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Constraining the spending behavior of subnational governments through borrowing limitation: The case of Malaysia.

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Abstract

In literature, subnational governments have been identified as being prone to fiscal profligacy. In response to this problem, some countries choose to put a limit on the borrowing capacity of the state and local governments. This is notably the case for Malaysia with the enactment of Article 111 (12) of the Constitution. However it remains to be answered whether such regulation really has an impact on the spending behavior of the state governments. This paper attempts to shed some light on this question by employing the methodology usually found in the study of intertemporal behavior. The underlying objective is to examine whether a decision to further decentralize the economy in the future will not be translated into macroeconomic instability due to the fiscally irresponsible behavior of the state governments. Indeed such eventuality can be avoided if the federal government has what it takes in order to put the spending behavior of the state governments under control. Our findings point to the conclusion that the regulation has failed to produce a significant effect on the spending behavior of the state governments. The results indicate that the state governments in Malaysia manage to observe a forward looking behavior implying that they are not subject to any liquidity constraint.

Keywords: Fiscal Federalism, subnational borrowings, institutional restriction, consumption smoothing.

JEL classification: H74, D9, O53

1. Introduction

In the last two decades, there has been an increasing interest in decentralization all around the world. Yet Malaysia seems to be oblivious to this decentralization wave. To date, there has been no major move made by the country in order to empower or to further develop the existing local and state governments. Instead, the federal government has, on various occasions, made an incursion on the functions of the states despite the clear division of powers and functions between the federal and state governments¹.

The Malaysian government's reluctance to espouse the decentralization process is not without costs to the country. There are strong arguments that the devolution of several powers of the federal government to local levels could enhance efficiency as the latter could be more responsive to variations in local needs and perhaps more accountable to those being served. However it is important to notify that all these positive impacts may not materialize if no efforts are made in controlling the spending behavior of subnational governments. It is virtually a conventional wisdom, at least among economists, that subnational governments are predisposed for fiscal profligacy. The latter if left unchecked will embark on a spending spree which at the end will jeopardize the stability of the economy as a whole.

Malaysia is no exception. The risk of fiscal profligacy does exist in the country and the government tries to have a hold over this problem notably by the enactment in 1976 of the Article 111 (2) of the Malaysian Constitution which avers that "*A State shall not borrow except under the authority of State law, and State law shall not authorize a State to borrow except from the Federation or, for a period not exceeding five years, from a bank or other financial source*

approved for that purpose by the Federal Government, and subject to such conditions as may be specified by the Federal Government".

The regulation is rather strict in the sense that all borrowing by the state governments needs to go through the central government who will act like a filtering device. So in principle, borrowing for the purpose of financing activities or goods considered unwarrantable will be refused. States governments realizing that they will not get financing easily will become more close-fisted especially on unnecessary ventures. On the other hand, since there's no guarantee that only good projects will pass through and get financed as the central government may not have the capacity (or the willingness) to sieve all the projects submitted to them, state governments face weak incentives to be more fiscally responsible. In other words, this limitation may be regarded by the state governments as a mere veil with no consequence whatsoever on their spending behavior.

This paper attempts to shed some light on the impact of this institutional control on the spending behavior of the 13 state governments in Malaysia. The underlying objective is to examine whether a decision to further decentralize the economy in the future will not be translated into macroeconomic instability due to fiscally irresponsible behavior of the state governments. Indeed such eventuality can be avoided if the federal government has what it takes in order to put the spending behavior of the state governments under control.

The rest of the paper is organized as follows. The next section provides a summary on the relation between subnational governments and fiscal indiscipline. Section 3 looks at the role of institutional rules both theoretically and empirically. A description of the theoretical framework is provided in section 4. In section 5, we will discuss the data and empirical approach adopted.

The results of the estimation strategy are presented and discussed in section 6. Finally, section 7 concludes.

Subnational governments and fiscal indiscipline.

In a multi-tiered government, the subnational governments have the possibility to overfish the common revenues by shifting their costs onto others. This problem known as the common pool problem arises from the fact that the opportunity cost of public revenues as perceived by subnational governments is lower than the true social cost. Indeed, the financial resources of subnational governments do not fully come from own-source revenues like local taxes, charges and borrowing. Instead, subnational governments rely (in some cases, heavily) on the intergovernmental grants to finance its activities. And the larger the vertical fiscal gap is, the more aggravated the problem of common pool will be: subnational governments will have every incentive to overspend when means of financing are mostly raised by the central government.

The soft-budget constraint faced by state governments is another factor that explains why state governments are prone to fiscal profligacy. It refers to the fact that federal transfers to subnational governments are sometimes based on ex post financial needs and not, as it should be, on ex-ante characteristics of the recipient states. As such, subnational governments are not held to a fixed budget but find their budget constraint softened by the injection of additional credit (or guarantees) whenever they are on the verge of fiscal fiasco. In other words, it refers to the failure of the central government to credibly show its commitment not to come to help to states in financial distress. The soft budget constraint is aggravated by the existence of intergovernmental grants. When the central government is providing for a big chunk of the local and state government budget through the intergovernmental grants, it is very probable that, in the event of

fiscal crisis, residents (and creditors) of the subnational governments will turn to central government for a solution. This is because a highly transfer-dependent local government, when faced with an adverse fiscal shock, may not have the flexibility to raise additional revenue and it may be forced to reduce the provision of basic public services, to default on loans or to rely on arrears on employees and contractors. Besides, the literature on "flypaper effects" shows that intergovernmental grants may spur new expenditure commitments or new public employees which are difficult to cut during downturns. Consequently, the high adjustment cost faced by the subnational government in time of distress makes it difficult for the central government to commit to the implicit or explicit ex-ante rule. As a result, subnational governments estimating that the central government will not be able to ignore their fiscal woes, face weak incentives to be fiscally responsible².

