

**MARKET PRESERVING FEDERALISM:  
IMPLICATIONS FOR MALAYSIA**

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## DEDICATION

*Abd Ghaní Abd Rahman*

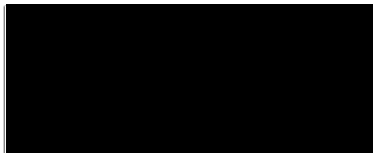
*§*

*Azízah Mohamed*

## **DECLARATION**

'I, Judhiana Abd Ghani, declare that the PhD thesis entitled Market Preserving Federalism: Implications for Malaysia is no more than 100,000 words in length including quotes and exclusive of tables, figures, appendices, references and footnotes. This thesis contains no material that has been submitted previously, in whole or in part, for the award of any other academic degree or diploma. Except where otherwise indicated, this thesis is my own work'.

**Signature**

A solid black rectangular box used to redact the signature of the author.

**JUDHIANA ABD GHANI**

**Date**

**28 March 2014**

## **ABSTRACT**

In the Malaysian federal system, the central government is in a dominant position and the states depend heavily on fiscal transfers from the centre to meet their budgetary needs. This model of fiscal federalism is widely regarded to have a negative impact on states' fiscal performance, in turn, affecting the overall performance of the economy. Having experienced three decades of rapid growth, Malaysian economic growth has been sluggish since the Asian financial crisis of 1997, and there is a widely shared view that the country needs a radical change in its economic development strategy in order to break out of the middle income trap. The National Economic Action Council of Malaysia has also been critical of the previous growth model for being inadequate for meeting this challenge, and the government's New Economic Model (NEM) aims at developing a system of governance that empowers the private sector for broad-based inclusive development.

In this context, the aim of this thesis is to explore whether new insights gained from the latest model of federalism – the Market Preserving Federalism (MPF) – can be applied in Malaysia for reforming intergovernmental fiscal relations and for improving both national and regional economic growth potential. The concept of market preserving federalism (MPF) proposes a form of fiscal federalism with decentralised governance that functions on market-based principles, hard budget constraints, and fiscal accountability. The thesis investigates how the current model of fiscal decentralisation in Malaysia can be improved to support a market-based economy. Using econometric analysis of public finance data for two decades (1990-2009), the thesis evaluates the four critical attributes of Malaysian federalism, namely fiscal decentralisation, subnational competition, efficiency of public finances, and equity of outcomes by analysing the relationships between fiscal decentralisation and governmental incentives for revenue raising, public expenditure, and debt financing. In particular, the thesis analyses the nature of incentive structures generated by the current soft budget constraints faced by subnational governments and their effects on regional and national economic performance. Policy implications are drawn for reforming the current federal framework in order to foster business investment and inclusive economic development in Malaysia.

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# CHAPTER 1

## INTRODUCTION AND BACKGROUND

### 1.1 Chapter Aims and Description

Developed in the 1990s (Weingast 2009; Qian and Weingast 1997 and Weingast 1995), market preserving federalism (MPF) is a new addition to the growing literature on fiscal federalism, and represents an ideal (according to its proponents) type of fiscal federalism which seeks to re-establish government institutions and intergovernmental relations on market-based principles and to minimise rent-seeking behaviour of governments. Specifically, the MPF model emphasises the importance of fiscal decentralisation and the right kind of incentives in governance (Jin, Qian, and Weingast 2005, 1999). Thus, the MPF approach sets out several conditions under which a federal system can promote and preserve market-type conditions in the public sector, and provide incentives for economic growth and development (Dollery 2002; Qian and Weingast 1997; Weingast 1995). The cornerstone of the MPF model is a set of market-based principles that emphasises the role of hard budget constraints, local autonomy, fiscal accountability and operational transparency (Grewal and Sheehan 2004).

The earlier theories of fiscal federalism focused on the concepts of local public goods (Tiebout 1956), perfect equivalence between benefit spans of local public goods and governing jurisdictions (Oates 1972; Olson 1965), and coordination costs (Breton and Scott 1978). While concentrating on what local governments in a federation should do, these theories overlooked the political economy aspects of multilevel governance when one level of government controls most of public revenues and the other has responsibility for public spending (Grewal 2008a; Grewal and Sheehan 2004). Against this background, the focus of the MPF literature on the impact of budget rules on fiscal incentives is indeed appropriate.

Having experienced three decades of rapid growth, Malaysian economic growth has been sluggish since the Asian financial crisis of 1997, and there is a widely shared view that the country needs a radical change in its economic development strategy in order to break out of the middle income trap. The federal system in Malaysia accords a dominant position to

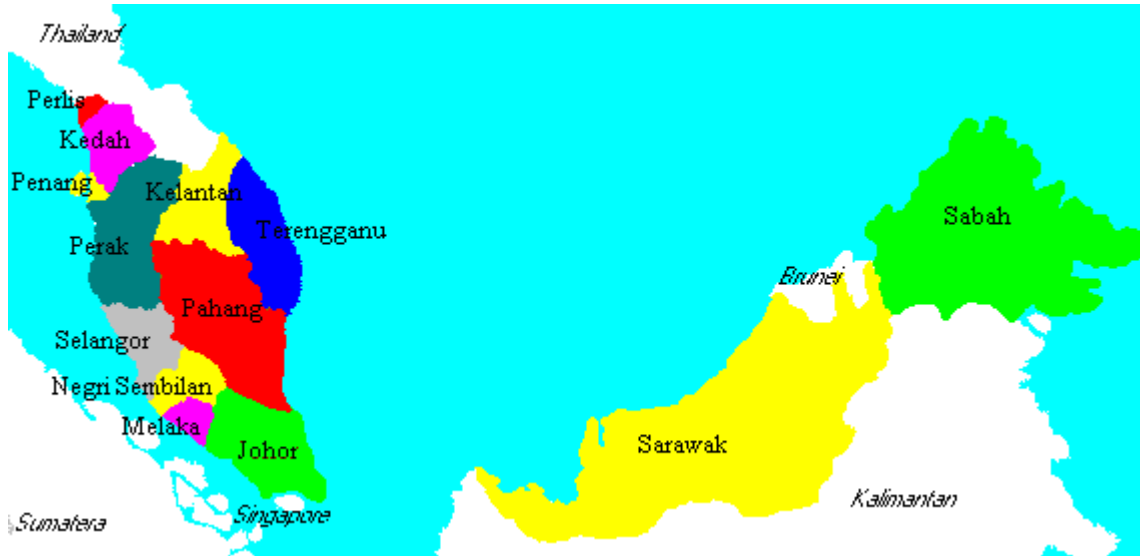
the central government making the states heavily dependent on fiscal transfers from the centre to meet their budgetary needs. This model of fiscal federalism is widely regarded as having a negative impact on the states' fiscal performance, in turn, affecting the overall performance of the economy. The National Economic Action Council (NEAC) of Malaysia has been critical of the previous growth model for being inadequate for meeting future challenges of economic growth and the government launched the New Economic Model (NEM) in 2010 with the aim of developing a system of governance that can empower the private sector to generate broad-based inclusive development.

In this context, the aim of this thesis is to explore whether new insights gained from the latest model of federalism – the market preserving federalism (MPF) - can be applied in Malaysia to improve both national and regional economic growth potential. In other words, this study aims to make a contribution to the literature on reforming the current system of fiscal federalism in Malaysia. The principles of decentralisation and market-based mechanisms featured in the MPF model appear to be in line with the New Economic Model (NEM) to enable and empower Malaysia's private sector. Given the focus on economic diversification and competitive markets in government policy, it is worth considering whether MPF principles can provide the Malaysian economy with the requisite framework for achieving the goals of higher rates of economic growth and efficient governance through healthy competition among the states. Using a dynamic panel data model, the study will explore whether the model of market preserving federalism (MPF) can be applied to usher in a new era of fiscal federalism in Malaysia that is aligned with its ambitions achieving higher levels of economic growth and becoming a relatively open state-oriented market economy. In fulfilling this aim, this study focuses on four critical attributes of federalism in Malaysia, namely decentralisation, competition, efficiency, and equity – by empirically examining the relationship between a) fiscal decentralisation and regional growth, b) system of fiscal incentives, and c) regional competitiveness and allocative/technical efficiency within the MPF framework. Since efficiency is the main factor for promoting economic growth that can be evaluated quantitatively; whereas equity tends to be more of a subjective (and important) goal, the empirical analysis will focus more on the efficiency consequences of MPF along with the analyses on the nature of incentive structures generated by the current practice of soft budget constraints and their effects on regional and national economic performance. Lastly, policy implications are drawn for reforming the current federal framework in order to foster business investment and inclusive economic development in Malaysia.

## 1.2 Background

Malaysia is separated by the South China Sea (spanning across about 430 km) into two regions, Peninsular Malaysia and Malaysian Borneo, covering a total geographical area of 329,750 km<sup>2</sup> (see Map of Malaysia).

**Figure 1.1 Map of Malaysia**



Malaysia is a multiracial country with a population of over 28 million growing at 2.3% per annum, where Malays and other indigenous groups account for 58% (officially designated as Bumiputra or son of soil, Malays are dominant in this group), Chinese 26%, Indian 7% and 9% others. Malaysia is a federation of thirteen states (Johor, Kedah, Kelantan, Melaka, Negri Sembilan, Pahang, Perak, Perlis, Selangor, Penang, Terengganu, Sabah and Sarawak)<sup>1</sup> with three levels of government; i) Federal ii) State and iii) Local. Despite these differences, Malaysia has maintained 'unity in diversity' as the common objective of the federation from the day of its creation to the present day. The Federal Constitution forms the foundation for the federalist system in Malaysia and demarcates a clear separation of powers between federal government and state governments (Anuar 2000). The head of state is an elected monarch<sup>2</sup> (Yang di Pertuan Agong) and the head of government is the Prime Minister. The legislature is closely modelled after the Westminster parliamentary

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<sup>1</sup> Peninsular Malaysia comprises eleven states with two other states in Borneo, namely, Sabah and Sarawak.

<sup>2</sup> Nine of these thirteen states have hereditary rulers (Sultan) who share the position of King (Yang Dipertuan Agong) on a rotating basis with five year tenure. However, the King's function has been purely ceremonial since the Constitutional amendments in 1993 and 1994.



system with a bicameral parliament consisting of the House of Representatives (Dewan Rakyat) and the Senate (Dewan Negara).

### **1.2.1 Macroeconomic Performance**

According to (Bożyk 2006) and Mankiw (2007), the Southeast Asian nations experienced an economic boom and underwent rapid development in the late 20<sup>th</sup> century. In terms of economic performance, Malaysia has been recognised as one of the fastest growing economies in the Asia Pacific Region. With a GDP per capita of around USD 14,400 (MYR 43,200)<sup>3</sup>, Malaysia is considered as a newly industrialised open state-oriented country and classified as a new emerging economy with growth driven by a greater market orientation. In 2007, the GDP (in purchasing power parity terms) of Malaysia ensured it the position of the third largest economy in South East Asia and 28<sup>th</sup> largest in the world. In 2008, the GDP (nominal) was recorded at USD 222<sup>4</sup> billion, increasing to USD 383.6 billion in 2009. The GDP per capita (nominal) significantly increased from USD 8,100 in 2009 to USD 14,700 in 2010 (Malaysia Economic Report 2010/2011). Generally speaking, Malaysia today is a multi-sector economy based on services and manufacturing. It is one of the world's largest exporters of semiconductor components and devices, electrical goods, solar panels, and information and communication technology (ICT) products (Economic Report, various issues). The manufacturing sector accounted for the largest share of foreign direct investments (FDI), which increased by 12.3% from MYR 29.3 billion (approximately USD 10 billion) in 2010 (Economic Report 2010/2011). However, since the Asian financial crisis 1997/98, the government has started rethinking its strategies for growth and development as the local economy is easily exposed to external shocks. The focus is now on transforming the economy from labour intensive manufacturing operations into higher value-added manufacturing activities which use highly-skilled labour and advanced technology.

Apart from the importance of manufacturing and industry sectors, Malaysia is well-endowed with natural resources in areas including agriculture, forestry and minerals. In terms of agriculture, Malaysia is one of the top exporters of natural rubber and palm oil, which together with sawn logs and sawn timber, cocoa, pepper, pineapple and tobacco, dominate the growth of the sector. But petrochemicals sector provides the main share in the economy, as 44% of the federal government revenue is supported by the oil and gas

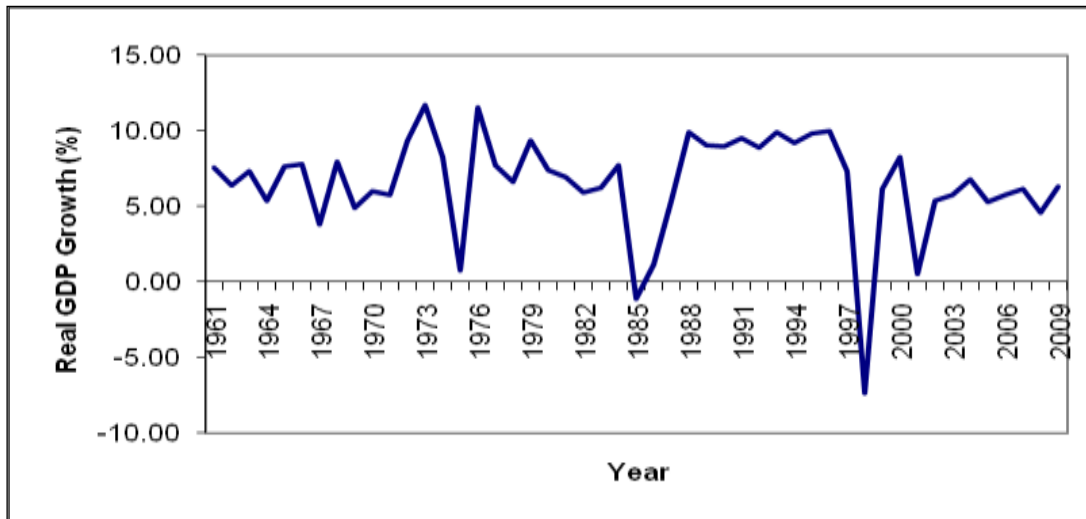
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<sup>3</sup> Current exchange rate (May 2013) is USD 1 = MYR 3.04.

<sup>4</sup> World Development Indicators, World Bank Group (2012).

industry led by Petronas<sup>5</sup>, the national oil company. Figure 1.2 shows Malaysia's economic performance has been growing, with the GDP growth rate of more than 4% in five decades (1970 - 2000) and hitting the 10% mark at times of four major economic events: 1973, 1977, 1989 and 1996.

**Figure 1.2 Real GDP growth**



Source: Ministry of Finance, Economic Reports (various issues).

Apart from that, Table 1.1 reveals that the growth experience has been accompanied by consistently low inflation rates and the oil crises year of 1974/75, 1979/80 and 1997/98, while unemployment rates have also been reasonable even when measured by developed country standards.

Table 1.1 Some macroeconomic indicators on Malaysia (average percentage)						
Indicator	1971-1980	1981-1990	1991-1995	1996-2000	2001-2005	2006-2009
Real GDP Growth	6.8	7.8	8.7	4.8	4.5	5.7
Inflation Rate	6.0	3.2	4.0	3.2	1.8	1.6
Unemployment Rate	6.6	6.7	3.9	4.0	3.5	3.4

Source: Ministry of Finance, Economic Report (various issues).

<sup>5</sup> As the custodian of oil and gas reserved for Malaysia, Petronas has an excellent record, ranking as 68th largest company in the world in the Fortune Global list of 500 companies in 2012, and 18th in the industry on the same list. According to the same source in 2012, the company further grew to be the 12<sup>th</sup> most profitable company in the world and the most profitable in Asia (Fortune Global 500 2012).

