishlow, Albert and Samuel Morley (1987) Debts, deficits and destabilization: the perversity of high interest rates. *Journal of Development Economics*, 27 (October), 227-44.

Giovannini, Alberto and Martha de Melo (1993) Government revenue from financial repression. *American Economic Review*, 83(4), 953-63.

Guidotti, Pablo E. and Manmohan S. Kumar (1991) Domestic public debt of externally indebted countries. *Occasional Paper, no. 80. International Monetary Fund* (June). Washington, D.C.: IMF.

Haque, Nadeem Ul and Peter J. Montiel (1989) Consumption in developing countries: tests for liquidity constraints and finite horizons. *Review of Economics and Statistics*, 71(3), 408-15.

Khan, M.S. and J. Saul Lizondo (1987) Devaluation, fiscal deficits and the real exchange rate. *World Bank Economic Review*, 1 (January), 357-74.

Montiel, Peter J. (1986) Long-run equilibrium in a Keynesian model of a small open economy. *IMF Staff Papers*, 33 (March), 685-708.

Seater, John J. (1993) Ricardian equivalence. *Journal of Economic Literature*, 21(1), 142-90.

Shahin, Wassim N. (1992) *Money supply and deficit financing in economic development.* Westport, Conn.: Greenwood.

Tan, E.C. (1997) Money demand amid financial sector developments in Malaysia. *Applied Economics*, vol.29, 1201-15.

Veidyanathan, Geetha (1993) Consumption, liquidity constraints and economic development. *Journal of Macroeconomics*, 15 (Summer), 591-610.

Table 1. Federal Government and Overall Public Sector Expenditures (% Share)

	1967-70	1970-86	1974-86	1987-99
Expenditure as a % of Nominal GDP				
Public Sector	28.1	40.8	43.7	36.5
Federal Government	23.9	31.9	33.6	25.8
Fed. Govt. Expenditure as % of Overall Public Sector Expenditure				
Total	85.0	78.9	77.3	70.7
Operating	89.5	83.4	82.1	86.5
Development	73.8	71.3	70.1	47.5

Source: Computed from Bank Negara Monthy/Quarterly Economic Bulletin, various issues

Table 2. Federal Government Revenue by Type (% Share)

	1970-86	1974-86	1987-99
As a % of Total Revenue			
Tax	81.1	82.0	75.1
Non Tax	17.1	16.1	22.8
Non Revenue	1.8	1.9	2.1
As a % of Total Tax Revenue			
Direct Taxes	44.6	47.2	54.1
Indirect Taxes	55.4	52.8	45.9
As a % of Total Tax Revenue			
Direct Taxes- Corporate Income Tax	22.7	22.0	26.9
Personal Income Tax	10.0	10.5	13.0
Others	11.9	14.8	14.2
Indirect Taxes - Export Duties	15.8	16.6	5.3
Import Duties	20.1	17.5	14.1
Others	19.5	18.6	26.5

Source: Computed from Bank Negara Malaysia Monthly/Quarterly Economic Bulletin, various issues

Table 3. Seignorage and Inflation (Periodic Average)

	1976-86	1987-97
I. GDP Deflator-based		
Seignorage (% of Real GDP)	1.4	3.5
Inflation Tax (% of Real GDP)	0.6	0.7
Inflation (%)	4.5	3.9
II. CPI-based		
Seignorage (% of Real GDP)	1.4	3.5
Inflation Tax (% of Real GDP)	0.6	0.6
Inflation (%)	4.1	3.1

Table 4. Correlations between Seignorage and Inflation (Based on GDP Deflators)

	Normalized#	Not Normalized
1976-86	0.6492 *	0.4994 **
1987-97	-0.3431	-0.3208

Seignorage normalized by real GDP

* Significant at the 5-percent level

** Significant at the 10-percent level

Figures in square parentheses refer to t-statistics

Table 5. Correlations between Government Sector Deficits and Reserve Money (in nominal terms) and Inflation (based on GDP Deflators)

	Public Sector	Federal Government
Government Deficit#		
1975-86	-0.0959	-0.4357
1987-97	0.4439	0.7013*
Reserve Money#		
1975-86	-0.3796	
1987-97	-0.3763	

Normalized by nominal GDP

* Significant at the 5-percent level

Table 6. Correlations between Government Sector Deficits, Government Net Domestic Borrowings and Real Lending Rates#

	Public Sector	Federal Government
Government Deficit##		
1976-86	-0.0402 (-0.0736)	-0.0536 (0.0494)
1987-97	0.4185 (-0.1976)	0.1637 (-0.4063)
Govt. Net Domestic Borrowings##		
1976-86	-0.0592 (-0.0203)	-0.1231 (0.0274)
1987-97	0.2179 (-0.3516)	0.0219 (-0.3910)