The role of institutional rules.

In response to the fiscal indiscipline problem, various institutional approaches have been adopted that consist mainly in limiting the subnational governments' access to credit. Following Ter Minassian (1997), these approaches are usually grouped into 4 broad categories: Market discipline, rule-based control, administrative constraint and cooperative arrangement³. These rules are not mutually exclusives and most countries utilize a mix of them. The diversity in approaches adopted indicate among others, the legal or constitutional status of subnational governments, the degree of political and administrative controls of the central government over them, the country's overall tradition of financial discipline, the presence or absence of serious fiscal and macroeconomic imbalances and the state of development of the country's financial market.

A number of empirical studies have focused on the impact of these institutional controls on fiscal outcomes such as the local fiscal deficits or the level of subnational indebtedness. Yet the econometric evidence has so far been limited and mixed.

In a sample of 30 countries, von Hagen and Eichengreen (1996) found that the introduction of borrowing constraints has led to increases in subnational indebtedness. However, this result is based on a regression that does not control for factors other than GDP. Fornasari, Webb, and Zou (2000), in a study on 31 countries, found that constraining subnational borrowing did not seem to have any consistent effect on subnational fiscal deficits. Jin and Zou (2002) found similar results in 32 countries for the size of subnational governments. These results comforted the view according to which these fiscal institutions are simply a veil that can easily be pierced by voters and their fiscal representatives (Poterba, 1995).

On the contrary, empirical results found in some studies show that fiscal institutions have a potential to affect fiscal outcomes. A report by Advisory Commission on Intergovernmental Relation (ACIR) in 1987 shows that an index of the stringency of the state's balanced budget requirement to significantly reduce state deficits measured here by a general fund deficit. Alt and Lowery (1994), using a panel data set from 1968-87, found that Republican state facing a "no carry-over" balanced budget constraint are found to close more of the deficit gap than republican states without the "no carry-over" constraint. However, Democratic states with and without the "no carry-over" constraint behave similarly, closing the same deficit gap as the republican "no carry-over" states. Poterba (1994) found that states with strict anti deficit rules respond to a deficit shock by reducing spending and increasing tax more than do states with weak anti deficit rules. Using budget data from a panel of 47 states from the period of 1970-1991, Bohn and Inman

(1994) estimates the responsiveness of state deficits to change in state income and found that an end-of-the-year (stricter) budget requirement have a positive effects on a state's general fund surplus. Alesina, Hausmann, Hommes and Stein (1999) found that an index of fiscal institutions that included a component measuring the existence of fiscal rules limiting the level of debt was negatively correlated with fiscal deficits in a sample of Latin American countries. Rodden (2002) in a study on a panel data of 33 countries, found that the largest deficits are run by subnational governments that rely heavily on federal transfers and at the same time are free to borrow.

However, all these studies are plagued by a serious endogeneity problem. The correlation found between fiscal institutions and fiscal outcomes may actually be the reflection of underlying voters' preferences. In fact, it is possible for states in which voters have preference for fiscal prudence tend to have lower fiscal deficits and to support a constitutional or legislative limit on subnational borrowing.

The Malaysian case and the choice of methodology.

In the case of Malaysia, it is clear from Article 111(12) of the Constitution that the state governments cannot make any borrowings without the federal government being advised about it. At the same time, even though the article makes allowance for other sources of financing, we note that the state governments' borrowings consist mainly of loans from the federal government (up to 95%). Therefore as far as their borrowing activities are concerned, we can see that the state governments are highly dependant on the federal government. This situation originates probably from the fact that most of the state governments are too small to venture into the capital market. It can also be explained by the fact that the capital market is not developed enough and is not yet

ready to welcome a new player. As for the rest 5% of the financing, it comes mainly from the local financial institutions.

It is also clear from the Article that regarding the application of the regulation, no exception is made for any particular state. The rule is applied with the same intensity to all states. However the fact that the borrowing limitation is similar for all states makes it impossible for us to adopt the same methodology as the one employed by most studies where the intensity and type of rules vary across time or geographical areas.

We propose to adopt the approach normally used to study the intertemporal behaviors of an economic agent. We assume that the borrowing limitation imposed by the Constitution works like a liquidity constraint that inhibits the state governments from smoothing their consumption over time or in other word from observing a forward looking behavior implied by the permanent income hypothesis. Therefore, if the results of the estimation show that state governments observe a forward looking behavior, it means that the latter are not subject to any liquidity constraint and thus the borrowing limitation does not have any influence on their spending behavior. On the contrary, a non-forward looking behavior does not necessarily mean that the borrowing limitation is effective for such eventuality can also be explained by the presence of precautionary saving⁴. Nevertheless, in the case of the state governments in Malaysia, we may argue that it is quite unlikely for the latter to be the cause of any non-observation of the permanent income hypothesis and this essentially for three reasons.

Firstly, if we look at the financial positions of the state governments as a whole for the period of 1980-2003, as depicted by figure 1, we notice that most of the time, the revenues of state

governments were insufficient to finance their expenditures, resulting sometimes in a huge deficits (the highest deficit was recorded in 2001 where it stood at a whopping RM 3.745 billions (USD 1 billion). It is thus more probable for the state governments to draw into their savings in order to finance these deficits than to add into them. The increase in state governments' debts as depicted by figure 2 is another major consequence of these deficits. Furthermore, a recent report by the Auditor-General's Office revealed that most states have not been able to maintain their assets and their incomes have dwindled over the years. Consequently, as at 31/12/2003 a total amount of RM 2.55 billion (USD 580 millions) in arrears of debt service repayments are yet to be settled by the state governments to the federal government (see table 1).