Since 1980, Malaysia has experienced significant growth in its GDP as its economy took a transition from reliance on mining and agriculture to manufacturing. Coupled with the privatisation policy introduced by Prime Minister Mahathir Mohamad, this move towards industrialisation enabled the heavy industries to flourish in a matter of years and the industrial sector became an engine of economic growth. The growth peaks (see Figure 1.2) were a result of the close partnerships between the government and private sectors under what was known as a new privatisation policy of 'Malaysia Incorporated'. This policy was launched in 1983 as a new corporatised approach towards development by emulating the policy of 'Japan Inc.' followed in Japan in the earlier decades. This policy seeks to provide a cohesive direction to the country as a single corporation with the government providing and maintaining conducive environment for business and private enterprises and private sector (Yusof and Bhattasali 2008). Since then, Malaysia consistently achieved more than 7% GDP growth along with low inflation in the 1980s and the 1990s (Mankiw 2007). Although this policy was geared towards fostering the private sector, federal government benefited from the tremendous increase in corporate tax income, which could be further used to finance development projects (Rosly 2006). In the 1980s, export-led industrialisation was the major factor contributing to this rapid economic growth and structural change (Wong and Jomo 2005). The economy experienced extreme variations in growth performance, ranging from a severe recession at the beginning of the Fifth Malaysia Plan (1981- 1985) to boom conditions in the last three years of the Sixth Malaysia Plan (1986-1990). During this period, petroleum exports grew rapidly by 28.7 % per annum, while tin exports were experiencing slow decline (Hart 1994). Manufactured exports grew rapidly over this period in line with greater industrialisation. Here, electrical appliances and electronics, textiles, clothing and chemicals accounted for a significant share of manufactured exports whereas the share of rubber in total merchandise exports declined from 33.4 percent in 1970 to 7.5 % in 1985 (Sixth Malaysia Plan).

In the 1990s, as a result of macroeconomic stability the economy recorded an average growth of 8.7% per annum. The recovery of the world economy in the mid-1990s further supported the performance of the Malaysian economy. With growing private enterprises, government tax revenues have grown, which enabled further financing of development projects and a surplus in the government's overall account since 1993. Further liberalisation of procedures and rules, and devaluation policies supported by a stable political climate, provided a conducive environment for increased private investment. Malaysia was successful in financing these investments through domestic savings and high inflows of

foreign direct investment (FDI) particularly from Japan, South Korea and China to relocate their production due to several economic factors (Sixth Malaysia Plan).

As a result of the deceleration of the United States economy and dampened global electronics demand exacerbated by the attacks of September 11 in 2001, global economic growth slowed during 2001-2005. Being a small and open economy, Malaysia is susceptible to external shocks and this has been successively seen in past crises, whether it was the 1997/98 financial crisis or the recent global financial crisis of 2008.<sup>6</sup> In 2002, the economy started to recover from the 1997/98 financial crisis with the GDP growth recorded at 4.1% (Figure 1.2 and Table 1.1). Part of the growth of the Malaysian economy is often attributed to its rapid industrialisation which considerably changed the structure of the economy (Zainal Abidin and Rasiah 2009). In addition, with the rapid speed in adoption of ICT technology, human capital and technology development are clearly the major engines of economic growth in this era.

### **1.2.2 Economic Policy**

Looking back across the economic history of the country, some interesting transformations are traceable in the path that Malaysia has taken. Prior to independence in 1957 Malaysia was a low-income agrarian economy. From 1957 to 1970, the economy was heavily dependent on primary commodities, namely, rubber and tin production and business enterprises, which were small in scale, locally orientated, and family based. During the commodity-driven phase between 1957 and 1970, there was wide income disparity and widespread poverty. At this time, the GNP per capita growth in nominal terms was at a low annual rate of 1.24 % (Department of Statistics Malaysia). For this reason, the government strongly felt the need to diversify the economy and reduce dependence on tin and rubber to increase income and revenue generation. Following the collapse of the tin market, it was only in 1972 after petroleum and natural gas discoveries in the oil fields off Sabah, Sarawak and Terengganu, that these commodities began to contribute to the Malaysian economy. In the early 1970s, the government started an industrialisation process, although it actually began as early as 1958 through import substitution strategies with the introduction of the Pioneer Industry Ordinance 1958 as well as the establishment of Malaysian Investment and Development Authority (MIDA). With these initiatives, export-oriented manufacturing

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<sup>6</sup> Increases in international commodity prices, like fuel or food, have direct impact on domestic prices. Similarly, if production cost and productivity in Malaysia cannot keep pace with those abroad, exports are likely to lose ground with negative effects on the national employment and income.

industries gained momentum when Malaysian exports became the country's primary growth engine. Furthermore, foreign direct investment (FDI) was also given attention, with many incentives being given by the government through successive legislations, including, Investment Incentives Act of 1968, Free Trade Zone Act of 1971 and Promotion of Incentives Act of 1986. Hence, over time the economy has diversified beyond agriculture and primary commodities, and now manufactured goods account for a larger share of GDP and total export, with economic diversification has been a long term strategy.

Since 1970, Malaysia's economic development strategy has focused on three long-term policies—New Economic Policy (1971-1990)<sup>7</sup>; National Development Policy (1990-2000)<sup>8</sup>; and National Vision Policy 2020, (2001-2020)<sup>9</sup>. These long-term development policies not only focus on economic growth, but also on social equity benefits for all groups and communities in Malaysia (Yusof and Bhattasali 2008). The race riot in 1969 created a turning point in the Malaysian economy and led to the establishment of a New Economic Policy (NEP) in 1971. This policy has been the backbone of Malaysian economic development, substantially reducing poverty and addressing interethnic economic imbalances. NEP was the first in a series of five year economic plan including the First Outline Perspective Plan (OPP1, 1971-1990) and the Second Outline Perspective Plan (OPP2, 1991-2000), the Third Outline Perspective Plan (OPP3, 2001-2010) and the Tenth Malaysian Plan (MP10, 2011-2015) which is currently in place.

Malaysia has since maintained a delicate ethno-political balance with a system of government that attempts to combine overall economic development with political and economic policies that promote the equitable participation of all races. Consequently, many development programs and sub-policies have been established across the country in order to achieve the target set in NEP, resulting in fair and equitable distribution in a new phase of economic growth where the construction and manufacturing sectors have experienced rapid growth. However, the implementation of NEP has always been regarded as one of the factors raising the cost of doing business due to rent seeking, patronage, pervasive corruption and opaque government procurements (NEAC 2010).

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<sup>7</sup> The race riots in May of 1969 were a turning point leading to the introduction of the NEP in 1970. After this event, the distribution of income issues became more important and moved to the forefront (Yusof and Bhattasali 2008).

<sup>8</sup> National Development Policy is part of the Second Outline Perspective (OPP2).

<sup>9</sup> The Third Outline Perspective Plan (OPP3) 2001-2010, constitutes the second decade of development under Malaysia's Vision 2020. This covers the 8<sup>th</sup> and 9th Malaysia Plan which is the second phase in the nation's framework to achieve Vision 2020 (to achieve a developed country by year 2020).

The New Economic Model (NEM) was launched by the Malaysian government in 2010, with the purpose of bringing Malaysia out of the 'middle income trap' resulting from the economic slowdown over the years and weak prospect for economic growth. In particular, after the Asian financial crisis of 1997-98, production and growth have been markedly reduced which led to a growing concern that emerging markets like Malaysia might fall into a "middle income trap", becoming unable to achieve high levels of economic growth and further economic transformation (Flaaten, Ghani and Mishra 2013). Additionally, since 1957, Malaysia has experienced only six years of budget surplus and the longstanding budget deficit has been a worrying factor in the economy particularly in the 2000s as revenue is expected to decline in the coming years (MIER 2009)<sup>10</sup>. Huge accumulated deficit in the federal government account amounted to a total national deficit of about 34% of GDP or MYR 233.9 billion by June 2009, leading to the payment of substantial amount of annual interest, and hindering the development of infrastructure and public goods (NEAC 2010). It has been found that Malaysia can no longer rely only on spending its wealth from natural resources as this is unsustainable as a long-term source of income. After the continual move towards greater privatisation in earlier plans, it is now evident that the country cannot leave the market forces alone to determine the fate of the economy. More importantly, it needs to focus on preserving social harmony.

The National Economic Action Council (NEAC 2010)<sup>11</sup> reported that many of the policies and strategies used to achieve the current state of development are now inadequate for taking Malaysia to the next level of development. Although the previous growth models provided three decades of outstanding performance, progress in Malaysia has slowed down since 1997 and the quality of economic growth has weakened considerably. The NEAC Report has emphasised that Malaysia not only needs a better governance but also a radical change in its economic development model in order to bring it out of the middle income trap and move into the status of a high income nation. The economic growth has not benefited all segments of the population; it seems to have benefited only the top 20% of income earners (NEAC 2010). According to a report by NEAC (2010), productivity is not growing fast enough and Malaysia still lacks creativity and innovation. Several factors have been identified in relation to this problem. Firstly, Malaysia needs to attract more private investors by improving the procedures of doing business as cumbersome procedures contribute to

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<sup>10</sup> Malaysia's Institute of Economic Research

<sup>11</sup> The NEAC was set up by the to the Prime Minister of Malaysia in May 2009 with a mandate to formulate a New Economic Model (NEM) to transform Malaysia into a high income economy by 2020.

higher cost of doing business. Secondly, there is a critical shortage in human capital as a result of lack of talent and skills and a decline in skilled labours across industries resulting in reliance on unskilled foreign workers. Thirdly, although the New Economic Policy (NEP) has reduced poverty and substantially addressed inter-ethnic economic imbalances, its implementation has inadvertently bred rent-seeking, patronage and opaque government practices.

The high growth target became a national agenda with the aim of transforming Malaysia into a high-income country with a sophisticated economy (NEAC 2010). This has led the Malaysian Government to launch a New Economic Model (NEM) aimed at unleashing full growth potential. The NEM aims to focus on human development and identify factors that contribute to persistent poverty. Even though many steps have been taken to eradicate poverty, 40% of Malaysian households still earn less than MYR 1,500 a month. Income disparity needs to be addressed and measures are needed to improve the economic well-being of the poor, especially those in Sabah, Sarawak and rural areas of the Peninsula. Being strategically located in a high-growth region and having good infrastructure, a well-established manufacturing base and a young educated labour force, it is expected that Malaysia can easily achieve this goal by implementing economic transformation programme (ETP)<sup>12</sup>. As countries develop, the importance of the manufacturing sector declines and the importance of the service sector increases, and this shift is also required for promoting rapid economic growth in emerging markets. However, Malaysia has not fared well on this front. Moreover, the pace and quality of urbanisation becomes even more important as countries try to make the transition from middle income to an advanced economy. Urbanisation strategy to develop services may differ in some respect (Desmet et al. 2012). The redistribution of knowledge and technologies in a spatially balanced manner is a crucial ingredient for facilitating broad economic transformation. Transformations will evolve depending on how countries manage urbanisation, education, and infrastructure linkages (Flaaten, Ghani and Mishra 2013).

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<sup>12</sup> This ETP involves two integral components represented by the eight Strategic Reform Initiatives (SRIs) and the twelve National Key Economic Areas (NKEAs), to achieve the ultimate objectives of high income, inclusiveness and sustainability.

### **1.3 Federal System and Fiscal Arrangements in Malaysia**

#### **1.3.1 Federal System in Malaysia**

Historically, the federal system in Malaysia<sup>13</sup> was formed in 1895 by the intervention of the British Government who consolidated the various colonies into a federation of Malay states. The British interest in the Malay states was essentially motivated by their growing interest in trade, especially spice and tin. Demand for rubber and tin increased following the Industrial Revolution in Europe in the second half of the 18<sup>th</sup> century. Fearing that the internal affairs of the Malay states might affect British trade in the Straits Settlements (Penang, Melaka and Singapore), the British made further intervention in other Malay states' affairs especially in the middle of the 19<sup>th</sup> century (Bakar 2004). The Treaty of Pangkor 1874 marked the beginning of British colonial rule in all the Malay states outside the Straits Settlements leading to the formation of the Federated Malay States (FMS) by the Treaty of Federation 1895. With the purpose of attaining efficiency in administration and fulfilling economic aims, the Treaty of Federation marked the beginning of the federal system in the history of Malaysia with the integration of four Malay states (Perak, Selangor, Pahang and Negri Sembilan). It must be re-emphasised that this first idea of a federal system in Malaya was not intended to unite the Malay states into larger political union for their future self-government but merely represented the British intention to control the Malay states in order to safeguard their business interests. In 1909, a step towards a proper federal system government took place with the establishment of the Federal Council in Kuala Lumpur for making legislation for the FMS. Meanwhile, outside the FMS the British attempted to expand their power to other Unfederated Malay States (UMS), which were administratively separated: of Johor, Kedah, Perlis, Kelantan and Terengganu<sup>14</sup>.

The Japanese occupation of Malaya in the Second World War, however, gave the impetus for the rise of nationalism among Malays, especially the younger generation, and inspired a new political movement aimed at gaining independence<sup>15</sup>. After the Japanese withdrawal from Malaya in 1945, the British returned to Malaya and established the British Military Administration (BMA) as they feared that communists would control Malaya. While BMA was an interim measure, the Colonial Office planned for a future Malaya by introducing a

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<sup>13</sup> Formerly known as Malaya.

<sup>14</sup> All these states except Johor were under Thai/Siam's protection until 1909 (Bakar 2004).

<sup>15</sup> The Japanese occupation in Malaya lasted for only three and half years, from 1942 to 1945, until the Japanese surrendered to the Allied Forces (Kratoska 1995).



unitary form of government to integrate all the Malay states (FMS, UMS and Straits Settlements) (MacDonald 1948) as a step towards self-government. However, this attempt to integrate Malay states engendered strong opposition from Malay Nationalist after the British Parliament accepted the proposal to form the Malayan Union in early 1946. Strong Malay opposition stemmed first from the fact that the powers of the Malay Rulers would be lost in the larger body of the union within which the states were to be merged. Secondly, under the Malayan Union, citizenship was open to all inhabitants in Malaya by reason of birth or by naturalisation (for those who had resided for ten out of fifteen years in Malaysia before 15 February 1942)<sup>16</sup>. The citizenship issue effectively created conflicts between communities, as Malays feared they would lose sovereignty to other ethnic groups in their own motherland because non-Malays would outnumber the Malays (Macdonald 1948). With continued strong Malay opposition towards the Malayan Union, headed by the United Malays National Organisation (UMNO), the Malayan Union was finally abolished in 1948 and replaced by the Federation of Malaya. Clearly, the Federation of Malaya of 1948 and 1957 was not established to accommodate states' socio-economic diversity as the interest of the people and states was towards future political survival rather than defending states' interest. Thus, in the new Union, the financial arrangements between the centre and all state governments were not given emphasis by the states. It is evident that what emerged from the Federal Agreement 1948 was a heavily centralised federation which was almost unitary in character with strong centripetal forces (Bakar 2004). However, the successful creation of the Federation of Malaya 1948 inspired the movement towards self-government and subsequently Malaya independence from the British.

On 31<sup>st</sup> August 1957, the Federation of Malaya gained independence from the British, and the new Constitution came into force in which most elements were imposed by the British in consultation with the Alliance coalition party, rather than openly negotiated by all prospective members of the federation. In other words, state governments were not directly involved in the drawing up the Constitution. Six years later, Malaysia was formed when the former British colonies of Singapore and the East Malaysian states of Sabah and Sarawak joined the Federation in 1963<sup>17</sup>. Singapore was allowed to join the federation due to the

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<sup>16</sup> Under British colonial rule, a large number of migrants from China and India were brought to work the tin mines and rubber plantations. This situation created a plural society in Malaya, and in the long term caused socio-economic and political fears among Malays of non-Malay political dominance, as the number of foreign labourers far outstripped that of the Malay population (Bakar 2004).

<sup>17</sup> By the turn of the 20th century, the states of Pahang, Selangor, Perak, and Negri Sembilan were together known as the Federated Malay States, not the Federation of Malaya. The remaining five states in the Peninsula

perceived threat of a communist takeover, while Sabah and Sarawak were incorporated into the union to preserve the delicate racial and political balance in favour of the Malay and other indigenous people vis-a-vis the Chinese population of Singapore, many of whom were suspected of communist ties. Following this, the 1957 Constitution was amended to provide for the special requirements from these states. However, due to a prolonged ideological mismatch between the Singapore State Government and Federal Kuala Lumpur Government, Singapore was separated from Malaysia in 1965 (Hicks 1978). As a result, Malaysia is now a federation made up of the nine states of Peninsular Malaysia (including the Federal Territory Kuala Lumpur as the capital) and the former British Borneo possessions of Sabah and Sarawak.