Real lending rates are computed based on nominal lending rates minus the rate of growth of GDP deflator (1987=1.00) led one period

##Normalized by nominal GDP

Figures in parentheses refer to correlation coefficients with respect to nominal lending rates

Table 7. Correlations between Government Sector Deficits, Government Net Domestic Financing, Government Net External Borrowings and Government Development Expenditure and Private Investment (in nominal terms)

	Public Sector	Federal Government
Government Deficit		
1970-86	0.8667*	0.7987*
1976-86	0.7622*	0.6589*
1987-97	-0.8999*	-0.9086*
Government Net Domestic Financing		
1970-86	0.8927*	0.8581*
1976-86	0.7683*	0.7017*
1987-97	-0.9491*	-0.8092*
Government Net External Borrowings		
1970-86	0.7743*	0.7307*
1976-86	0.7125*	0.6567*
1987-97	0.8304*	-0.0407
Government Development Expenditure#		
1970-86	0.3640	0.3225
1976-86	0.6577*	0.4843
1987-97	0.1505	0.5466*

* Significant at the 5-percent level

Since government development expenditure and private investment inherently have an upward trend, analyses are based on their de-trended series derived by taking first log differences.

Table 8. Correlations between Government Sector Deficits, Government Net Domestic Financing and Government Net External Borrowings and Private Consumption (in nominal terms)

	Public Sector	Federal Government
Government Deficit		
1970-86	0.8006*	0.7919*
1976-86	0.6144*	0.6408*
1987-97	-0.8604*	-0.9242*
Government Net Domestic Financing		
1970-86	0.8841*	0.8743*
1976-86	0.7412*	0.7324*
1987-97	-0.9203*	-0.8528*
Government Net External Borrowings		
1970-86	0.7157*	0.6915*
1976-86	0.5996*	0.5794*
1987-97	0.8208*	-0.0815

* Significant at the 5-percent level

Table 9. Correlations between Government Sector Deficits, Total Government Expenditure, Government Development Expenditure and Government Operating Expenditure and Balance of Trade in Goods and Services (in nominal terms)

	Public Sector	Federal Government
Government Deficit		
1970-86	-0.8245*	-0.8123*
1976-86	-0.8906*	-0.8483*
1987-97	0.5984*	0.7686*
Total Government Expenditure		
1970-86	-0.6792*	-0.6809*
1976-86	-0.7557*	-0.7622*
1987-97	-0.8083*	-0.8016*
Government Development Expenditure		
1970-86	-0.7933*	-0.7893*
1976-86	-0.8890*	-0.9032*
1987-97	-0.8209*	-0.8607*
Government Operating Expenditure		
1970-86	-0.5667* #	-0.5835*
1976-86	-0.5847* #	-0.5910*
1987-97	-0.7654* #	-0.7693*

With respect to general government operating expenditure

* Significant at the 5-percent level

Table 10. Correlations between Government Sector Deficits, Total Government Expenditure, Government Development Expenditure and Government Operating Expenditure and Real Exchange Rates (in nominal terms)

	Public Sector	Federal Government
Government Deficit		
1970-86	0.4984*	0.5891*
1976-86	0.5757*	0.7828*
1987-97	0.4184	0.5971*
Total Government Expenditure		
1970-86	0.5876*	0.5998*
1976-86	0.8005*	0.8572*
1987-97	-0.6917*	-0.6686*
Government Development Expenditure		
1970-86	0.5745*	0.5738*
1976-86	0.7304*	0.7507*
1987-97	-0.6682*	-0.5909*
Government Operating Expenditure		
1970-86	0.5805* #	0.5846*
1976-86	0.8099* #	0.8213*
1987-97	-0.6938* #	-0.6928*

* Significant at the 5-percent level

With respect to general government expenditure

Table 11. Selected Macroeconomic Indicators of Crisis-Afflicted Countries

	1997	1998	1999	2000	2001
Fiscal Balance (% of GDP)					
Malaysia	2.4	-1.8	-3.2	-5.8	-5.5
Korea	-1.5	-4.2	-2.7	1.1	NA
Thailand	-0.7	-2.5	-2.9	-2.4	-2.1
Indonesia	1.3	-2.3	-2.1	-5.1	-3.7
Real GDP Growth (%)					
Malaysia	7.3	-7.4	6.1	8.3	0.4
Korea	5.0	-6.7	10.9	8.8	3.0(F)
Thailand	-1.7	-10.2	4.2	4.4	1.5(F)
Indonesia	4.7	-13.1	0.2	4.8	3.3
Current Account Balance (% of GDP)					
Malaysia	-5.9	13.2	15.9	9.4	8.9
Korea	-1.7	12.7	6.0	2.5	2.6
Thailand	-2.1	12.8	10.1	7.7	5.4
Indonesia	-2.3	4.3	4.0	5.3	3.0

Source: Bank Negara Malaysia Annual Report 2001