Secondly, consumers constitute precautionary saving in order to deal with uncertainty in their future income. With enough savings, consumers hope that they will be able to at least enjoy the same level of utility in case of unpredictable adverse events. There are thus two underlying conditions for the existence of precautionary saving - the uncertainty of future incomes and the risk averse behavior of the consumers. In the case of the Malaysian state governments, while it is plausible to assume that they are to a certain extent risk-averse, the structure of their revenue is such that it is less likely for it to vary considerably in an unpredictable manner. In fact, the tax base of the state governments is very small. All direct taxes are collected by the Federal government and state governments are assigned residual revenues such as those related to land, real property, agriculture and forestry. As for other sources of revenue, they come mainly from non-tax revenues (such as licenses and permits, commercial undertakings and service fees) as well as transfers and grants from the federal government. Most of the sources of these revenues are clearly sheltered from unpredictable shocks⁵ and as a consequence, state governments may not consider it as necessary, the constitution of precautionary saving.

Finally and more importantly, the main reason that pushes us to believe in the absence of motivation for precautionary savings by the state governments is the existence, as stated in Article 109(6) of the Constitution, of the State Reserve Fund. The latter which is totally funded by the central government⁶ is designed in order to provide two types of grants to state governments: those to assist states which have deficits in their current accounts and those to assist states with development expenditure based on the level of economic development, infrastructure and quality of life. The payment of these grants is however subject to review by a special committee of the Finance National Council⁷ to ensure that adequate efforts have been made by the state governments to meet shortfalls from their resources. With the existence of this "emergency" fund, it is quite plausible to assume the absence of precautionary saving motive among Malaysian state governments.

Together, these evidences suggest that as far as the Malaysian state governments are concerned, a deviation from the permanent income hypothesis is more likely to be explained by the existence of liquidity constraint than by the presence of precautionary saving motive. In other words, we believe that any potential non-forward looking behavior by the state governments in Malaysia is due more to their excess sensitivity to current income variation than to their lack of reaction to unpredictable income innovation.

Theoretical framework

In the intertemporal approaches to decision making, it is assumed that agents are forward looking which implies that decisions regarding today's consumption are made on the basis of expectations about future resources. This model of intertemporal consumption behavior by private households uses as benchmark the permanent-income hypothesis. Testable empirical implications of the

permanent-income hypothesis were developed in a seminal paper by Hall (1978). The first application of the notion of intertemporal decision making to the state and local governments' spending behavior was done by Holtz-Eakin and Rosen (1989). It is their framework that will be adopted for the present case.

We first assume the existence of a decision maker representing the state governments whose goal is to maximize the expected present value of utility subject to an intertemporal budget constraint. The utility function depends upon the flow of government services measured here by current expenditures. If we denote the period-specific utility function for state i by $U_i(\cdot)$, then the maximization programme can be expressed as follows

$$V_t = E_t \left[\sum_{s=0}^{\infty} \beta^s U_i(G_{it+s}) \right] \quad (1)$$

where E_t denotes expectations taken using information available through the end of period t , $\beta = \frac{1}{1+\delta}$ and δ is the pure rate of time preference, and G_{it} is the level of state government i spending on nondurable goods and services in period t . An attractive feature of this model is that it does not require us to specify whose preferences are represented by $U(\cdot)$. It might as well depict that of a bureaucrat of state government or that of a representative resident. We only need to assume that the decision maker has a stable preference.

Furthermore, the state government i decision-maker is subject to the following intertemporal budget constraint

$$W_{it-1} + \sum_{s=0}^{\infty} \rho^s (R_{it+s} - G_{it+s}) = 0 \quad (2)$$

where W_{it} is state government i wealth at period t , R_{it} resources available to state government i at period t and $\rho = \frac{1}{1+r}$ and r is the constant real rate of interest. R_{it} Is considered to be exogenous. This budget constraint states that the initial wealth plus the present value of resources must at least cover the present value of expenditures.

The resolution of the above maximization problem will yield the optimal spending path of the state government i which is characterized by the system of Euler equations

$$E_t \left[\frac{U'(G_{it+s})}{U'(G_{it+s-1})} \right] - \frac{1+\delta}{1+r} = 0 \quad (3)$$

According to equation (3), the marginal rate of substitution between state government expenditure in adjacent period is equated to the intertemporal relative prices. After some manipulation, equation (3) can be transformed into the following ex post relationship

$$\ln U'(G_{it}) - \ln U'(G_{it-1}) = \ln \left(\frac{1+\delta}{1+r} \right) + v_t \quad (4)$$

where v_t represents an expectational error term and, assuming that expectations are formed rationally;

$$E_{t-1}(v_t) = 0 \quad (5)$$

A direct implication of equation (4) is that the state government expenditure is a martingale. There are in effect several assumptions which are embedded in the above model. It first assumes that the state government spending decisions are derived from the maximization of the discounted value of a time-separable objective function. Secondly, it assumes that the state government is not facing any credit market rationing. Finally, the model assumes rationally formed expectations. It is the second assumption that we're interested in. Since state governments in Malaysia are facing credit market constraints, we presume that the model will be invalidated if it is to be confronted with the Malaysian data.

In practice and under certain assumptions, the permanent-income hypothesis, applied here to the state and local governments' spending, can be tested by estimating an equation of the form

$$\Delta \ln G_t = \alpha_0 + \sum_{j=1}^k \alpha_j \Delta G_{t-j} + \eta_t \quad (6)$$

where α parameters to be estimated and η_t a random error term⁸. If α are found to be significantly different from zero, we can reject the permanent income hypothesis.