After independence in 1957, the national government formed the Constitution of the Federation of Malaya as the supreme law defining the rights and responsibilities of the federal government, the member states of the federation, and the citizens and their relations to each other. The Ninth Schedule of the Federation Constitution details the distribution of legislative powers and responsibilities between the federal government and state governments. Articles 73 to 79 elaborate on the division of legislative powers between the state governments and federal government.<sup>18</sup> The Constitution clearly favours federal government over the state governments, both in terms of legislative jurisdictions as well as revenue assignments, as the states have been left with very little power and are highly dependent on the federal government. Compared to other federations in both developed and developing countries, Malaysia practices a federal system which has a strong centre with most of the authority concentrated in the hands of the federal government, particularly in conducting financial relations. This has led several scholars to dismiss the Malaysian system as a 'flawed federation' in the conduct of financial relations (Holzhausen 1974) because the federal system in Malaysia tends towards a more centralised structure as the distribution of functions is highly skewed towards federal government. At the same time, eminent lawmakers and leaders have argued that this skew in power towards the federal government is appropriate and advantageous in the context of the Malaysian Federation. It has been argued that this centralised form of federalism holds the various states and ex-

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were known as the Unfederated Malay States and while not directly under rule from London, also accepted British advisers around the turn of the 20th century. Of these, the four northern states of Perlis, Kedah, Kelantan and Terengganu had previously been under Siamese control. The other Unfederated State, Johor, was the only state which managed to preserve its independence throughout most of the 19th century.

<sup>18</sup> The scheme of federal arrangement in the 1957 Federation of Malaya Constitution is provided under part VI-relations between the federation and the states.

colonies together to preserve national unity. The greater power given to the centre is also justified on the basis that it also holds greater responsibility in governing, developing and defending the country (Musa 2008).

### **1.3.2 Fiscal Federalism in Malaysia**

Apart from the design of fiscal federalism, the Federal Constitutions provides for the establishment of several councils for specific matters to facilitate coordination between federal and state governments in order to foster cordial intergovernmental relations. These councils are the National Land Council to deal with land matters (Article 91), the National Council for Local Government (NCLG) for local government affairs (Article 95A), and the National Finance Council (NFC) for federal-state fiscal matters (Article 108). In particular, the NFC<sup>19</sup> is an important body within the Malaysian federal system as it ensures the smooth running of intergovernmental fiscal relations between the federal and state governments especially in times of conflicts. The Constitution outlines the main functions of the NFC, that is, the making of grants, assignment of revenue, states' borrowing requirement, states' development plans, and any other matters regarding federal-state fiscal matters. However, the role of NFC is purely advisory. For example, the NFC can be accused of being politically influenced in its operation because the members of the NFC represent the political echelon of the ruling party as the council is chaired by the Prime Minister and dominated by ruling party members (Jalil 2008; Bakar 2004).<sup>20</sup>

As a result, the outcome of this institutional arrangement is a highly centralised fiscal federalism system. This claim will be clarified further with the financial data illustrated in all the tables and figures in Chapter 4 and Chapter 5. The federal government collects relatively more revenue than the consolidated state revenue by retaining all major revenue sources and powers of borrowing. Indeed, the monopoly of the revenue system provides a fundamental basis for the strong political power of the federal government and fosters a permanent dependency of the state governments on the federal government for development funds/transfers.

This means that the centralised federal system in Malaysia empowers the federal government not only in regulating the development and location of industries but also in

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<sup>19</sup> The financial provisions of the Constitution came into force on 1<sup>st</sup> January 1958 and with it the NFC legally came into effect.

<sup>20</sup> The NFC includes a representative from each state (e.g. chief minister) except for Sabah and Sarawak as they are not obliged to consult the NFC for making additional grants or reviewing existing grants.

controlling the state's share of expenditure allocation. In terms of expenditure assignment, the federal government incurs larger shares of total government expenditure, including all important functions such as education, health, transport and communication. This leaves development of the states to be very much at the discretion of the centre. This is different from most other federations where the states are constitutionally responsible for the major areas of spending, particularly in the education and health arenas.<sup>21</sup>

The limited financial resources of the state governments and their inadequate capacity to implement large socioeconomic development projects have led to greater federal government involvement in the development process on behalf of the states. This causes states to continue to be subordinated and subservient to the centre. When the federal government has too much power over the economy especially in revenue matters, state governments tend to become its administrative arms sacrificing many of the benefits of lower government independence. This mismatch between limited revenue and continuous increase in expenditure has led the state governments to experience widening deficit in their fiscal balances and also levels of inflation (macroeconomic instability). This situation will not only affect the state governments but also the whole country at large, and would further exacerbate the vertical fiscal and horizontal fiscal imbalances in Malaysia. This has actually been the case in Malaysia as the country has continuously suffered from a range of fiscal imbalances despite its relatively steady economic progress. For example in 1990, vertical imbalance in Malaysia was the highest of all federations in the world including the United States, India, Argentina and Brazil (Shah 2007). This extreme imbalance was a result of the central policies for reducing inequalities and fostering national perspectives, which were used to legitimise the dominance of the federal government.

Since Malaysian states are unable to self-finance at the margin, and rely on transfers/grants from the federal government, this situation displays a high degree of dependence on such transfers to close the fiscal gap between state own revenues and state development expenditure. The fiscal help assured through intergovernmental transfer mechanism

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<sup>21</sup> In Malaysia, the education expenditure and health expenditure constituted 22.3% (MYR 44,412 millions) and 6.7% (MYR 13,246 millions) of the total federal government expenditure respectively (Malaysia Economic Report 2009/10). This budget allocation constitutes expenditure of all state in Malaysia. However, there is no record on the break-up of data for each individual state on health and education expenditures which clearly shows the centralised nature of Malaysian fiscal federalism system. In the case of Canada an example of a decentralised fiscal system, its provincial governments spent 58.4% for the education expenditure and 68.8% of health expenditure in 2001 compared to its federal government which only spent 3.3% on education and 1.3% on health (Canadian Tax Foundation 2001). In Australia, the federal government (the Commonwealth) and states share equal responsibility in funding health and education expenditures.

reduces the urgency for proper fiscal management and a sense of responsibility among state governments. In terms of macroeconomic stability function, persistent inflation and high deficit can appear when the federal or state governments give up credible commitment to hard budget constraints. The soft budget constraints can also become a source of problem for the federal government as it contributes to the huge deficit in the federal government account. Any deficit in federal accounts indirectly affects the state grants and transfers, and all the planned development expenditures in state may be affected or deferred.

In the Malaysian economy, both federal and state governments find themselves in a precarious situation as they remain in overall deficit. This situation was further worsened when Malaysian federal government consistently provided loans to finance the shortfalls at state level and state governments operate with an expectation of bailouts by the federal government. In most situations, the states borrowed under very favourable loan conditions, sometimes even interest free for some types of development expenditure (Ariff and Lim 2001; Ariff 1991) and states without the capacity to repay their loans were often financially dependent in the future (Rosly 2006).

Malaysian state governments have built up unsustainable deficits requiring special bail-out transfers from the federal government. For example, in 2004, the arrears in the debt repayments from the state governments to the federal government, accumulated over the years up to MYR 21.7 billion (from MYR 94.88 to MYR 76.79 million) (Jalil 2008). Indeed, the General Audit Report in 2004 showed that seven out of the thirteen states in Malaysia faced dire financial difficulties even to the extent of being on the verge of bankruptcy (Jalil 2008). Increasing the state government deficits led to higher federal government expenditure which increased about 1.4 times within five period from 2000 to 2004 and worsened the national inflation rate by 5.7% (Economic Report, various issues).

The accumulated debt resulting in large annual interest payments hinder the development of state's infrastructure and provisions to the people. The soft budget constraint currently practised in Malaysia poses risks that can undermine the public finance management as well as economic well-being of the whole country at large. This situation is further worsened when the state governments mistakenly assume that ready help is available to them from the federal government, but the federal government actually has inadequate financial capacity to help the state governments.

In addition, restrictions on the types and sources of revenues often lead state governments to resort to other means to balance their budget. When state governments are not permitted to introduce new taxes, charges or fees other than those determined by law, they are forced to increase current tax rates, charges and fees in order to raise revenues and close fiscal gaps. Consequently, tax distortions may excessively raise costs and burden the private sectors, thus, limiting their ability to compete in the market economy. Additionally, changes in federal policies, such as, revision of salaries for civil servants, growing demand for public services resulting from urbanisation, the rising cost of public services due to inflation, have contributed to increase in state governments' expenditures that cannot be fulfilled by existing revenues.

The state governments have little power when deciding their own priorities and needs, particularly in areas of growth, including infrastructure, education, innovation and research, and their development priorities are limited to providing public amenities. Even though both economic federalism and MPF theories emphasise the importance of certain national goods to be provided by the central government, the current centralised provision of local public goods also creates a common pool problem in which these goods are over-provided and tend to be larger than the efficient scale (Poterba and Jurgens 1999; Inman 1988; Weingast, Shepsle, and Johnsen 1981; Winer 1980). This situation is worsened when political officials or cabinet ministers at the federal level, representing specific jurisdictions, allocate projects and formulate policies that benefit their jurisdictions while the costs of those projects are spread across all taxpayers in the country.

In sum, the current model of fiscal federalism is widely regarded as impacting negatively on states' fiscal performance, in turn, affecting the overall performance of the economy. If the state governments are unable to generate the revenue necessary for their expenditures and run excessive deficits under present conditions, the federal government would have to bear the consequences. In other words, if debt grows at a rate faster than the economy, it will eventually exceed the nation's ability to repay it.

Viewed in this light, fiscal decentralisation has been a subject of serious contention and consideration for many politicians, economists and business leaders in Malaysia (Hamzah 2010). A single political party, the National Front Party (Barisan Nasional or BN), has continuously formed the federal government since Malaysia's Independence in 1957, and in fact, facilitated a stronger centralised federalism. However, since the twelfth General Election in 2008 and 2013, BN has lost its two-thirds majority in the national parliament, and

the opposition coalitions, elected in four states<sup>22</sup> and three states<sup>23</sup> respectively, are now insisting on reassignment of certain revenues from the federal government to their coffers. Furthermore, in order to generate more revenue they have initiated several new policies aimed at bringing foreign investments to strengthen their states' financial positions. For example, the opposition party, DAP (Democratic Action Party) proposes that states should be granted greater control over their finances, especially in terms of tax sharing, to provide a stronger link between state governments' economic performance and revenue shares.

Following the launch of NEM in 2010, the Malaysian government has changed this to adopt a 'new way of doing business' by emphasising the need to empower the state and local authorities to develop and support growth initiatives as well as encourage competition. Despite the place accorded to decentralisation in the politico-economic initiatives outlined in the NEM, the proposal for devolving substantial authority to state governments has not given emphasis on fiscal matters. Considering the imbalance in revenue assignment between federal and states, the existing arrangement needs to be revised and strengthen. However, if the fiscal imbalances and poor fiscal incentives due to common pool problems could not be eliminated completely, still the alleviation of the problems must be emphasised. The fiscal reform must be necessarily aimed at redesigning a system of revenue allocation that can guarantee continuous and stable revenue inflow to the states, as states' financial difficulties are a long-term problem that have relentlessly persisted over the decades. In addition, increasing globalisation and deregulation over the last two decades has meant that the current centralised fiscal federalism system in Malaysia is no longer relevant or sustainable in the competitive market-based economy. Therefore, there is an urgent need to re-examine Malaysian federalism to develop a new fairer system of fiscal decentralisation.

#### **1.4 Fiscal Decentralisation and Market Preserving Federalism**

Developing countries have been the subject of many studies in fiscal decentralisation, particularly in the area of allocative/technical efficiency and economic growth. A major debate exists on whether the implementation of fiscal decentralisation has a negative or positive effect on economic growth. A key challenge for many developing economies has been to reap the economic benefits of decentralisation while maintaining control over public expenditures and borrowing, restoring growth and improving accountability of local

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<sup>22</sup> Selangor, Penang, Kedah and Kelantan.

<sup>23</sup> Selangor, Penang and Kelantan.

governments and officials to limit corruption. Further, many developing countries face the task of determining the extent of decentralisation needed to generate incentive structures that support a market economy in light of the key factors associated with their economic growth.

According to Weingast (2006), control over markets is one of the most powerful tools for shaping the economic destiny of a country. This power is inherently political. In the context of MPF, decentralisation means giving more authority to the states to counterbalance the dominating behaviour of the central government in fiscal matters. Here, decentralisation uses a bottom-up approach to economic development that rests on local autonomy and accountability in decision making. State governments are faced with the challenge of providing a business-friendly atmosphere to attract businesses that can provide much-needed jobs for citizens and effectively create an increase in the levels of economic activity. For this to occur, it is necessary to have a supportive system of governance in place that will allow the subnational governments to have a major role in the process of development (Tirtosuharto 2009). Such policies, from the MPF perspective, focus on the development of local institutions and the market economy to create incentive structures in a decentralised or federal system using a market mechanism. In other words, the government needs to facilitate the development of the private sector and market economy through laws, policies and regulations (property right, contract law and labour law). In addition to that, a market-supporting environment potentially attracts business investors and skilled labourers to the states, thus, creating a multiplier effect that allows the economy to grow and expand and enhances the state's competitiveness and efficiency. Subnational governments which fail to foster markets risk losing capital and labour, and consequently, valuable tax revenue to other areas.

Federalism induces the state government to enter into some form of competition with one another, satisfying the criterion put forth by traditional economists (Brennan and Buchanan 1980; Oates 1972; Tiebout 1956). Competition among governments in this framework is efficiency enhancing and the country creates an institutional environment conducive to economic growth. In fact, interjurisdictional competition is one of the two important mechanisms which work to align local government's interests with economic prosperity. Interjurisdictional competition provides state with strong fiscal incentives to pursue policies for a healthy local economy (Weingast 2009). Competition rewards local governments that are friendly to markets as factors of production move to their regions, while it punishes



heavily interventionist local governments as they lose valuable factors of production (Jin, Qian and Weingast 1999). Competition among jurisdictions limits a state government's ability to abuse its authority by predating on investments or granting privileges to certain companies (Weingast 2006). At the same time, efficiency in service delivery can be achieved through strong competition between the states (Weingast 2009; Saez 2003). In sum, a government's fiscal interest has strong effects on its incentives to choose pro- or anti-market policies. Governments that raise money from broad and relatively uniform taxes on general economic activities are far more likely to choose policies that foster markets. Governments that raise revenue through restrictive economic activities instead manipulate markets for political ends. The MPF sets out several conditions under which a federal system can effectively promote and preserve market-type conditions in the public sector, and provide incentives for economic growth and development (Dollery 2002; Qian and Weingast 1997; Weingast 1995). These conditions allow the assessment of the economic and political performance of a federal system with different characteristics (Weingast 2006; Parikh and Weingast 1997).

The proposals put forth under the MPF model have been considered by some economists as the best model for fostering fiscal decentralisation and promoting economic growth at regional and national levels (Rodden and Ackerman 1997; Weingast 1995). The literature provides examples of fiscal decentralisation roughly characterised by the MPF conditions, such as England in eighteenth century, the United States in nineteenth century and early twentieth century and contemporary China, which have successfully achieved good economic performance and thriving markets as compared to those federations that fundamentally diverged from MPF conditions, such as Argentina, Mexico and India (Saez 2003; Parikh and Weingast 1997). MPF may provide an appropriate framework for Malaysia in its attempts to achieve the goals outlined in the New Economic Model (NEM) that seek to transform Malaysia into a high income economy based on competitive markets and create a new model of governance that empowers the private sector.

Although there are strong arguments in favour of fiscal decentralisation, the question remains as to whether fiscal decentralisation can also lead to a more balanced regional development, as opposed to the highly concentrated development of selected regions. Without a fiscal equalisation programme, federal-state fiscal conflicts could have a corrosive effect on the federation's political stability and cause economic distortion when capital moves in favour of richer and more prosperous states. Indeed it poses dangerous

effect on the federation as well as on the national ruling party. A federation with equalised state fiscal capacities is one that, in principle, replicates the equity of a unitary system while at the same time provides the benefits of decentralisation, namely, the ability to have different packages of local public goods and taxes in accordance with local preferences.

### **1.5 Research Objectives and Questions**

In accord with the broader aims of this study noted above, the specific objectives are to examine the potential implications of MPF for the Malaysian fiscal federalism. Therefore, the specific objectives of this study are to:

1. Investigate whether fiscal decentralisation can generate incentive structures that support a market economy and state economic growth in Malaysia.
2. Examine the extent to which fiscal incentives ensure that the revenue generated locally is available to state government for expenditure.
3. Determine the effect of fiscal incentives on state governments' incentive to foster the growth of business investment.
4. Examine the level of regional competitiveness by measuring the efficiency of state governments in Malaysia.
5. Examine the extent to which fiscal decentralisation determines the level of technical efficiency of state governments in Malaysia.
6. Examine the extent to which productive spending determines the level of technical efficiency of state governments in Malaysia.