One disadvantage of this approach is that the results may be difficult to interpret since the permanent-income hypothesis is not tested against any specific alternative. A non-zero α_j does not necessarily reflect a total rejection of the permanent income hypothesis as it is possible that only, say 20% of spending produces the rejection while the other 80% are well determined in

accordance with the permanent income model. Campbell and Mankiw (1990) proposed an alternative test that allows one to measure the quantitative significance of the rejection. This test assumes that there's a fraction λ of state governments' expenditures that is determined by current resources so that another $1-\lambda$ will follow the permanent income hypothesis. The so-called ' λ model' is given by the following equation:

$$\Delta \ln G_{it} = (1-\lambda)\nu + \lambda\Delta R_{it} + (1-\lambda)\varepsilon_{it} \quad (7)$$

The key parameter in equation (7), and the parameter to be estimated in the empirical analysis, is λ . If λ is strictly positive, the consumption path is affected by expected fluctuations in income, and the permanent-income hypothesis is rejected. In this case, we presume that the state governments' expenditures are to a certain extent influenced by the borrowing limitations. Again it is important to emphasize that as indicated in the previous section, the precautionary saving motive is assumed to be absent. Thus any deviation from the permanent income hypothesis is due to the existence of liquidity constraint.

On the other hand, if λ equals zero, expected fluctuations in income will disappear from the consumption path. Consistent with the permanent-income hypothesis, consumers are perfectly able to smooth spending over time. In term of borrowing limitation, this result signifies that the control has been ineffective and has no effect whatsoever on the spending behavior of the state governments. An advantage with the ' λ -model' is that it does not only facilitate a test of the permanent-income hypothesis. If the permanent-income hypothesis is rejected, it also provides information about how 'serious' the rejection is: the higher the value of λ , the more weight is put on expected fluctuations in income and the more "serious" is the rejection. This finding can be

used in order to determine whether the liquidity constraint has a role in influencing the subnational behavior or not. Assuming that the “rich” states will be less affected by the liquidity constraint, the rejection of the permanent income hypothesis for this group should be at a lower degree than the one observed for the group of “poor” states. In other words, we may assume that liquidity constraint is at play if the behavior of the “poor” states differs significantly from the “rich” states. Again, such a conclusion is possible uniquely in the case where precautionary saving motive is, for valid reasons, assumed to be absent.

Data and Empirical Specification.

Data.

The study is based on the expenditures and revenues data of the 13 states in Malaysia from 1980 to 2003 obtained from the Financial Statements produced yearly by each state government. Concurrently with the theoretical consideration⁹, we only consider the spending on non-durables good and services. We do not have data on non-durable spending, so we have to use the current expenditure bearing in mind that it may include some spending on durables. The revenue of the state governments consist of taxes, licenses, user charges, commercial undertakings as well as grants from the federal government. Expenditures and revenue data are measured in real per capita terms using the consumer price index as deflator. We use three different price indexes: one for all the states of the Peninsular Malaysia, one for the state of Sabah and one for the state of Sarawak.

Table 2 summarizes the average growth of revenues and expenditures for all states for the period 1980-1990 and 1990-2000. We note that for the first period, all states have experienced a positive growth of their revenue and expenditures. We also note that for most states, their revenue seems

to grow faster than their expenditures. In the second period, we note that not only the growth for both the revenue and the expenditure have turned negative for certain states, but for those who experienced positive growth the hike is much lower as compared to the one in the first period. In total, for the period of 1990-2000, the average growth of expenditures and revenue for all states are 2.68% and 1.62% respectively (as compared to 6.10% and 7.53% in the first period). The radical change in the evolution of the revenue and the expenditures of the state governments between the 2 periods is not a surprise as it is the reflection of the growing centralization of the country. This point is illustrated by the acceleration of the growth of expenditures of the federal government in the second period.

Empirical Specification.

The empirical counterpart of equation (7) can be written as follows:

$$\Delta \ln G_{it} = \alpha_t + f_i + \lambda \Delta R_{it} + \varepsilon_{it} \quad (8)$$

where G_{it} and R_{it} represent, respectively, spending and revenues of state government i in year t .

The time specific constant α_t captures the real interest rate and other macroeconomic variables that are common to all state governments. f_i Is a state specific effect that captures any differences in time preferences across the state governments. The state-fixed effect can be removed by differencing equation (8) and we arrive at the following equation,

$$\Delta^2 \ln G_{it} = \Delta \alpha_t + \lambda \Delta^2 R_{it} + \Delta \varepsilon_{it} \quad (9)$$

In the above equation, the error term (ε_{it}) can be interpreted as the revision in the decision maker's forecast of future resources. However, it is very likely that this revision of future resources will be linked to the growth of current resources (ΔR_{it}) and this correlation will carry over to $\Delta\varepsilon_{it}$ and $\Delta^2 R_{it}$. Hence the method of ordinary least squares (OLS) will no longer be appropriate to estimate equation (8). Consequently, we will apply the generalized method of moments (GMM) as developed by Arellano and Bond (1991). This method suggests that if the error term is serially uncorrelated, lagged values of spending and revenue, dated t-2 and back, can be used as valid instruments. As for the number of lags to be used as instruments in our study, we will select the most parsimonious set of instruments consistent with the data.

There are two types of GMM estimators: (1) the difference estimator and (2) the system estimator. A problem with the original Arellano-Bond estimator is that lagged levels are often poor instruments for first differences. Arellano and Bover (1995) described how, if the original equations are added to the differenced system, additional moment conditions can be brought to bear to increase efficiency. In these equations, predetermined and endogenous variables in levels are instrumented with suitable lags of their own first differences. In what follows, we present results using the “system GMM” estimator. We will compare the system GMM results with those of the less efficient difference GMM estimator as well as with those of OLS estimator which treats the endogenous variables and their lags as exogenous.

Results.

We start by estimating the above equation using the OLS method. As indicated by column (1) of table 3, we find that the permanent income hypothesis can be rejected as λ is significantly

different from 0. Similarly, one can reject the hypothesis that the data are consistent with the Keynesian model i.e. $\lambda = 1$. Thus the spending behavior of the state governments is governed by both the permanent income hypothesis and the Keynesian model. We note however that a substantial share (85%) of state government spending is determined by intertemporal optimization. As stressed in the section above, OLS may not be an appropriate estimation method because there's a potential endogeneity problem with the regressor. Therefore, we reestimate the equation using the GMM method. Here, we set the maximum number of instruments used to 13¹⁰. In table 2, our primary result is given by column (3) where we use the “system” GMM estimator. In column (2) the “difference” GMM estimator is used.

Our estimation results shows that we cannot reject the hypothesis that the value of λ equals zero. On this basis, one cannot reject the permanent income hypothesis. The state governments spending are completely determined by intertemporal optimization. The joint hypothesis of correct model specification and valid instruments cannot be rejected and while the disturbances exhibit negative first-order serial correlation, there are no sign of second-order serial correlation. It is interesting to notify that the value of λ decreases when we use the GMM method instead the OLS. This signifies that the correlation between the growth of current resources (ΔR_{it}) and the innovation in the permanent resources (ε_{it}) is positive. This result is consistent with the one found in the literature¹¹ and signifies that part of the growth in the current resources is anticipated to be permanent.

In term of borrowing limitation, the fact that the state governments' current expenditures are not determined by current resources indicates that the latter are not facing any liquidity constraint. In other words, the borrowing limitation imposed on the state governments does not have any effect

on their spending behaviors. They are capable of smoothing completely their consumption in spite of this institutional constraint. These results also comforted our belief in the absence of precautionary saving constitution by the state governments.

The effect of borrowing limitation on the spending behavior of state governments may also be influenced by the latter's level of income. It is possible that the limitation is having an effect only on states with a certain level of income. In other words, we assume that for state governments with a relatively high level of income, their expenditures are less likely to be affected by institutional rule. We test for this by splitting our sample into 2 groups according to their level of income. Following Zeldes (1985) and Shea (1995), we use the average values of real per capita revenues during the period under study to determine the 2 groups. If there were to be any liquidity constraint, than it is more likely the states with a lower income that will be affected by it. We should thus observe a less forward looking behavior among this group as compared to the one with a higher income.

The results of the estimation are reported in table 4. Our results indicate that, in our preferred specification (column (5) and (6)), the level of income doesn't seem to have any influence on the effect of the institutional limitation. For both groups, state governments' pending behavior is found to be unaffected by the borrowing limitation. For the high income group, our estimation results varied according to the estimation method used. When the GMM in difference is employed, we found that the growth of consumption is negatively and significantly correlated with the growth in income. However, when we use the GMM system, the correlation becomes non significant. We take this result as a sign that the GMM system is a more efficient method of estimation than the GMM in difference. We also take into account the fact that the results of the

estimations may be sensitive to the instruments being used by varying the set of instruments employed. However we found the results not to vary that much from the ones in our original specifications and all of them seem to point to the same conclusion.

The results of our estimations showed that the borrowing restriction imposed on the state governments have not been effective in curbing their spending behavior. The regulation provides an avenue for the federal government to control subnational governments' spending behavior. Therefore, its impact will mostly (if not totally) depend on the motivation as well as the capacity of the federal government to implement it. Does federal government really have the incentives to restrict subnational governments' borrowing? If it does, does it have the capacity to do so?

Given the actual repartition of powers and responsibilities between different levels of governments, the federal government may not consider it as necessary to exert a strict control on the state governments spending behavior. As the state governments' responsibilities are quite limited, the federal government may believe that their expenditures will stay within a certain acceptable limit and will not pose any great danger to the stability of the economy as a whole. As a result, the federal government may not be as stringent as it should normally be in approving loans applications by state governments. However, we believe that with the growing incapacity of the state governments in honoring their debts, the federal government may become more vigilant in the future.

The ineffectiveness of the borrowing limitations may also be the reflection of the central government willingness not to further burden state governments financial needs by restricting their access to loans. With most of the revenue sources being devolved to the federal government,

state governments' financial resources are far from sufficient to cover their expenditures, creating a financial gap which is normally filled through federal transfers (grants and loans). At the same time, statistics showed that there's a net tendency for federal government to shift its financial allocation to state governments from grants to loans over time. Federal government grants to the states decreased from 9.0 per cent of its operating budget in 1975 to 3.5 per cent in 1999. Meanwhile, outstanding loans from the federal government to the state governments increased from RM1107 million to over RM9000 million. In other words, state governments' easy access to borrowing may simply be the result of the federal government relying more and more heavily on loans to cover the financial needs of the states government.

The fact that state governments can have some degree of political leverage over the decision-making of the central government can also help explain why they are not constrained in their spending behavior. Even though, it is up to the central government to decide whether to grant a loan or not, state government can use its representatives both at the legislature and the executive to tilt the decisions in its favor. While there is as yet no empirical proof as to the relation between political representations and the amount of loans accorded to subnational governments in Malaysia, anecdotal evidence suggests that elected politicians tend to reward their constituencies. Besides, since the whole process concerning loans applications and approval are usually kept away from public scrutiny, it is quite plausible to believe that economical and financial merits are not the sole determinant factors for state governments to secure a loan.

To summarize, the way responsibilities and powers are divided across levels of governments in Malaysia has to a certain extent rendered the federal government less "motivated" in regulating subnational governments' borrowing. In addition, the political leverage possessed by the

subnational government on the decision-making of the central government make it even harder for the latter to properly enforce the regulation.