In achieving the above objectives, this study sets the following seven research questions to guide its analyses:

1. What would be the implications of MPF for federalism in Malaysia in terms of its benefits for fiscal decentralisation on regional growth?
2. How would the strong link between revenue and expenditure at state levels impact on fiscal incentives and the hard budget constraints?
3. To what extent can fiscal incentives create a market preserving environment in Malaysian states?
4. How would the state governments' efficiency level impact on the adoption of MPF?
5. To what extent does fiscal decentralisation affect state governments' technical efficiency level?

6. To what extent does productive spending affect state governments' technical efficiency level?

### **1.6 Statement of Significance**

Given the inadequacy of the current system of centralised governance for Malaysia's economic future, it is worth considering whether MPF can provide the Malaysian economy with a policy framework that can deliver much-needed higher economic performance, efficient governance and competitive market economy. This study will reflect on how Malaysia may be able to reform its model of fiscal federalism by adopting the insights gained from the MPF literature. Specifically, the contribution to knowledge made by this study which impart its significance in this field of research are:

1. This is the first research study that attempts to analyse Malaysia's fiscal federalism against the requirements of MPF.
2. This thesis considers ways in which the prescriptions of MPF may need to be modified in the light of Malaysia's federal-state relation in fostering markets and spurring economic growth at the states.
3. The thesis aims to provide a better understanding of the role of different states in Malaysia's overall economic development.
4. It will contribute to the existing body of knowledge in terms of literature and empirical work related to MPF, not only in Malaysia but also in other developing countries.

Academics, professional researchers, economists, federal and state politicians and policy makers in Malaysia are expected to be the stakeholders in this research. The implication of good governance via MPF is expected to significantly improve the dialogue on fiscal federalism between stakeholders and provide a resource that can be used for such dialogue. Policy analysts, political leaders and economists can evaluate the benefits of having a more decentralised fiscal system in Malaysia. The outcome of this study is also expected to improve intergovernmental fiscal relations and state/federal relationships, especially in attempts to fulfil the NEM's stated goals. By doing so, less distortion will be created in the economy and future fiscal capacity will be strengthened to improve the fiscal relationships between the state government and federal government. Promoting local autonomy in decision making would empower the states and local authorities to support growth initiatives and encourage competition. This would ultimately give the states greater

power in fostering local economic growth, and benefit the country at large. This study will provide policy recommendations that could help to formulate economic development agendas of state governments and increase their economic growth.

### **1.7 Organisation of the Study**

The thesis is divided into eight chapters. The current chapter, Chapter 1, has highlighted the requisite background to this research including Malaysia's economic and policy history and the features of Malaysia's federal system. The chapter has clearly defined the direction of this research as a study examining the applicability of MPF in Malaysia, and stipulated the objectives of the study. It has also clarified the contribution to knowledge and significance of the study.

Chapter 2 presents the first part of literature review, principally examining the economic theory of fiscal federalism and practices derived from the first generation theories of fiscal federalism (FGFF). In particular, attention will be directed at the drawbacks of the FGFF theories pointed out by scholars, which will then direct the study towards the second generation theories of fiscal federalism (SGFF) as a more suitable alternative.

Chapter 3 is the second part of literature review and it takes up from the discussion ended in the previous chapter. It covers a detailed examination of the second generation theories of fiscal federalism (SGFF), specifically examining the basic tenets of the market preserving federalism theory and investigating its practice by using China and India as examples for evaluation.

Chapter 4 examines the constitutional and administrative arrangements for revenue and expenditure assignments between the federal government and state governments in Malaysia. This chapter also analyses the growth and composition of revenue and expenditure, and evaluates how these assignments have shaped the fiscal federalism system in Malaysia.

Chapter 5 examines the constitutional and administrative arrangements for federal grants in Malaysia. It also analyses the growth and composition of federal grants, evaluates the extent to which federal grants together with federal loans have resolved the problems of vertical and horizontal fiscal imbalance, looks at regional disparities, and finally assesses the impact of federal transfers on state finance.

Chapter 6 presents the methodologies employed in this research. It explains the antecedents and procedures followed in developing a) the fiscal decentralisation/regional

growth model, b) the fiscal incentive models, and c) the regional competitiveness/efficiency model to analyse financial data on state/federal finances from 1990-2009. The models are estimated using a range of statistical methods, including, Dynamic-OLS time series panel regression, traditional panel regressions, Data Envelopment Analysis (DEA) and Tobit panel regression.

Chapter VII examines the econometric results of the models presented in Chapter VI, with these findings being further discussed in the chapter. The discussion also relates these findings to the earlier chapters to further justify the implications of MPF for Malaysia.

Chapter VIII summarises the major findings of the thesis, provides important conclusions, suggests alternative solutions to the problems, and mentions key areas in which further research into specific aspects of MPF in Malaysia is most needed.

## **CHAPTER 2**

### **FIRST GENERATION THEORIES OF FISCAL FEDERALISM**

#### **2.1 Chapter Aims and Description**

The purpose of this chapter is to develop an understanding of the core tenets of decentralisation and theories of fiscal federalism that can form the theoretical foundation for this research and inform the empirical examination of data in the analyses. There are many theoretical approaches to conceptualising fiscal federalism, and the first part of this chapter begins with a brief overview of the so-called first generation theories of fiscal federalism (FGFF). The next section reviews the existing literature on theoretical arguments for the advantages of decentralisation and how this has been proved/ disproved in empirical research. Efficiency, economic growth and competition are considered to be the three main indicators for measuring the advantages of a decentralised system. This is followed by a discussion on criteria stipulating the conditions for the level and type of assignment of expenditure /tax / borrowing and the concept of equity and the role of intergovernmental transfer and grants in rectifying imbalances.

This chapter concludes that FGFF is based on the normative assumption that public decision-makers are benevolent maximisers of the social welfare (Rubinfeld 1987; Oates 1972; Musgrave 1959). As a result, FGFF theories are unable to take account of the fact that public decision makers may not necessarily be driven by concerns of social welfare at all times and other interests may intercede in their activities. In addition, they emphasise the importance of transfers for mitigating vertical and horizontal imbalances in which their analysis tend to focus on equity considerations rather than emphasising the incentive effect of transfers on subnational government policymaking or growth.

#### **2.2 First Generation Theories of Fiscal Federalism (FGFF)**

The topic of fiscal federalism was generally introduced into public finance theory in the mid twentieth century, following the renewal of interest in fiscal decentralisation and advancement in economic theory, as well as new sources of financing in public finance and public expenditure management (Bird et al. 2003; Bird and Vaillancourt 1998; Ter-Minassian 1997). Specifically, fiscal federalism is more than a matter of financial

arrangement, it involves the political aspect of federalism as well as the background to the particular federation (Bakar 2004). The main normative question in this subject concerns the extent to which fiscal powers and responsibilities should be devolved from higher to lower levels of government. The level of analysis associated with this question has now developed to the extent where scholars have started to distinguish between first and second generation theories of fiscal federalism (Oates 2005).

The term 'federalism' in Economics holds a somewhat different connotation to that in Political Science. In the field of Political Science, federalism refers to a political system with a Constitution that guarantees a set of principles which foster the sharing of competences between the various levels of power. In other words, while political federalism refers to a formal political system of power sharing, economic federalism refers to contextual policies of economic decisions made between different levels of government even in political systems which are not politically federal. As Viswanathan (2007) explains, fiscal federalism is relevant for all kinds of governments even when there are no formal federal structures. The government may be unitary, federal or confederal, but fiscal federalism can be used as a set of principles by all countries attempting fiscal decentralisation. This, however, does not mean that all forms of governments are 'fiscally' federal. Intergovernmental financial arrangements in a federal system of government are constitutionally entrenched, as a result of the political bargaining process at the time of creation of the federation, while intergovernmental fiscal arrangements in a non-federal system or in a multi-level financial system are not constitutionally entrenched and are instead based on concession (Lockwood 2004; Hopkins and Hopkins 2002; Bhargava 1953). As Sharma (2005) argues, fiscal federalism constitutes a set of guiding principles which can be used to design fiscal relations between national and subordinate levels of government whereby fiscal decentralisation is a process of applying such principles. Therefore the terms of fiscal federalism and fiscal decentralisation have been used interchangeably. Different federations follow different types of fiscal federalism - specifically in terms of how fiscal powers are allocated and fiscal arrangements made between various tiers of the government. For example, application of fiscal federalism between unitary and federal governments may differ vastly, depending on their political and legislative contexts.

A policy of fiscal decentralisation is directed towards the transfer of fiscal powers and responsibilities from the national to subnational governments. While fiscal centralisation is often a response to the demands of national unity, fiscal decentralisation may be seen as a

response to the demands for diversity and accountability within the community. Therefore, the first generation theorists investigating fiscal federalism tended to associate the process of fiscal decentralisation with an enhancement in the overall degree of public sector responsiveness to a public demand and, ultimately, to an improvement in economic efficiency of public economic activities by better linking resource allocation with public preferences (Vo 2009). Seminal contributions were made by Tiebout (1956), Musgrave (1959) and Oates (1972) to the discussion of fiscal decentralisation. Olson (1969) also made an important contribution with his concept of fiscal equivalence. These works, with the public choice approach to multi-tier government initially developed by Brennan and Buchanan (1980) in 'The Power to Tax – Analytical Foundations of a Fiscal Constitution', represent seminal works in the first generation literature on fiscal decentralisation.

### **2.2.1 Economic Theories of Fiscal Federalism**

Traditionally, theories on fiscal federalism were concerned with three essential aspects, namely, distribution of spending, taxing and borrowing powers between various levels of government, structure of intergovernmental grants associated with and shaped by the distribution of powers and functions. The earliest approach to fiscal federalism was developed from work by Kenneth Arrow (1970) and Paul Samuelson (1955,1954) in two important papers focusing on the theory of public goods. However, the most influential approach to fiscal federalism was presented by Musgrave (1959) within a welfare economics framework delineating the proper role of the state in the economy. Thus, there are three distinct economic perspectives on federalism which form the first generation theories of fiscal federalism: public goods theory of federalism, organisational costs theory of federalism, and public choice theory of federalism. But Grewal and Sheehan (2003 ) have criticised FGFF theories because they are normative in nature and ignore both the question of describing actually existing federal systems and explaining how distribution of political authority within a federation evolves over time. For this reason, these theories of federalism have been found to be incomplete, prompting Grewal and Sheehan to propose the incomplete contracts approach.

#### **A. Public Goods Theory of Federalism**

The public goods theory of fiscal federalism is based on the premise that any public goods retains its 'publicness' within a particular geographic domain beyond which it no longer



remains non-rival in consumption. Public goods are distinguished from private goods on the criteria of non-rivalness and non-exclusion and labelled on the scope of publicness<sup>24</sup> they cover. A public good is produced unilaterally and is available and accessible to everyone, whereas private goods are bought and sold in the market and each buyer exercises an ownership right on the units legally purchased. For example, national defence provided by the central government is a public good meant to serve all citizens of a nation while street lighting retains its publicness when it is consumed within a small geographic area. This means that a government can undertake the provision of public goods as it can legally compel people to pay the taxes and recover the cost of providing the service (Grewal 1981). When public goods are provided by subnational governments, citizens may move between different regional jurisdictions leading to a free rider problem (Tiebout 1956). This mobility between local jurisdictions is known as the act of 'voting with feet', and considered to be a signalling mechanism revealing consumer preferences for subnational public goods. Although, Tiebout's hypothesis has only been shown to be valid under highly restrictive conditions, fiscal federalism is seen as an efficiency enhancing structure of the public sector (Sinn 1997; Pestieau 1977). Three roles were identified for the government sector in Musgrave's framework, including:

1. Changing the allocation by providing public goods and correcting the external effects of private economic behaviour (allocation function).
2. Redistributing income in order to equalise income distribution which is the result of market forces (redistribution function).
3. Stabilising the economic process in order to reduce business cycle fluctuations (stabilisation function).

Explaining the distribution of these three roles, Musgrave stipulates that the lower tiers of government should undertake the duty of provision of public goods for maximisation of social welfare, while the central government is suited to the two important functions of income redistribution and stabilisation.

Subnational government's role in maximising social welfare is linked with provision of public goods on the premise that consumption of public goods are localised in character, so local outputs targeted to local demands by respective local jurisdictions provide higher social

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<sup>24</sup> The notion of geographically based public goods can then be conveniently used to establish a hierarchy of public goods. Those public goods which retain their publicness only cover a small area maybe labelled as local public goods (Grewal 1981).

welfare than the central government. Oates (1972) formalised this principle into the 'Decentralisation Theorem' which constitutes the basic foundation for what may be referred to as the first generation theory of fiscal decentralisation (Oates 2004a). This theory focuses on situations where different levels of government provide efficient levels of outputs of public goods 'for those goods whose special patterns of benefits were encompassed by the geographical scope of their jurisdictions' (Oates 2004b) with an aim to achieve 'perfect mapping' or 'fiscal equivalence' (Olson 1969).

On the other hand, the redistribution and market stabilisation functions are assigned to the central government rather than lower government tiers. For example, citizens who are freely mobile across local or regional jurisdictions face a lower level jurisdiction that implements programmes of redistribution from rich to poor, causing the out-migration of the rich to non-redistributing jurisdictions and in-migration of the poor from other jurisdictions. However, if powers to redistribute are conducted by the central government, a redistribution policy would apply equally to citizens in all jurisdictions, and not induce migration (Jalil 2008).

Stabilisation function is considered inappropriate for lower tiers of government as they have limited capacity to influence local employment levels and inflation (Ozo-Eson 2005). Besides, the openness factor that characterises the relationship between subnational governments is grossly constrained in carrying out effective stabilisation policies. However, this view has been challenged by several writers on both theoretical and empirical grounds. Many researchers have argued that problem of debt raised at the local level might entail higher regional cost (Hunter and Shah 1998; Mihaljek 1995; Shah 1994) and monetisation of local debt could create inflationary pressures and pose a threat to price stability (Jalil 2008).

In establishing a hierarchy of spatially arranged public goods, optimal provision of public goods requires a federalised public sector that perfectly corresponds with the hierarchy of governance structures. The absence of such perfect correspondence results in allocative inefficiency leading to interjurisdictional spillovers of benefits and costs that can make the supply of public goods suboptimal (Pauly 1970; Thurow 1970; Brainard and Dolbear Jr 1967). For this reason, the distribution of authority is the best option in a federation. The public goods theory of fiscal federalism mainly focuses on developing the efficiency enhancing properties of fiscal decentralisation.

However, it is notoriously difficult to determine whether subnational governments are producing public goods on, or closer to, the production possibilities' frontier of national governments. Cost comparisons for the provision of standard packages of goods and services are complicated by the fact that decentralisation usually leads to changes in the package of goods and services provided. Indeed, certain public goods, such as local garbage collection, are not provided by the central government at all (Loehr and Manasan 1999). Therefore, the public goods theory of fiscal federalism deepens our understanding of the geographic nature of public goods and of the efficiency conditions that must be met in the provision of public goods with geographic spill-overs. Grewal and Sheehan (2003) associated the public goods theory with the economic theory of public sector where the former provides the critical mass for the latter. Thus, the economic rationale of the public sector rests on functions relating to regulation of the private sector, management of the economy and provision of public goods.

## **B. Organisational Costs Theory of Federalism**

The organisational costs theory is viewed as an improvement over the public goods theory of federalism as it recognises the cost constraints of the assignment problem previously overlooked in the public goods theory, and introduces an explicit objective function of governments in terms of power. In contrast to the public goods theory, the proponents of the organisational costs theory of federalism prioritise the organisational costs of the public sector instead of the geographic boundaries of public goods. Their argument is that as long as organisational costs are assumed to be zero, a logical case for fiscal decentralisation cannot be created and the assignment problem becomes indeterminate. The essential nature of a structure for the public sector can be found by recognising positive organisational resource costs but not public goods or externalities (Breton and Scott 1978).

According to Grewal and Sheehan (2003), the institutional framework for this theory includes the 'constituent assemblies' responsible for reviewing the preferences of voters and cost structures of public goods and reassigning functions to ensure that organisational costs are kept at a minimum level. In broad terms, the four related costs include all costs incurred by individuals and governments in satisfying the collective wants of people, and organisational resource costs including signalling and mobility, and administration and coordination. These four types of costs correspond to the four kinds of activity in which individuals and governments engage for the purpose of providing public goods.