Conclusion

In this paper, we attempt to assess the effectiveness of the control mechanism designed to curb the incentives for fiscal indiscipline among subnational governments in Malaysia. The objective is to examine whether a decision to further decentralize the economy in the future will not be translated into macroeconomic instability due to the tendency for fiscal profligacy of the state governments. Indeed such eventuality can be avoided if the federal government has what it takes in order to put the spending behavior of the state governments under control.

However, the nature of the borrowing limitation in Malaysia (invariant across all 13 states) makes it impossible for us to adopt the methodology usually found in the literature. Consequently, we applied the methodology normally employed in the study of intertemporal behavior or more precisely, the one suggested by Campbell and Mankiw (1990). This method allowed us to examine the extent to which intertemporal considerations play a role in determining the spending behaviors of the state governments.

We regarded the borrowing limitation imposed by the Federal Constitution as similar to a liquidity constraint facing the state governments. We assumed that if this limitation were to have an impact on the state governments, we should not observe a complete forward looking behavior by the latter. We also argued that at the state governments' level, the precautionary saving motive can be assumed to be absent. Thus, any potential deviation from the implication of the permanent income hypothesis is mainly due to the presence of liquidity constraint.

Our estimation results show that the spending behavior of the state governments in Malaysia is completely governed by the permanent income hypothesis. We also find some evidence that regardless of their income level, states governments manage to completely smooth their current expenditures. Taken together, these results suggest that the borrowing limitations imposed on the state governments do not have any impact whatsoever on the spending behavior of the state governments in Malaysia. The institutional rule can thus be considered as a mere veil that can easily be pierced down.

The finding of this study implies that the federal government in Malaysia has not succeeded in putting the spending of the state governments in check. It also implies that the borrowing limitation, clearly etched in the Federal Constitution is taken for granted by both the federal and states governments. Given the actual level of decentralization in Malaysia in terms of spending and taxation power of the state governments, these results did not really take us by surprise. The central government realizing that the state governments do not have much powers, does not see it as necessary to really control the latter's spending behavior and thus is very laxist in the application of the Article 111(2). Besides, the facts that state governments rely more and more heavily on loans to cover their expenditures make it difficult for the federal government to be too strict in approving their loans application. Finally, we believe that there's a lack of objectivity in the decision making of the federal government due to the political influences exerted by the state governments through their representatives at the legislature and the executive. Consequently, should the Malaysian government decide to embark on any decentralization process, it is imperative for a new and more stringent control mechanism to be introduced. If the central government were to content itself with the same rule (and at the same degree of application),

there's a chance that further decentralization of the economy will be translated into an increase in irresponsible spending by the state governments with all the effects that it can have on the macroeconomic stability of the country.

End notes

1. See Jomo and Wee (2002) for a discussion on the conflictual relation between state and federal governments in Malaysia.

2. The no-bailout commitment problem of the central government can also be explained through a simple dynamic games of incomplete information between the central and subnational governments as proposed by Rodden (2005)

3. A different approach was proposed by Alesina and Perotti(1996) who distinguish three types of "rules and regulations" (1) numerical targets on the budget such as a balanced-budget rule (2) procedural rules (such as voting rules) that regulate the preparation and legislative approval of the budget and (3) rules regarding the transparency of the budget

4. Several attempts have been made in order to discriminate between these two effects but to no avail. According to Carroll and Kimball (2001), these attempts are bound to fail for both the precautionary saving and the liquidity constraint are derived from the concavity of the consumption function. In fact, precautionary saving and liquidity constraint are related to two different phenomenons that lead to the same deviation from the implication of permanent income. These two phenomenons are; excess smoothness to income innovation which can be explained by the existence of precautionary saving and excess sensitivity to expected income changes explained by the liquidity constraint effect.

5. Such a situation is not limited to Malaysia. Indeed, in the literature concerning the assignment of revenue-raising responsibilities, there is broad consensus that taxes that are more sensitive to changes in income should be assigned to the central government. As such, the central government will have in its hand an instrument of stabilization and the subnational governments will have its budget sheltered from cyclical fluctuation.

6. In the United States, it is the states themselves that constitute their own "Rainy Day" Fund. A generally accepted rule of thumb in state government budgeting is that reserve should be equal to approximately 5 percent of the current budget.

7. The National Finance Council consists of the Prime Minister, or his representative, and one representative of each of the states appointed by the Governor or the Ruler of the state. It is an important forum for the discussion of all matters of federal-state finance but its decisions are not binding; it is purely advisory. The Finance National Council has also set the maximum amount of disbursement to RM 170 million.

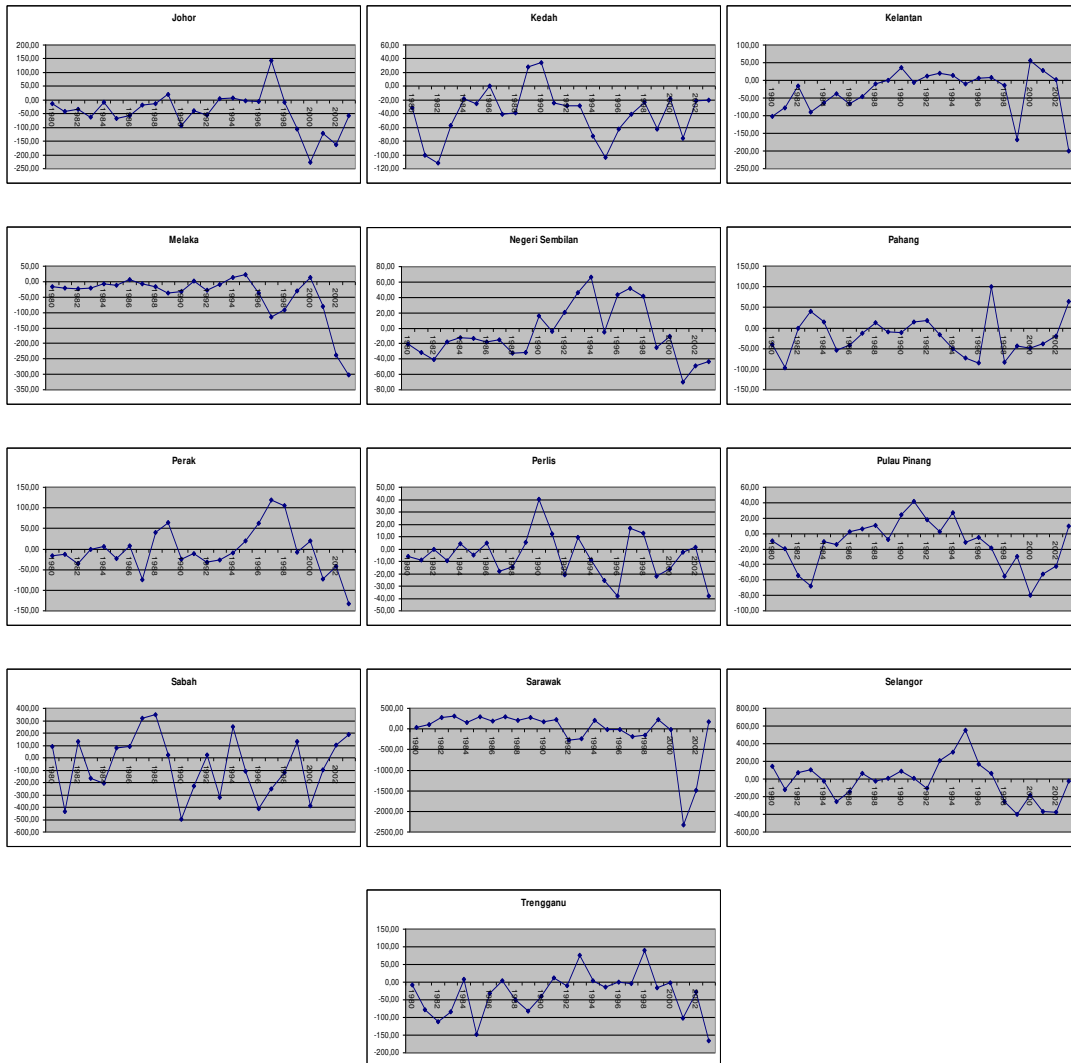
8. The equation is exact if we assume that the decision maker's utility function displays a constant relative risk aversion. Otherwise, this equation should be considered as a first-order logarithmic approximation.

9. In the utility maximization program, we assume that the utility is separable in time (Dyanan (1992) Albaran (2002)). Thus consumption in $t-1$ should not have any effect on the utility in period t . In order to avoid this, we will exclude consumption on durables from our specification.

10. It is well documented that GMM estimators with too many overidentifying restrictions perform poorly in finite samples. As a rule of thumb, one should use fewer than N instruments, where N is the number of cross-sectional units (in our case $N=13$).

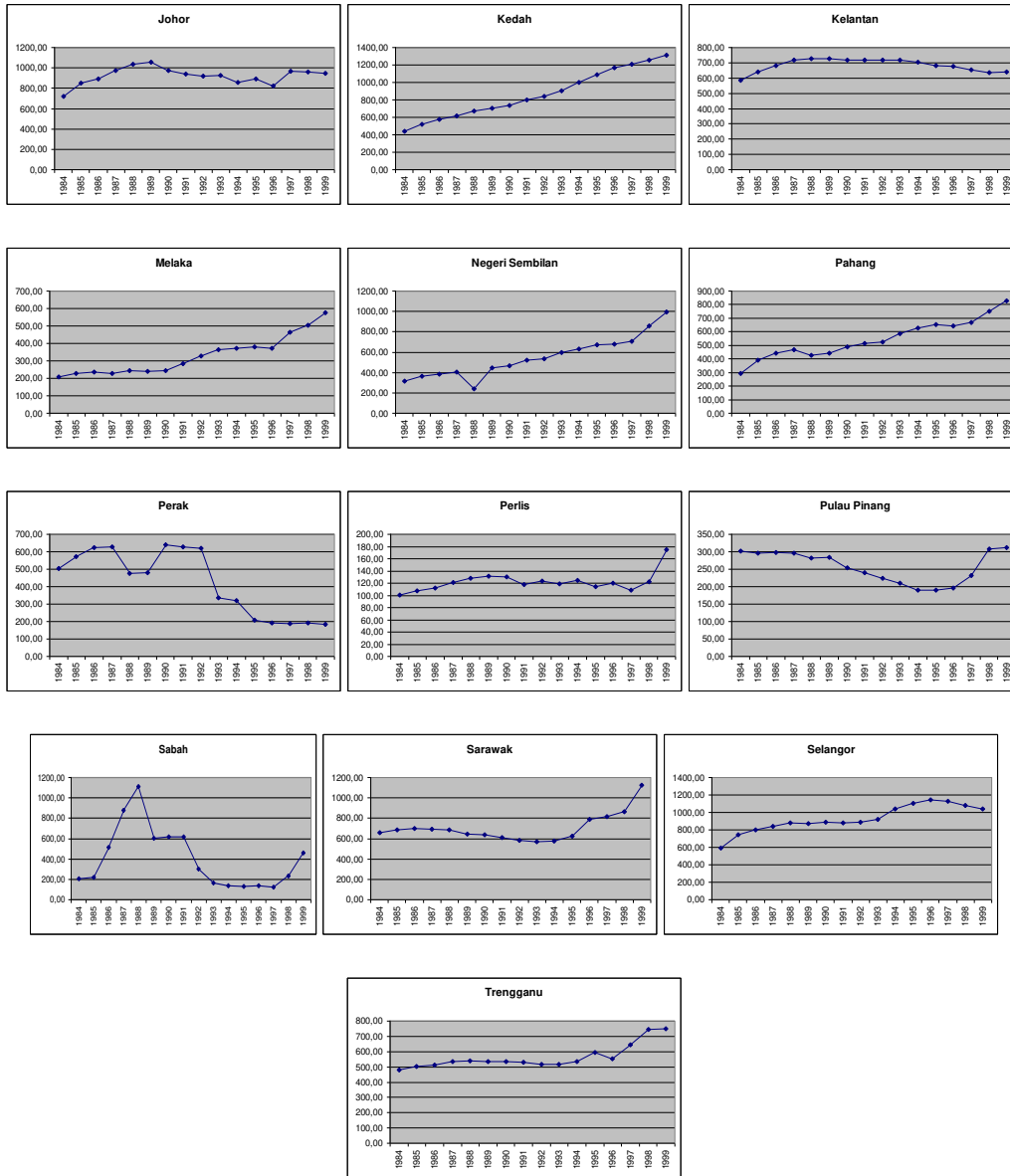
11. See Dahlberg and Lindström (1998) Borge and Tovmo (2000) and Borge, Dalberg and Tovmo (2001)