The objective function of governments in the organisational costs theory is defined in terms of their desire to be re-elected to power. In other words, governments seek to ensure that the probability of their re-election remains above a certain critical level. To this end, governments aim to provide public goods that can satisfy the preferences of voters and at the same time minimise the cost to tax payers, subject to the specifications of the production function. These factors lead governments to invest in administrative activities (searching for preferences and technologies) and co-ordination. Indeed, the entrepreneurial role of governments in seeking out information about people's preferences has also been recognised in the theory, particularly in shaping preferences and implementing technologies for the provision of required goods and services at the lowest cost possible.

### **C. Public Choice Perspective on Federalism**

Public Choice theory is a school of thought which seeks to understand and predict the behaviour of politicians and bureaucrats by utilising analytical techniques developed from the concept of rational choice (Tullock 2008). Inspired by the writings of James Buchanan and Gordon Tullock (1962), this theory is based on the premise that governments have a natural tendency to use their powers over taxation to exploit electors in the absence of appropriate institutional constraints. It aims to apply an economic analysis using decision theory and game theory to reveal certain systematic trends in inefficient government policies in political decision-making. In contrast to the public goods theory which argues for allocative efficiency between different levels of government, a public choice approach favours fiscal federalism over a unitary form of government when there is a multiplicity of governments which can restrict the powers of each level of government and thereby increase the welfare of the voters (Buchanan 2000).

Public choice theory is intimately related to social choice theory, which uses mathematical tools to study voting and voters. Since voter behaviour influences the behaviour of public officials, public choice theory often uses results from social choice theory. Further, one of the basic claims that results from public choice theory is that good government policies in a democracy are an underprovided public good due to the rational ignorance of the voters.

Other major sub-fields of public choice theory are bureaucracy and rent seeking behaviours. While traditional models reveal how top bureaucrats are chosen by the chief executive and legislature, the latter combines the study of a market economy with that of its government. Tullock (2008) regards this phenomenon as representing a 'new political economy' as the presence of both a market economy and government together leads

government agents to provide numerous special market privileges. Here, fiscal federalism provides greater scope for the satisfaction of heterogeneous preferences for public goods which is impossible in a centralised public sector. Therefore, with a greater degree of fiscal decentralisation in a country, voters may have a greater opportunity to escape from the coercion of centralisation and also improve their welfare, other things being equal.

#### **D. Incomplete Contracts Approach**

The concept of incomplete contracts was built on the basis that contract between separate parties has to be implemented and carried out in the unforeseen future. An incomplete contracts approach acknowledges that the future cannot be predicted completely without any mistake. As Hart and Moore (1998) explain, an incomplete contract refers to a situation in which the exact nature of the good is uncertain or more precisely, it depends on a situation which is yet to be realised. On the other hand, a complete contract is possible only in the case when the entities have capability to observe all actions and events without errors or uncertainties (Hart and Moore 1998). In other words, when entities are able to know future events or, identify future circumstances without incurring costs, and the contracts do not have to be revised at any time in the future.

Even if some form of prediction were possible, it would be expensive to draw up a contract for every future incident and it is generally impossible to supervise all of the parties actions related to the contract. In an ideal world, the parties would write a contingent contract exactly specifying the good which is to be delivered in each state. However, if the number of states is very large, drawing up a contract encompassing all those situations would be too expensive. Then all the parties have tendencies to write an incomplete contract, but once the state of nature is realised, there can be renegotiation in the contract as the situation changes.

From a public finance point of view, Grewal and Sheehan (2003) argue that the 'significance of incomplete contracts derives from the responses and strategies of the agents in dealing with this reality of incomplete contracts'. They believe that their incomplete contracts approach can provide the best insights on how the national government exercises control over subnational jurisdictions through the grant system. Governments actively look for a position of power over their contractual partners in order to influence intergovernmental relations. Viewed in this light, revenue sharing becomes an important mechanism to gain such power; hence, revenue sharing is not a neutral agreement but a powerful instrument of control. Furthermore, within the fiscal

decentralisation process, the revenue sharing agreement is viewed as a powerful mechanism to preserve power and influence over the states (Grewal and Sheehan 2003).

The theory of incomplete contracts presents an advantage over the traditional principal-agent theories. The theory considers that revenue sharing programs represent a mechanism that produces fiscal and policy dependence over the recipient jurisdiction. The theory is able to illustrate the incentives of both national and state governments to keep a free alternative in view of unforeseen events in the future. Intergovernmental fiscal relations will always be under negotiations and the original agreement will be modified according to the new circumstances and bargain costs. Under the theory of the firm, the party that has the right to establish the new clauses is in fact the firm. However, in a federal agreement, it is not clear which party or jurisdictions should have the prominent role (Saiegh and Tommasi 1998). Despite its usefulness, the incomplete contracts approach does not consider differences among states which receive the same revenue sharing program but only considers a relationship between national and state governments. This would omit different fiscal and policy behaviours among states under the same grant program.

Apart from revenue sharing, the National Constitution was also identified to represent an incomplete contracts approach. The Constitution represents a legal domain in which the jurisdictions attributions are not fixed forever. This feature provides rooms for conflicts over the interpretation and meaning of the articles. According to Grewal and Sheehan (2003), this incompleteness of the Constitution adds another dimension to the intergovernmental agreements giving more power to the national government over the states.

### **2.2.2 Criticism of FGFF Theories**

The FGFF theories believe that greater welfare gains can be generated from fiscal decentralisation and suggest various forms of intergovernmental transfers to correct potential inefficiencies and promote fiscal equity. These views are based on an assumption of uniform level of output by the central government and Pigouvian view of the government as a social maximiser. However, these two key assumptions have been criticised by SGFF scholars who view fiscal decentralisation differently and focus on interjurisdictional competition and environmental federalism (Enrich 1996; Oates and Schwab 1996), market preserving federalism (McKinnon 1997; Weingast 1995) and decentralisation in developing or transition economies (Alves and Afonso 2007; Shah 1994; Bahl and Linn 1992). Basically the SGFF perspectives differ from traditional public finance analysis in that they treat governments as endogenous social institutions that have their own motives. SGFF

disagrees with the assumption of traditional economic theory that governments/politicians are benevolent social planners. Even though there are roles (e.g. correcting market failures) for the governments to play, the governments themselves may not automatically adopt Pareto improving policies because their decisions are influenced by voters preferences, politicians, pressure groups, special interest groups, bureaucratic machinery and any other participating agents (Rubinfeld 1987).

Brennan and Buchanan (1980) developed a Leviathan hypothesis that treats governments/politicians as rent-seekers who tend to maximise the extraction of tax revenue from the economy. This is also because politicians have strong incentives to stay in power, augment the salaries and control more money and people. Since citizens have little knowledge of the cost function underlying public services provision, they can only control the tax side. Brennan and Buchanan (1980) proposed several principles to constrain the Leviathan, with one of the potential solutions being fiscal decentralisation. In a similar vein, Qian and Weingast (1997) developed the so-called market preserving federalism (MPF) theory, considering fiscal decentralisation as an effective way to constrain the expansion of government and preserve private markets to generate higher economic growth. Indeed, some of the effects of intergovernmental grants seem to deviate from the predictions of the FGFF. For example, there are some unintended consequences of the grants ranging from the 'flypaper effect' and 'common pool problem' to 'soft budget constraint'. Thus, SGFF approach could pay more attention to these issues and propose the constructive design of intergovernmental fiscal relation. In addition, the SGFF approach stresses on the potential process in revealing individual's preferences for public services, while the FGFF assumes that the government has full information.

Lastly, the above three theories are all normative in nature and concerned with providing an economic rationale for fiscal federalism, but they do not explain why power structures in a federation change over time (Noh 1991). The objective function of a government has not yet been properly defined and integrated into the dynamics of federalism, indicating that no positive economic theory of federalised public sector exists. For this reason, Grewal and Sheehan (2003) have been led to propose their theory called the incomplete contracts approach. The major issue in this theory is the impossibility of analysing the present status of state-federal fiscal relations without mistake or even forecasting the future on basis of existing knowledge. In an ideal world, the parties would write a contingent contract specifying the exact measure for each situation, but as the possibilities can be very large

such a contract would be too expensive. Therefore, this theory advocates that any status be seen as an incomplete contract, where once the state of nature is realised further renegotiation of the contract should take place according to the situation.

### **2.3 Decentralisation Vs Centralisation**

The concept of decentralisation began to gain recognition in the late 1960s with growing criticisms of central planning systems, especially with the inability of centralised government to maintain regional equity and reduce socio-economic problems that are caused by imbalanced development. Rapid economic growth because of industrialisation in several developing countries has only benefited a small (typically exclusive) group in the society. Consequently, income disparities within societies and regions increase as the standards of living of the poorest groups decline (Cheema and Rondinelli 1983). Decentralisation is defined as the transfer of political, fiscal and administrative powers to subnational governments. There have always been calls for more decentralisation of governments as people want to get more involved in the process of government and central governments become unable of fulfilling their job requirements (Tirtosuharto 2009). The seminal studies of Tiebout (1956), Musgrave (1959) and Oates (1972) laid the foundation for the discussion of fiscal decentralisation (Vo 2005). It is important to note here that fiscal decentralisation is the delegation and devolution of fiscal authority to subnational governments and does not include deconcentration, which is not a form of decentralisation but a process followed by centralised governments to delegate provision of services through regional and local offices<sup>25</sup> (Azarova 2010).

The arguments for decentralisation are based on the traditional approach to public finance focusing on allocative benefits based on the works of Hayek (1945), Tiebout (1956), Musgrave (1959) and Oates (1972)<sup>26</sup>. Thus, the efficiency gain from decentralisation is determined by the ability of states to strategically mobilise and coordinate fiscal resources. Indeed, it has been argued that decentralisation increases competitiveness levels among state and local district governments and limits the size of the public sector (Canaleta et al. 2002). Oates (1972) argued that decentralisation is more appropriate if residents in different sub-federal jurisdictions have different preferences for public services as uniform provision

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<sup>25</sup> For a more complete discussion of the difference between delegation, devolution and deconcentration of fiscal authority see Bird (1993), Bird and Vaillancourt (1997) and Martinez- Vazquez and McNab (1998).

<sup>26</sup> This literature is reviewed at length by Grewal, Brennan and Mathews (eds.) in *The Economics of Federalism* (1980).



at the federal level may be inappropriate for residents who want either more or less of a public good. It has been found that decentralisation of government is preferable in environments where there are interjurisdictional externalities and economies of scale in the provision of public services. Empirical studies by Strumpf and Oberholzer-Gee (2002) for the US and Cerniglia (2003) for a sample of OECD countries have supported this notion to show that preference heterogeneity induces decentralisation. At the lower levels of government, decentralisation seeks to achieve various policy goals, such as poverty reduction, income equality, job creation and new investments. From the aspect of investments, an effective decentralised system reduces transaction costs<sup>27</sup> and overcomes problems of bureaucracy and information sharing (Bodmer and Boner 2004; Azis 2003; Bardhan 2002). Decentralisation is also considered more suitable to ethnic, racial and religious diversity as it is more amenable to safeguarding regional cultures and identities, and increasing the sustainability of culturally heterogeneous states (Moreno 2001; De Winter and Tursan 1998; Horowitz 1985). In contrast, a centralised system emphasises national unity as the key objective, which sometime comes at the expense of minority groups or peripheral regions. Since people from different parts of a region may have different ethnic, cultural, and religious backgrounds, social and political tensions may be inevitable<sup>28</sup>. In other words decentralisation is able to preserve local politics as well as cultures (Azis 2003).

Whether the efficiency gains associated with fiscal decentralisation are as significant in developing countries as they are in developed countries is also a matter of contention. Subnational governments in developing and transition countries may lack the institutional capacity to reap the efficiency gains associated with fiscal decentralisation and western-based democratic models of expenditure assignment may not readily apply due to lack of voting mechanisms and the reluctance of central governments to relinquish control over local expenditure responsibility and revenue authority. Although, decentralisation might result in increased participation at the subnational levels of government, the privileged elite may 'capture' local governments, continuing the exclusion of the majority of the population from the governance process. If so, decentralisation may only result in the transfer of

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<sup>27</sup> Transaction costs in the form of fees or charges at the state level affect the costs of doing business and the level of competitiveness. The problem typically lies on the multiple fees and charges that state and local district government impose on businesses.

<sup>28</sup> More diversely populated countries spread across a large geographic area tend to implement decentralisation in various degrees to accommodate the aspirations of people from all diverse regions.

authority from the privileged elite at the central level of government to the privileged elite at the local levels.

Beginning with Oates (1972), many studies in fiscal federalism and local finance have indicated some factors that make either decentralisation or centralisation desirable. Many countries have moved toward more decentralised structures in the past two decades but on quite different paths. Others have remained highly centralised and are reluctant to devolve any taxing and spending powers to lower level governments. China and Russia are examples of countries where federal governments have been claiming increasing shares of lower governments. Conversely, policy and practice in the United States have largely followed the direction of cutting reliance of the states and local sectors on the federal government, but these three countries have granted equal amounts of taxing autonomy to their subnational units of government. Brazil, Canada and Switzerland are examples of highly decentralised federations, whereas Australia, Germany, Malaysia and Spain are relatively centralised (Shah 2008)<sup>29</sup>. In Germany, fiscal decentralisation has been opposed by weak states due to their limited capacity, and fiscal decentralisation as such is politically unpopular among weaker states which are in favour of cooperative federalism. On the other hand, strong states are in favour of competitive federalism through fiscal decentralisation as it also means less contribution towards the cost of equalisation transfers (Adelberger 2001). A study by the World Bank observed that most developing countries have implemented a decentralised system to varying degrees (Bird, Ebel, and Wallich 1995). In order to understand the determinants of fiscal decentralisation in different contexts, it is worthwhile to look over the a priori reasons why a country might choose decentralisation in its fiscal structure (Oates 1972) as well as the advantages of fiscal decentralisation (Bahl 1995).

There are also many arguments for fiscal centralisation, but these arguments are stronger in transition and developing countries than in industrialised ones. Most of these arguments advocate central government control of the main tax and borrowing instruments. A large body of literature has followed the normative theory of fiscal federalism by developing conditions under which centralisation of government activities or coordination among subnational government can be undertaken (Wilson and Wildasin 2004; Oates 1999a).

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<sup>29</sup> In terms of allocation of fiscal powers among federal members, some countries have asymmetric features. For instance, some members enjoy less autonomy (due to special circumstances) as in the case of Jammu and Kashmir in India and Chechnya in the Russian Federation. Conversely, some members have been treated as more equal than others as in the case of Sabah and Sarawak in Malaysia and Quebec in Canada (Shah 2008).

Inter-regional externalities of cost and benefit spillovers are often argued as the main basis for coordination of activities through a centralised system. For example, tax competitions create fiscal externalities between jurisdictions, and thereby provide a rationale for centralisation. In addition, economies of scale in the consumption of public services can be exploited by a centralised provision.

Several arguments for income distribution also support fiscal centralisation. For example, if local governments are given access to major tax bases, they may compete with the central government and therefore limit the amount available for central tax. As a corollary, centralisation allows the national government to allocate fiscal resources to goods and services with national benefits, whereas local autonomy inevitably leads to greater expenditures on those services with higher local benefits. The struggle over financing health care in the United States is a good example of this issue (Roy 1995). Importantly, those transition countries that are undergoing privatisation and building a public and industrial infrastructure also need to achieve a coherent growth policy with centralisation so that the central government can control limited investment capital to give the maximum returns.

Centralisation may further be useful in avoiding income segregation between sub-federal jurisdictions, causing macroeconomic stabilisation to be provided more effectively at the federal level. However, fiscal decentralisation may be favoured by those wealthier urban governments which benefit most from greater taxing powers. Centralisation allows the national government more discretion in shaping regional differences in levels of public service and taxation, which is an especially important consideration for governments that intend to use tax and subsidy policies to shape this spatial distribution of economic development.

In their theoretical analysis of centralisation processes, Besley and Coate (2003) argued that they can clearly be explained by referring to arguments from political economics where even the empirical literature seldom considers the political economy of centralisation or decentralisation. Firstly, by following the US studies in the late 1980s on the impact of authorities' veto power, Baker (2000) showed that governors use enhanced veto authority to attract local spending responsibilities to the state level. In examining the impact of legal and constitutional restrictions on government centralisation for a cross section of about 50 countries in the early 1990s, Vaubel (1996) found that the independence of the highest courts significantly reduces centralisation. Another study by Panizza (1999) further

demonstrated evidence from about 60 countries to show that a higher level of democracy is associated with less centralised government activity. His results were confirmed by Garret and Rodden (2003) in a study covering a panel of 47 states in the period 1978–1997. This indicated that more open economies have greater levels of fiscal centralisation (Feld, Schaltegger, and Schnellenbach 2008). As all decisions to allocate fiscal resources lie in the hands of the central government, lack of consideration by the central government to address the specific needs of each region, potentially decreases the efficiency and effectiveness of regional resource allocations (Tirtosuharto 2009). China and Russia in particular have faced difficult choices with regard to equalisation. For example, China was forced to choose between the two options of funnelling more resources to the lower income provinces or leaving the retained revenues in the high-income coastal growth provinces. Similarly, Russia faced the difficult decision of choosing between equalisation, central government fiscal solvency and appeasing the potential breakaway provinces. In both cases, central governments retained control over these fiscal resources and were in a position to make the decision. In contrast, the United State federal government would have been in much less of a position to affect a regional redistribution of resources (Bahl and Linn 1992). However, there are also theoretical arguments against both the Russian and Chinese motivations for centralisation. For example, fiscal and regional externalities may offset each other (Sørensen 2004), and internalisation of externalities can be achieved through voluntary transfers between jurisdictions (Myers 1990). Therefore, the normative question of the extent to which government services and tasks should be (de-)centralised is still openly debated.

### **2.3.1 Economic Growth and Fiscal Decentralisation**

Economic growth is defined as growth in output due to additional input or factors of production (Kindleberger 1983). Although, this definition incorporates the importance of efficiency and productivity in the production process, other intangible factors can also influence the output. Here, the term total factor productivity (TFP) is used to define intangible factors of technological growth and efficiency (McNab 2001). In line with the earlier works of Tiebout (1956)<sup>30</sup> and Oates' (1972), Decentralisation Theorem has been accepted as the starting point for empirical and theoretical research into the effects of fiscal

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<sup>30</sup> Tiebout (1956) argued that regional and national growth could be increased if decisions concerning investment in different types of capital were determined by the subnational governments due to their having greater local knowledge, political accountability and transparency.

decentralisation on economic growth since the mid-1990s (Jin and Zou 2005; Iimi 2005; Desai, Freinkman, and Goldberg 2003; Akai and Sakata 2002; Yilmaz 2000; Lin, Liu, and 2000; Woller and Phillips 1998). Other studies have not only measured such effects, but constructed a simple analytical model reflecting this relationship (Brueckner 2006; Martinez-Vazquez and McNab 2003; Zhang and Zou 2001). In the Southeast Asian region, two main studies conducted by Ismail and Hamzah (2006) and Tirtosuharto (2009) have focused on decentralisation in Indonesia.

Despite the large number of studies in developed and developing countries, the results obtained for the effects of fiscal decentralisation on economic growth are inconclusive. A Barro-type growth model was estimated by Kim (1995) in an econometric study where he found a positive significant relationship between decentralisation and a rate of economic growth indicating that decentralisation supports economic development. Similarly, Huther and Shah (1996) demonstrated a significantly positive relationship between increased decentralisation and economic performance by assembling a large and diverse set of indices for 80 nations. In these studies, the coefficients take different economic political structures and performance measures into account. More importantly, proponents of market preserving federalism (MPF) like McKinnon (1997) and Weingast (2000) have suggested that an appropriately structured decentralisation fosters economic development.

While studies by Lin and Liu (2000) in China, Zhang and Zou (2001) in Indian states and Desai, Freinkman and Goldberg (2005, 2003) in Russian regions found positive result for the effects of revenue decentralisation on growth, many studies by Davoodi and Zou (1998), Xie, Zou and Davoodi (1999), Woller and Phillips (1998) found insignificant results and even in cases of significance a test of potential non-linear relationships found that the coefficients estimated were not significant (Martinez-Vazquez and McNab 2003). Further, Yilmaz (2000) and Iimi (2005) only found positive effects of the decentralisation of expenditure on economic growth in developed countries and Davoodi and Zou (1998) found negative results in developing countries. On the other hand, Fukasaku and De Mello (1998) found that coefficient of the impact of revenue decentralisation on growth was insignificant, with the same results were also reported by Woller and Phillips (1998) in developing countries and Thiessen (2003) in developed countries. Zhang and Zou (1998) examined the impact of intersectoral and intergovernmental public expenditures on economic growth in China and found that fiscal decentralisation is negatively associated with provincial growth.

Such diversity of results between fiscal decentralisation and economic growth may be caused by differing economic or time scenarios analysed in each case, or methodological problems in specification of the equation being estimated. According to Martinez-Vazquez and McNab (2003), indicators used for fiscal decentralisation as well as the source of data would influence the results<sup>31</sup>. More specifically, the effectiveness of decentralisation depends on the economic situation, the degree of decentralisation or type of public services involved. Martinez-Vazquez and McNab (2003) also found that different types of expenditures have different effects on economic growth, with results depending on the level of government.

Besides the above arguments, an important question arises as to whether decentralisation promotes good governance or growth, as there are theories and empirical studies that show opposite results. Bahl and Linn (1992) examined decentralisation from the perspective of a country's economic growth to ask whether fiscal decentralisation is based upon a country's economic growth and whether fiscal decentralisation is a cause or a result of economic development. They claimed that decentralisation more likely comes with the achievement of a higher stage of economic growth and fiscal decentralisation is a consequence of economic development. Shah (1997) similarly argued that federal systems differs in their ways of establishing power and authority across government levels as these different arrangements have different implications for economic performance. Thus, there are no clear projections about federalism with regard to growth because some federal systems foster growth faster than other types of federations. Considering the above theoretical developments and empirical results, the following comment by Oates (1999a) is relevant.

'There exists, incidentally, no formal theory of fiscal decentralisation and economic growth; it might be useful to set out such a theory, for a framework that incorporates jurisdiction- specific investment programs might provide some insights into the parameters on which improved growth performance depends.'

The implication of the above argument is that fiscal decentralisation should be evaluated in terms of the particular characteristics of each developing nation in order to improve their political and economic institutions. Despite the lack of a formal decentralisation theory, the

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<sup>31</sup> Depending on where the subcentral/total ratios of expenditure and revenue are compiled from the Government Financial Statistics (GFS) of either the International Monetary Fund (IMF) or National Statistic Institutes.

above studies provide empirical findings that are useful to consider in relation to the design of a proper transfer system (Rabell-Garcia 2006).

### **2.3.2 Fiscal Decentralisation and Efficiency in the Allocation of Fiscal Resources**

Generally, fiscal decentralisation is associated with expenditure and revenue allocation to accommodate district or regional economies for ensuring efficient delivery of public service provisions (Rao 2003). An efficient economy is measured by its ability to efficiently allocate or distribute resources. This implies that states should optimise the use of their limited fiscal resources to serve the welfares of both individual citizens and firms, which is consistent with the principles of the Neoclassical theory. The term efficiency refers to the use of minimum resources to produce optimum output, while effectiveness refers to the extent that allocated resources produce a positive effect on economic growth. In recent years, growing attention has been given to efficiency in the government sector (Tirtosuharto 2009) and many countries have turned to decentralisation as a particularly effective way to promote efficiency. Building on the classic works of Tiebout (1956), Musgrave (1959) and Oates (1972), Brennan and Buchanan (1980) have posited that fiscal decentralisation leads to increase in government efficiency through allocative/consumer and producer/technical efficiency and despite lack of empirical evidence this idea has won widespread acceptance (Martinez-Vazquez and McNab 2003; Thieben 2003; Loehr and Manasan 1999).

Devolution of certain resources and expenditures to the subnational level allows public spending to be more accurately matched with consumer preferences, thereby increasing the so-called allocative or consumer efficiency of governments (Martinez-Vazquez and McNab 2003; Prud'homme 1995). This allocative efficiency concept parallels Tiebout's (1956) theory of how a rational consumer-voter has incentive to reveal their preferences by selecting to live within the community that offers the basket of public goods and services satisfying their needs. In addition, free mobility of citizens across states actually offers a functional equivalent to market competition (Marks and Hooghe 2004). Certainly, the subnational government opportunities to finance a substantial portion of the budget through own-source revenues provide greater opportunities to make more efficient spending decisions. In fact, as Bird (1986) and Oates (1993) have pointed out, funding from own sources, especially at the margin of local programs, is critical to achieving allocative efficiency.

Studies on tax competition<sup>32</sup> by Brueckner (2004) and Tanzi (2000) found that fiscal decentralisation can harm the economy by distorting the taxation system. States that are engaged in tax competition by offering tax incentives to firms and enterprises with the expectation that there will be a boost in investments and job creation. However, these incentives may result in the misallocation of resources of both the public and private sectors leading to market failure.<sup>33</sup> Consequently, government intervenes the market in the form of capital investments or through various regulatory and fiscal incentives. Such actions by subnational governments may augment the inefficiency of resource allocation, reduce the effectiveness of incentive structures and further constrain business enterprises. Many proponents of market mechanism argue that markets can work efficiently without government involvement, despite a number of facts which indicate that the market economy has often failed to allocate resources efficiently (Chang 2000).

Moreover, private sectors are often hesitant to get involved in public capital investments due to the high risks and low returns on investment, subsequently government intervention is unavoidable. However, higher incidences of moral hazard can occur at the state level (Tanzi 2000) particularly when states lack the ability to manage debt, budget deficits exist, and 'good' incentives to encourage the efficient allocation of resources, hence offsetting the benefit of fiscal decentralisation as well as increasing the risk to the fiscal and macroeconomic stability of both federal and state government. Based on the competitiveness and allocative efficiency concepts, therefore fiscal decentralisation supports economic efficiency and intergovernmental competition (Bardhan 2002).

There are also some counter-arguments showing decline in efficiency under decentralised systems. Firstly, if subnational governments operate on a lower production frontier than the central government, then decentralisation leads to a decline in the quantity or quality of public good output, and is likely to retard economic growth. Also, it is not always possible to accurately measure the tastes of preferences as the allocative efficiency gains from decentralisation of service provision at local levels would then be much less than anticipated (McNab 2001). Whether fiscal decentralisation actually leads to allocative

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<sup>32</sup> Tax competition also provides an incentive for states to become strategic and efficient in utilising tax instrument. State's tax regulation is part of the development strategies that aim to stimulate aggregate demand and private sector development.

<sup>33</sup> The development of fiscal decentralisation along with the modern theory of public finance has focused on how governments should intervene in the markets and how to maintain a proper role of governments in a market economy since government interventions are also the sources for market failure or economic inefficiency (Chang 2000).



efficiency in practice or not is questionable, particularly in situations where subnational governments lack the technical expertise or resources to translate their knowledge of local preferences into effective policies. On the other hand, there is no apparent consensus in the literature that fiscal decentralisation results in increased producer/technical efficiency, and there is also little discussion on how potential efficiency gains can be translated into increased economic growth. In fact, Prud'homme (1995) argues that fiscal decentralisation can increase disparities, jeopardise stability and undermine efficiency. Several economists such as, Rodden (2002), Wildasin (1998), Inman and Rubinfeld (1997a) and McKinnon, Nechyba, and Weingast (1997) have also highlighted that common pool, spillovers, and problems from soft budget constraints can result in efficiency losses. In addition, Careaga and Weingast (2000) claimed that greater decentralisation generally leads to higher inflation and increasing corruption.

### **2.3.3 Competition and Regional Competitiveness**

In general terms, competition is defined as “striving or vying with another or others for profit, reward, position or the necessities of life” (American Heritage Dictionary 1976). This term is linked to the notion that rational individuals maximise utilities and firms or industries exploit scarce resources and market capacity for profits. In the regional development context, the focus of competition between regions is associated with accumulation of wealth and sustainable development. More specifically, competition between nations or regions is one of the most notable dynamics of an open economy, and normally linked with economic growth and development (Tirtosuharto 2009).

Two bodies of literature describe the effects of competition used to attract mobile capital. While the first sees competition used to discipline governments as harmful, the second argues that the positive effects of competition for capital can motivate governments to reduce corruption, waste and inefficiency, and provide more growth-promoting infrastructure.

The central importance of interjurisdictional competition was originally highlighted by Tiebout (1956) who considered competition as a way to provide an appropriate environment of authority for controlling and matching public goods and services with consumer preferences. Mobile factors would naturally incline towards choosing jurisdictions with better infrastructure and less corruption instead of those that are poorly governed (Qian and Roland 1998; Qian and Weingast 1997). Further, jurisdictional competition in a decentralised system serves as a disciplinary device that punishes wasteful or corrupt

governments with capital outflow, which then forces them to provide a more hospitable environment for factors, and guarantee secure property rights and infrastructure (Montinolla, Qian and Weingast 1995). Although there is disagreement about whether such competitive discipline is desirable, authors from both schools of thought agree that competition for capital is believed to shift government priorities away from non-productive public spending and toward business-friendly investments.

The second effect of competition is that the fear of capital outflows can severely restrict governments from providing welfare services, environmental regulations and non-productive public goods that citizen value. For example, Panizza (1999) found that increases in interjurisdictional competition can cause a 'race to the bottom' in which competition drives local tax rates to fall below the levels necessary to fund public goods in response to residents' demands. This problem also occurs when there is capital mobility in social and environmental policies of subnational governments within decentralised states and between countries competing in world markets (Cai and Treisman 2005).

Further, competition may also reduce governments' incentives to distort resource allocations such as occurs when they bail out enterprises. Such bail out operations cause great fiscal strain and reduce the ability of governments to establish the infrastructure required to attract for private investors (Grewal 2000).

Fiscal decentralisation promotes tax competition between states where states can offer tax incentives to firms and enterprises with the expectation that there will be a boost in investments and job creation in their state. Tax competition can act as a constraint on revenue growth and provide incentives to improve the efficiency of state taxation (Eccleston 2008). Indeed, it is claimed that fiscal decentralisation can provide scope for state governments to tailor tax levels and the structure of state tax systems to meet specific regional needs. The so-called Tiebout (1956) hypothesis is popular with those on the right with an interest in constraining the size of the state, while being criticised by those on the left who hold a more sanguine view of the state's ability to provide public goods. On the other hand, studies on tax competition found that fiscal decentralisation can harm the economy by distorting the taxation system (Brueckner 2004; Tanzi 2000).

The concept of regional competitiveness focuses on the capacity of subnational governments in stimulating and sustaining economic growth and development. Subnational governments can play an important role in supporting the private sector and preserving a market economy. Hence, it is necessary to have in place a supportive system of

governance, which will allow a subnational government to foster the process of development. From the viewpoint of regional competitiveness, decentralisation is imperative for increasing the power and capacity of a subnational government, sustain economic growth and improve standards of living. Viewed in this light, state government efficiency eventually is found to be the determining factor of competitiveness and growth at the regional level (Tirtosuharto 2009).

However, a review of literature reveals little consensus in defining competitiveness at national and regional levels due to ambiguities in transferring the concept from a micro to macro scale. From a micro perspective, it refers to dynamic of global market forces and critical aspects of restructuring firms and industries for increasing productivity and efficiency. The capability of firms and industries to generate goods and services that are able to compete in international markets is affected by the capacity to exploit available resources at the maximum level with the support of innovation and technological changes (Conti and Giaccaria 2001). In contrast, competitiveness at the macro scale refers to the capability of nations or regions to produce and distribute goods and services within the international economy, to reach the highest possible growth of productivity, increase per capita income, raise standards of living and achieve equal distribution and economic sustainability (OECD 2005; Boltho 1996).

Global trade competition and globalisation is the major driver for regional competitiveness. Although mobile resources like capital investments, skilled labour, and new technology can move across borders with relatively low costs and few barriers, less developed or remote regions still have limited access to essential resources, potentially restricting their ability to compete with larger and integrated global or regional forces (Siebert 1996). These limitations continue to widen the gap between less developed and developed regions.

#### **2.3.4 Productivity Enhancing Role of Public Capital Expenditure**

Based on the framework of fiscal decentralisation, the allocation of fiscal resources is primarily related to state spending or expenditure. The choices made by the state government for expenditure determine the degree of public capital accumulation which is identified as the key factor of growth and development by both Classical and Neoclassical theory.

Samuelson (1954) presented the idea of common public goods that focused on optimal public spending rather than taxation. In particular, the importance of public expenditure in the economy is related to the major role played by the government. However, Tiebout

(1956) extended such concept by linking public expenditure and Neoclassical theory of capital stock. Capital stock plays a key role in determining output levels, and will change over time as a result of additional investments and depreciation of capital stock.