Figure 1: State governments' finance 1980-2003



Source: Malaysian State Governments Financial Statement, various issues.

Figure 2: State governments' outstanding debts 1984-1999



Source: Malaysian State Government Financial Statement, various issues.

Table 1: Loans repayments and loan repayments arrears of the state governments

State government	Loan repayment arrears as at 31/12/2002 (RM Million)	Year 2002		Loan repayment arrears not identified (RM Million)	Loan repayment arrears as at 31/12/2003 (RM Million)
		Annuity payable (RM Million)	Annuity paid (RM Million)		
Johor	506.64	66.42	4.68	-	568.38
Kedah	488.48	71.54	11.72	67.33	615.63
Kelantan	129.57	25.44	0.74	4.02	158.29
Melaka	38.07	35.05	33.00	32.01	72.13
N. Sembilan	36.34	65.49	22.17	-	79.66
Pahang	244.99	93.86	2.44	19.35	355.76
Perak	4.35	15.92	14.56	-	5.71
Perlis	36.47	9.00	0.00	2.26	47.73
Pulau Pinang	31.71	31.19	20.57	-	42.33
Sabah	35.59	13.07	0.00	3.78	52.44
Sarawak	41.26	129.87	113.87	1.48	58.74
Selangor	178.62	94.56	0.58	1.89	274.49
Trengganu	160.09	52.83	6.72	7.60	213.80
Total	1932.18	704.24	231.05	139.72	2545.09

Source: Auditor General's Report 2003

Table 2: The evolution of state governments' real revenue and expenditures (1980-1990 and 1991-2001) (in %)

	1980-1990		1990-2000	
	Expenditure	Revenue	Expenditure	Revenue
Johor	4,22	7,04	-1,83	-4,38
Kedah	1,53	10,75	4,52	4,56
Kelantan	6,12	10,09	3,23	3,36
Melaka	7,50	8,29	1,53	4,89
Negeri Sembilan	0,54	3,75	4,05	3,29
Pahang	4,57	4,62	0,50	2,18
Perak	2,91	7,18	4,15	2,36
Perlis	9,43	8,59	0,49	-4,16
Penang	7,18	7,35	5,80	2,68
Sabah	3,90	0,20	-6,59	-1,80
Sarawak	11,20	11,07	8,10	2,69
Selangor	6,07	10,23	8,49	4,71
Trengganu	14,13	8,79	2,40	0,68
All states	6,10	7,53	2,68	1,62
Federal. Gov	3.74	4.73	5,32	4,39

Source: Malaysian State Governments Financial Statement, various issues.

Table 3: Estimation results for pooled sample (1980-2003)

	(1) OLS	(2) GMM difference	(4) GMM system
λ	0.2866*** (0.0605)	0,0185 (0.1193)	-0.1161 (0.1077)
Constant	-0.0003 (0.0099)		0.0023 (0.0076)
R ²	0.1522		
Sargan test		12.99	9.26
No. of restriction		12	11
Sargan p-value		0,370	0.598
1 st order AC		-3.30	-3.28
2 nd order AC		0.09	0.09

Notes: t-test in parentheses; significant at 10% level*, significant at 5% level**, significant at 1% level***.

Table 4: Estimation results for split sample (1980-2003)

	OLS Low income	OLS High Income	GMM difference Low income	GMM difference High income	GMM system Low income	GMM difference High income
λ	0.3902*** (0.1097)	0.2359*** (0.0602)	0.022 (0.3575)	-0.4358** (0.1382)	0.0665 (0.3077)	-0.2274 (0.2245)
Constant	0.0035 (0.0120)	-0.0053 (-0.0140)			0.0060 (0.0040)	-0.0033 (0.0177)
R ²	0.1920	0.1326				
Sargan test			6.80	5.45	3.35	3.80
No. of restriction			6	5	5	4
Sargan p- value			0.340	0.363	0.647	0.434
1 st order AC			-2.23	-2.26	-2.18	-2.18
2 nd order AC			0.03	0.08	0.04	0.06

Notes: t-test in parentheses; significant at 10% level*, significant at 5% level**, significant at 1% level***.

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