In Solow's (2000) growth model, capital along with the growth of the labour force, are found to be the main factors of production. The production function in the Solow model is based on the extent of efficiency or productivity of labour and capital. Although, there was lack of discussion on the role of public capital, Neoclassical theory provides a basis to understand the key issues of public capital and output growth. Accumulation of public capital stock provides a rationale for government involvement in the market economy through public investments as an attempt to support private sector production.

Public expenditure influences economic growth through three channels: aggregate demand, resource allocation and income distribution. First, public inputs through government expenditure increase production and aggregate demand as the Neoclassical theory views public capital stock as a function of the marginal utility theory with respect to consumption (Tiebout 1956; Samuelson 1954). As a result of higher productivity, production increases as consumers derive utilities from public capital stock (Arrow 1970). Thus, it is imperative for state governments to provide incentives for the private sector to invest and produce (Aschauer 1989). Barro (1990) emphasised that public capital is considered an input to production and a complement of private capital, hence allocation of state fiscal resources in productive public capital investment would reduce the costs of production and increase output of firms due to higher productivity. Therefore, regions compete to support higher return on capital investments to the private sector (Siebert 1996; Munnell 1992). However, increasing public expenditure can lower the aggregate investment and consumption in the private sector. This situation is referred to "crowding-out" in which public capital acts as a substitute to private capital and at the same time hinders incentives for private sector investment. Subsequently, increase in public expenditure results in the cost of higher taxes to finance public investments. Empirical studies suggest that there should be a balance between investments from public and private capital (Munnell 1992). Since the government intervention reduces the optimality of resources allocation, the questions are whether the share of public spending is significantly large compared to the national economy and whether the government should be directly involved in production, which could increase inefficiencies from waste spending, rent seeking, and corruption practices. Such issues are imperative for the implementation of fiscal decentralisation particularly in developing

countries where the extent of inefficiency is greater than in developed countries (Tirtosuharto 2009).

## **2.4 Criteria for Expenditure and Revenue Assignments**

### **2.4.1 Expenditure Assignments**

The most important elements in intergovernmental elements in fiscal relations are the division of function or expenditure assignment between levels of governments. Before assigning revenue function, types of expenditure should be identified first (Bakar 2004). According to Shah (1994, p. 9), “the literature on fiscal federalism argues that assigning responsibility for spending must precede assigning responsibility for taxation, because tax assignment is generally guided by spending requirement at different levels and cannot be determined in advance.” In other words, the government needs to determine the amount to be spent on their functions first and then raise the funds necessary to finance the assigned functions (Ahmad 1997; Ter-Minassian 1997; Ghandhi 1995). Economists remain divided on how to determine the level of government that appropriate for carrying the responsibility for which public services (Oates 1972). In particular, Ghandi (1995) argued that it depends on the historical, constitutional, social and political development of the particular country. However, there seems to be a consensus of opinion among politicians and economists that, as far as possible, functions should be divided according to the principles of efficiency and equity. A socially desirable intergovernmental assignment of expenditure should meet both equity and efficiency criteria. While the central government is more suited to serving equity objectives, subnational governments are generally more efficient in the provision of public goods and services. This is consistent with the criterion for expenditure assignment in the Oates’s Decentralisation Theorem (1972)<sup>34</sup> that the lowest level of government should provide public goods and services.

Oates (1972) argued the importance of the perfect correspondence principle in meeting the efficiency objective such that jurisdictions which provide public goods cater precisely to all the individuals who benefit from them. Under this principle, the central government should

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<sup>34</sup> Firstly, this theorem implicitly assumes that there are various preferences across jurisdictions making the decentralised provision of public goods and services more desirable. Secondly, in contrast to a centralised system, decentralisation does not render a uniform provision of public goods and services across jurisdictions. Finally, due to the presence of intergovernmental asymmetries in information and stronger accountability at lower levels of government proximity to their constituencies is the best reason to explain them. More importantly, local constituencies have more opportunities than the central government to observe and evaluate the performances of their lower governments leading to a stronger accountability (Oates 1972).

intervene in the provision of those goods and services that generate interjurisdictional externalities including national defence, interstate highways, health services, regional development programs and natural resources, among others. On the other hand, lower governments should provide those public goods and services whose benefits and costs do not extend beyond jurisdictional limits, for example, the municipality government level would include streetlights, local public parks, city planning and local police cemeteries. As many factors determine the optimal intergovernmental assignment of spending responsibilities, such determinations should be treated differently according to externalities.

Raimondo (1992) suggested that the size of the benefit area is not the only determinant for the delegation of service responsibility, the size of the benefit area of the public goods and services is also important for determining whether the central or decentralised level of government provides that particular service. He further suggests other factors such as economies of scale, fiscal equivalency, fiscal capacity, political accountability and administrative capability as follows:

- i. Economies of scale – the benefit area should be large enough to take advantage of a lower average unit cost of provision of public services to gain benefit from economies of scale. With a large coverage area, public services can be mass-produced, which means a reduction in the average unit cost. Clearly, the best level of government to undertake this type of public services is the federal government (Bakar 2004).
- ii. Fiscal equivalency – the benefit area of the public goods and services must coincide with the political boundary. Based on this consideration, the benefit from the public goods and services provided by one jurisdiction should be enjoyed only by the people of that particular jurisdiction. There should be no free riders and spillover effects in the provision of the public goods and services.
- iii. Fiscal capacity – any constituent units that undertake the provision of public goods and services should have sufficient resources. This is to avoid the problem of fiscal imbalance and subsequently interstate disparities created by insufficient resources.
- iv. Political accountability- the government officials of the particular jurisdiction should be accountable to the residents for the quality and efficiency of the delivered goods and services and.
- v. Administrative capability – in order to ensure that the constituent units could take up the functions efficiently with minimum disruptions the constituent units should have administrative capabilities (e.g. technical and managerial know how).

Therefore, the general rule in assigning functions should be based on the benefit principle, with the maximum efficiency and equity possible by considering the economic function of the government and the federal spirit. If the benefit from the public services goes beyond one state and requires national coordination, provision of these public services should rest on the central government. On the other hand, functions that are localised in nature/character and benefit, local people should be assigned to positions in the state government. However, the problem arises in distinguishing which functions are regional and which are nationwide in nature because of the ambiguity of functions such as education and public health. Theorists suggest that, for efficiency purposes, a centralised policy is desirable (Ahmad and Craig 1997) for those ambiguous functions. Besides, the size of countries matters in designing the expenditure functions Ter-Minassian (1997). For example in large countries like the United States, India, Canada and Australia, decentralisation of functions to lower levels of governments is more appropriate than in small federations like Malaysia<sup>35</sup>.

In sum, these functions have long been the starting point in any discussion of the division of fiscal powers and responsibilities among units of governments (Bahl and Linn 1994). In federal systems, expenditure assignment is determined within the constitution as a result of a long bargaining process between the central and the constituent governments. However, any change in the expenditure function between both levels of governments to suit growing and changing needs will take a long time as it involves a long judicial process and constitutional amendment. The framers of Constitution may not have foreseen the growing need for public services and the appropriateness of certain functions to the level of government. Thus, in older federations, most expenditure functions have been increasingly reassigned to the constituent governments in line with the movement toward fiscal decentralisation (Bird et al. 2003; Bird and Vaillancourt 1998; Ter-Minassian 1997).

#### **2.4.2 Revenue Assignment**

Adequate revenue assignment is crucial for expenditure assignment in designing intergovernmental fiscal relations. Shah (1994) emphasised that once expenditure assignment has been agreed on, tax assignment and design of transfers become critical elements in matching expenditure needs with revenue means at all levels of governments. According to McLure and Martinez-Vazquez (2000), the biggest mistake in designing the intergovernmental relation is when revenues were assigned to subnational governments

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<sup>35</sup> Abdul. Rahim (2000) argued that fiscal decentralisation in Malaysia is a non-issue as the federal government has strong commitment to the states' economic development.

and transfers put in place before deciding the functional competencies to be transferred from the central government to subnational government. The assignment of revenue sources involves tax arrangements as taxes are the main revenue sources for the government.

The theory of public finance evaluates taxation according to how they affect economic agents' behaviour and how the tax burden is distributed among them. However, tax assignments in the context of federal system are more complicated than theory may suggest as they not only involve economic considerations, efficiency and equity criteria as proposed by Musgrave and Musgrave (1976), and Musgrave (1983), but also historical, political, institutional and demographic characteristics, economic aspects of the particular federal country and political considerations (Ebel and Yilmaz 1999; Gandhi 1995). However, the outcomes work against the theory of taxation (Gandhi 1995).

Shah (1994) argued that tax assignment, as normally practised in developing countries, can be either dependent on expenditure assignment or independent of expenditure assignment. When the tax assignment is taken independently of expenditure assignment, this indicates centralisation in tax administration where the federal government collects almost all taxes and redistributes part of the revenue to subnational governments. However, if the theoretical guidance of tax assignment is unclear, expenditure assignment has the strong basis for assigning responsibility to the government with greatest need for more money (Shah 1994).

As with expenditure assignment, revenue assignment should coincide with economic functions of government, that is, redistribution, stabilisation, and allocation. Other factors that affect the wider interest of national economy are also important such as suitability of fiscal policy, overall economic development policy and political feasibility, with a view to achieving a greater measure of social justice and equity throughout the federation (Bakar 2004).

Income redistribution function is largely a federal responsibility, as the ability of the constituent governments is limited within their own boundaries<sup>36</sup> Taxes purposely created

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<sup>36</sup> Although in some federations the constituent governments do undertake a redistributive function (Bird et al. 2003).



for the economic stabilisation objective should be assigned to federal government as its primary responsibility such as income tax and wealth tax. This is because state or local stabilisation policies are open to leakages that reduce the effectiveness of aggregate demand control. Indeed, state and local governments do not have access to supportive monetary and debt policies that are available to the federal government. Therefore, the federal government should charge a levy on citizens and distributive taxes, while the state and local governments should levy on benefit and residence-based taxes.

For the efficiency criterion, it is suggested that the determination of tax assignment for any level of government should be based on the minimum possible cost of collection and administration. In other words, assignment of taxes is based on how efficiently and cost effectively tax can be administered. When this criterion is used as the guiding principle for tax assignment, the level of government that has the best information on a certain type of tax base would be appropriate for the relevant tax (Bakar 2004).

In this regard, most economists still hold the rules laid down by Musgrave (1983) in relation to allocative efficiency in tax assignment as the basic organising principle for fiscal federalism. Fiscal federalism literature emphasises the location of the efficiency criterion, and takes into account the distortions that local taxes may create on the geographical location of economic resources.

In terms of revenue mobilisation, taxes on revenue bases with high mobility between jurisdictions should be allocated to the federal government (e.g. individual taxes and corporate taxes), while taxes on immobile revenue bases should be assigned to state and local governments. For example, land and payroll taxes are suited to state or local taxation, while death duties should be reserved for the federal government. Some taxes are better allocated to local government as their assessment and collection require familiarity with the local economy and population and these taxes can be perceived as quasi-benefit charges that finance local area services. They include property tax and other land-based taxes which are usually thought of as local government taxes. In developing countries, normally small firms and workers outside the larger formal sector firms are left out of the tax net for administrative reasons. Local governments, it is argued, might be able to capture this untapped fiscal capacity because of their greater familiarity with the local tax base.

Further, according to Musgrave (1983), tax bases which are distributed unevenly among state or local jurisdictions should be assigned to the federal government. Natural resource based taxes, even though geographically immobile, should be drawn upon centrally.

According to Bhargava (1953), in situations of overlaps of tax jurisdiction, it may be desirable to have the federal administration collect taxes and assign all or part of the proceeds to the states under tax-revenue sharing arrangement (Ahmad and Craig 1997; Shah 1994). Economically, it would be unwise to leave the problem open to both levels of government as this may lead to duplication and unnecessary conflict in tax collection and administration.

According to Adelberger (2001), the present trend of fiscal federalism is towards competitive federalism as against cooperative federalism, that is each constituent units set its own taxation and other fiscal policy, which finally creates strong tax competition among constituents units, as evident in the US, Canada and Australia. In centralised federations, such as Germany, cooperative federalism is more evident, but Malaysia's fiscal federalism is neither cooperative federalism nor competitive federalism. Goodspeed (1998) also argues that heavy tax competition would result in inefficient tax administration and may cause unnecessary distortion to the economy.

Finally, Ghandi (1995) concludes that it is difficult to meet both efficiency and equity criteria in the assignment of taxes between the differing levels of government due to the following reasons; i) any taxes that could easily be shifted or exported to consumers of other jurisdiction (for example, natural resources tax, sales tax or excise duty, import and export duties at the ports, airports or border areas, taxes on tourism) were assigned to state governments, would cause detrimental effect to the economy as state government would pitch those taxes at excessively high levels; ii) any taxes whose administration required detailed information (for example property tax and land tax) when assigned to central government would be poorly administered and easily evaded, as the cost of their collection could be undesirably high, so this type of taxes should be assigned to a state government; iii) when taxes that are redistributive in character (such as progressive personal income tax, progressive wealth tax, or progressive inheritance tax) are not levied by the central government, the overall equity objective of the tax system could be seriously jeopardised and, iv) if taxes that have large built-in elasticity whose revenues grow automatically in boom periods and decline in recessionary periods (such as personal income tax, enterprise profits tax, sales tax, or value-added tax) are not assigned to the central government, the government would not be able to undertake macroeconomic stabilisation.

Whatever basis is used in assigning taxes to each level of government, the main condition is that it should support the desired goals of the economy, that is, economic growth with

equity and overall macroeconomic stability. In other words, tax policies should not have an adverse effect on economic stability, but instead should promote strong economic growth. More importantly, taxes should be assigned to each level of government according to their capacity to administer the particular tax, to avoid the possibility of tax evasion. In actual fact, the division of resources in the existing federations does not follow any particular pattern and has usually been the outcome of some political compromise. What may suit one federation need not always suit another. In developing countries, the question of the division of resources should be viewed in the light of the problem of efficiency in tax administration (the need for simplicity and uniformity in tax administration as well as well-trained personnel) and the prevention of large-scale tax evasion.

Centralisation of tax collection is necessary for an efficient tax administration as long as it does not run contrary to the economic functions of government. Hence, state governments are unlikely to have enough revenue to discharge their constitutionally assigned responsibilities and duties. Subsequently, the federal governments in most federations have more funds than functions, while the states have more functions than fund especially in developing countries (Bakar 2004). The imbalance between functions and resources (non-correspondence) leads to the issue of financial adjustment as fiscal imbalance is a common feature in federations. This situation creates intergovernmental conflicts that require financial adjustments and subsequently the design of appropriate fiscal transfers.

#### **2.4.3 Borrowing powers**

As a means of finance for government operation, borrowing could be sourced either domestically or externally. Domestic borrowing mainly comes from bank and non-bank sources, such as investible funds (life insurance and pension fund) or capital markets. External sources include the international capital market, bilateral sources (foreign government sources) or multilateral sources (from international lending institutions such as International Monetary Fund (IMF) and the World Bank (Bakar 2004). A review of fiscal federalism literature has shown that there is no consistent view on whether borrowing should assigned to the central government alone or to subnational governments.

The borrowing powers of the federal government are usually unrestricted, while those of the subnational governments are restricted to their own constitution or legislation and discretionary of the federal government. In most federations, the borrowing powers of federal and state governments are concurrent, but while federal governments normally have more borrowing powers, with unrestricted budget deficits, capital outlays, economic

management programs and emergency or extraordinary expenditures, states are often subjected to tight borrowing rules, and obliged to borrow for capital spending only. This is mainly to ensure that the national and public debt levels remains at prudent levels. Indeed, subnational governments' borrowing can lead to large macroeconomic stability due to their irresponsible fiscal behaviour (McLure 1999). This is the major concern of the central government as far as state borrowing is concerned, particularly when borrowing comes from the foreign sources with federal government guarantee. In order to reduce the possibility of moral hazard problem (the assumption by capital markets that states borrowing is ultimately backed by the federal government) from states' borrowing, the World Bank (1999) suggests using tax bases and unconditional grants as collateral that can be pledged against their borrowing. This would provide direct fiscal backing instead of loans being implicitly backed by the central government a method of loan security that is normally practised in developing countries. In other words, having their own fiscal base is an essential prerequisite for limiting moral hazard problems when subnational governments access external finance (World Bank 1999).

King (1984) identifies three consequences that might arise if the borrowing powers of subnational governments are not controlled:

- i. Intertemporal inequity - Subnational governments use loan finance to transfer some of the burden of financing services benefiting present generations to future generations.
- ii. Intratemporal inequity - Subnational governments use loans to transfer some of the cost benefits enjoyed in one year, on to citizens for a few years. For example, some citizens who benefited might leave the area before costs are paid off, while others who move later into the area later have to pay some of the cost without enjoying the benefits. As a result of escaping some of the costs, these citizens might vote for excessive subnational spending.

In order to avoid these circumstances, subnational governments must only borrow for capital projects that can be fully covered or balanced by the possession of assets of equal value. For example, a bridge or a hospital building has useful economic life of several decades indicating that both the current and the future users will benefit from the facility. Musgrave and Musgrave (1989) emphasised that on equity grounds the principle of benefit taxation demands that the cost of providing the project should be spread over its life. The current users should not be required to pay for the full cost of the facility now, and the

government can borrow to finance the construction. In the United Kingdom, Nicoll and Lindell (2011) supported this argument as it is a more acceptable option than raising current tax levels to pay for assets that future generations will benefit from. Indeed, capital investment during economic downturn is recognised as a good way to boost economy and create job opportunities.

Borrowing can also be used as a policy tool to stabilise the economy by regulating the level of aggregate demand. If the purpose is to stimulate spending, deficit financing is desirable because this policy is appropriate as a counter-cyclical measure during a recession or economic downturn (Bakar 2004). In contrast, subnational governments' borrowing is purposely to finance the provision of public goods and services in accordance with local preferences. In addition, large financing is required by the central government to implement nationwide development programmes. Borrowing from banks and the capital market can be an alternative when failing to finance from taxes and in some countries drawing from reserves is also possible (Bakar 2004). Based on these views the borrowing power should be exclusively assigned to the central government and it must have recourse to domestic and external sources, hence, yielding the direct benefit to the subnational governments through national development policy. This enforces further centralisation through centralised development policy.

Borrowing powers for subnational government should be limited, monitored and controlled to avoid contingent liabilities on the part of the central government and to minimise the likelihood of central government bailout (Ter-Minassian and Craig 1997) especially when it is guaranteed by the central government. Excessive and unrestricted borrowing by the subnational governments may cause debt servicing problems when their fiscal capacity is limited. There are instances where the central government has had to bail out subnational borrowing, such as Colombia and Brazil as well as Mexico in the early 1990s (Dillinger and Webb 1999). In countries like Malaysia, the central government may deduct debt service from federal grants if the subnational governments fail to service the debts.

Debt policy should be coordinated as large-scale government borrowing (by all levels of government) will affect the money and capital market as well as possibly cause adverse influence of extensive public borrowing on capital formation in the private sector. This shows that public debt management is an important aspect of macroeconomic management especially in relation to anti-cyclical policy. As a result, government borrowing

policy should be designed in line with both fiscal and monetary policies as well as prevailing macroeconomic conditions.

## **2.5 Intergovernmental Transfers**

The economic justification for intergovernmental grants arises from the mismatch between expenditure function and revenue powers (vertical fiscal imbalance), regional disparities in revenue capacity and/or expenditure needs (horizontal fiscal imbalance) and interjurisdictional benefit spillovers. Since the public sector have limited and scarce resources, there is financial limitation in a certain given period of time particularly to equalise the diverse areas which need urgent support in the country. The notion of equity in fiscal federal theory is generally couched in the language of vertical and horizontal imbalances (Viswanathan 2007). The criterion of horizontal equity posits that states which show similarities in some relevant economic circumstances, such as fiscal burdens and benefits, should be treated equally in a non-discriminating manner. The vertical equity principle establishes that the citizens of low-income states within a national economy have the 'right' to receive sufficient funds as other states (Buchanan 1950).

Based on the literature, the theory holds that these problems can be best handled by tax sharing, fiscal capacity equalisation program and a system of matching and conditional grants (Musgrave and Musgrave 1989; Boadway and Flatters 1982; Mathews 1980a; Oates 1972). Under this principle nationwide solidarity is facilitated by sharing of tax powers and revenues. Since fiscal adjustments involve large financial implications there is a strong reason for the federal government to take some form of control over the way in which the funds are spent. For this reason conditional grants are preferred by the federal government which parallels the principles of financial responsibility and accountability (Bakar 2004). Indeed a study by Watts (1999) shows that most federal transfers (more than 50%) were made in the form of conditional grants. However, from the state governments' point of view, conditional grants may undermine their fiscal autonomy particularly when their revenue is dependent on federal transfers. Hence, a combination of both conditional and unconditional grants is more preferable in the design of fiscal adjustment. However, the suitability of grants, conditional or unconditional depends on the objective of the grant and the particular issues to be addressed.

As noted above, the incomplete contracts perspective on federalism (Grewal and Sheehan 2003) highlights the risks of fiscal dependence and predation flowing from intergovernmental fiscal transfers. The market preserving federalism (MPF) provides

additional critique of intergovernmental transfers by drawing attention to the inefficiencies generated by the soft budget constraints resulting from such transfers, irrespective of their classification into conditional and unconditional transfers.

### **2.5.1 Vertical Balance/Imbalance**

The term vertical fiscal imbalance (VFI) and vertical gap are often used interchangeably in the literature and refers to a mismatch between expenditure requirements and revenue capacities of different levels of government (Miral 1995). The federal government has access to the most productive and elastic sources of tax revenues, foreign aid and borrowings and has the power to create money, while subnational governments have taxes which do not yield returns as fast as their dynamic and expanding functions. Generally, VFIs arise when assignments of fiscal competences are made between federal and subnational governments looking at their comparative advantage in performing budgetary functions. It is measured as the ratio of transfers to states' total revenue, but it is debatable whether tax shares should be excluded if they are independently determined entitlements.<sup>37</sup> However, VFI will continue when major revenue raising competences remain with higher order governments and major expenditure responsibilities with subnational governments. VFI is inevitable even in federations that closely adhere to the theoretical ideal about the quality treatment of all regions. Generally, VFI would be disadvantageous to decentralisation as well as the efficient operation of the public sector.

From the normative approach, a distinction is made between vertical gap, optimum vertical gap and vertical fiscal imbalance (VFI). Specifically, Boadway and Tremblay (2005) and Dahlby and Wilson (1994) define VFI in revenue raising as a deviation from the optimum vertical gap in which the marginal cost of public funds is equalised across the levels of government. Just like other studies, the allocation of spending responsibilities is assumed to be predetermined and the emphasis is on how revenue raising and federal-regional transfers should be designed in achieving the second best optimum gap in a decentralised system given that taxes are distortionary (Rangarajan and Srivastava 2008).

Vertical fiscal balance is achieved when expenditures and revenues (including transfers) are balanced for the richest local government, measured in terms of its capacity to raise resources on its own (Bird 1993). These factors call for some form of tax sharing

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<sup>37</sup> In Australia, the federal GST is voted by the Commonwealth Parliament after it is approved by the states and proceeds accrue to them, and in India tax shares are determined by a constitutional body, the Finance Commission (Viswanathan 2007).

arrangements that may increase the resources of subnational governments (Noh 1991). For example, Hunter (1974) proposed a measure for VFI by calculating coefficient of vertical balance, however, this method has been criticised by Hettich and Winer (1986). As Miral (1995) explains, vertical balance is not a static concept, as tax and expenditure assignments might initially achieve vertical fiscal balance, but over time the expenditure needs of different government units may change as a result of the changes in costs of demand for different public goods and services. In addition, factors like taxes assigned to different levels of government may also differ and changes in yield and elasticity can easily contribute to fiscal imbalance.

Vertical fiscal gaps have to be minimised by transferring responsibility for expenditures to the central government, or by reducing local expenditures or raising local revenues. Transfers are used in most countries to achieve vertical fiscal balance to ensure that the revenues and expenditures of each level government are approximately equal (Bird and Smart 2002). No matter what the state's purpose, any transfer from higher to lower level governments will of course help close the fiscal gap. However, the dependence of subnational governments on central government for financial assistance undermines their autonomy and decision making.

Since high level of dependence on transfers/grants from the central government has an influence on local budgeting, people learn to depend on central government and put pressure on the matters that are purely of local concern. Indeed this discourages subnational governments to further exploit their own source revenue or tax bases, which can be unpopular with the public or have negative effects. Furthermore, pressure from the electorates can lead the central government to respond with more public goods and services without considering the benefits and cost of these expenditures. As a result, local citizens ultimately bear the burden of central grants through increase in central taxes and are likely to restrain their demand for public goods and services (Winer 1983; Romer and Rosenthal 1980).

### **2.5.2 Horizontal Fiscal Imbalance/Regional Disparities**

The second type of imbalance referred to in federal fiscal theory is horizontal imbalance. Horizontal fiscal imbalance (HFI) may exist in an economy where there are different fiscal capabilities and needs in different subnational governments depending on their development levels as well as difference in the cost of providing services (Hajra, Rakhe, and Gajbhiye 2008). According to Matthews (1980b), horizontal fiscal balance refers to the



relative equality of fiscal capacities of government units at the same governmental level but does not imply uniformity in their tax and expenditure policies. This is in line with arguments for decentralisation which assume that all government units are equally capable of providing tax-expenditure packages which voter-taxpayers want. However, decentralisation can result in HFI unless proper policies are adopted as its effects are likely contrast to the benefits of decentralisation. HFI can exist even when there is a vertical fiscal balance (Miral 1995).

The revenue and expenditure sides of government budgets are identified as factors contributing to HFI. According to Scott (1950), all governments have different levels of fiscal capacities due to differences in resources, such as climate, soil location, mineral deposits and stock of capital goods as well as infrastructure such as transportation, ports, and financial networks. This view is supported by Viswanathan (2007) who found that divergence in natural resource endowments in different provinces has been found to be a fundamental cause of regional disparity. Fiscal federal experience indicates, however, that the determining issue is the possibility of exploiting such resources to augment the budgetary capacity of subnational governments. If subnational governments are largely free to levy royalties in mineral-rich areas, their budgetary resources often need little supplementation through compulsory levies. Much depends on how the regulatory and fiscal power to control natural resource exploitation is shared by different government levels.

On the expenditure side, different governments have different priorities and needs depending on their socioeconomic and demographic factors. In particular, there are cost variations in the provision of public goods and services arising from locational and physical differences. Indeed, when expenditure functions are devolved to subnational governments, this causes them to rely on their own revenue sources, which then accentuates the variation in their fiscal capacities of different state governments (Miral 1995).

HFI has both equity and efficiency implications. The horizontal imbalance is addressed by distributing vertically decided amounts among subnational governments while adhering to the principles of equity and efficiency. Subnational governments with high fiscal capacities have the advantage of providing their constituents with existing levels or standards of services at lower tax rates or improving/increasing current public goods and services. Conversely, those subnational governments will be forced to charge high tax rates and provide fewer and lower quality goods and services. The final result is that those individuals

who have similarities in all respects, except their place of residence, may be levied different tax rates to obtain the same level and standard of public services or face equal tax payment with unequal levels and standards of public services. Clearly it compromises the principal maxims of public finance about horizontal equity or 'equal treatment of equals' which is the central tenet of equity in all formulations of fiscal justice (Grewal, Brennan and Matthews 1980).

Equity demands higher transfers to poorer states, but efficiency demands higher transfers to the efficient states. Many poorer governments have poor tax and non-tax collection efforts coupled with inefficient expenditure allocation and providing more resources to such poorer states is viewed as compromising the efficiency principle. But the horizontal imbalance is to be corrected by allocating more resources to poorer subnational governments, without penalising the better performing subnational governments. This trade-off between the principles of equity and efficiency is the main challenge for correcting the horizontal imbalance in a federal setup. However, Inman (1998) and Johansson (2003) have argued that transfers allocated to jurisdictions cannot be explained by traditional concerns of equity and efficiency alone. Variables representing political considerations (e.g. accountability) are additional and significant determinants of these transfers. Political factors may play a dominant role in the allocation of central government expenditures and grants to subnational governments.

According to Morales (2005), federalism is a political construct, but fiscal federalism seeks to derive principles that can be applied for optimal allocation of functions among different levels of government. The issue of regional equity can in one sense be treated as a direct offshoot of the tension between political and fiscal federalism. Fiscal federalism lays the equity principle for considering economic feasibility of equalisation by striking a balance between needs and available resources in a country. However, both concepts of equity emphasise the need for central government transfers to reduce inequities, so is often viewed as contradicting fiscal decentralisation as well as market preserving federalism (MPF) theory. Prud'homme (1995) is of the opinion that fiscal decentralisation is likely to lead to a concentration of the resources in certain areas or it is known as regional disparity. This is achieved by unconditional grants equivalent to the difference between what a state ought to spend on specified normative levels of public services and the revenue it can raise at a given standard effort. Extension of specific purpose grants to compensate for spill-over effects is equivalent to attempts in establishing fiscal conditions necessary for effective

competitive federalism. Primarily, however, such grants are extended to provide a uniform level of core public goods across the country. To achieve this purpose, grants should be open-ended and given at matching rates where a variety of matching ratios should be made available to obtain the desired response from all states. From this point of view, the aim of specific purpose grants is to achieve equity among individuals of different states and not just regional equity. The issue of regional equity would, therefore, arise in the context of fiscal federalism only after taxing and spending competencies are shared as closely as possible in line with theoretical precepts for efficient and responsive budgetary policy.

General purpose grants should be used for equalising regional disabilities where states have less or no control like remoteness, distances, etc., and grants should be given without conditions so that state governments can respond to local preferences effectively. When such grants are determined after taking into account special purpose transfers, the driving principle is no longer regional but individual equity. Special purpose grants should, therefore, be superimposed at a later stage if the federation seeks a further degree of equalisation at the level of individuals. Therefore transfers/grants have an important role to correct spillovers and could also be viewed as a mechanism to provide a level playing field among competing jurisdictions within a federation (Shah 2007).

Apart from the above, transfers/grants from the central government expenditure may be allocated on 'derivation' principle which considers the proportion generated in that particular subnational government to the amount of central government revenues resulting in uneven effects on different local jurisdictions. The wealthier jurisdictions should be granted greater allocation compared to poorer jurisdictions. The central government taxation may also contribute to HFI particularly in progressive tax structure which fails to consider all the real income accruing to citizens of local governments in its income tax base, consequently exacerbating the HFI (Bird and Smart 2002; Petchey and Walsh 1993). The range of regional disparities varies among federations. Opportunities for mobility and investment that become available for capital and labour after the establishment of the federation also helps to reduce disparities over time. Canada is a federation of diverse states with most of its population concentrated in two large provinces, although the range of dispersion in per capita income is reduced if natural resources revenues are discounted (Viswanathan 2007). Poverty in Indian states is largely concentrated in the BIMARU group in north and central India (Bihar, Madhya Pradesh, Rajasthan and Uttar Pradesh), while states of the south and

west are by and large considered to be better off. Although Australia is substantially heterogeneous in area and population, the GDP per capita is largely homogeneous.

In sum, the mismatch between resource raising capacity and expenditure responsibilities calls for equalising fund transfers which create their own perverse incentives and distortions (Viswanathan 2007). At the federal-subnational interface, regional equity implies equitable fiscal treatment of different regions. In this context, there are at least two obvious issues:

- i) Mechanisms used to correct vertical fiscal imbalance (VFI) should as far as possible be non-discriminatory among regions and
- ii) Levies raised by different provinces should not obviously discriminate against taxpayers of other regions.

As subnational governments are financially dependent<sup>38</sup> on the central government to varying degrees in all federations (Grewal 1975), financial transfers from the central to the lower level governments provide a useful tool for bringing about intergovernmental fiscal co-ordination. Indeed, these transfers can be used to persuade, induce and even compel subnational governments onto a preferred line of action. As tools of fiscal co-ordination, the federal government can use specific transfers which carry specific conditions with regard to the manner and direction of spending or general transfers which carry no conditions (Grewal 1975).

## **2.6 Conclusion**

This chapter reviewed the concept of fiscal federalism and fiscal decentralisation to lay the theoretical foundations for the thesis. Efficiency, economic growth and competition were cited as the three main indicators for measuring the advantages of a decentralised system. Economic arguments for efficiency, equity and administration suggest that distribution and stabilisation functions are best considered as a federal responsibility, while the allocation function is generally best shared between federal, state and local governments. A decentralisation agenda for allocation of certain expenditure and revenue functions and borrowing provisions between central and subnational governments was explained. Intergovernmental grants were shown to be, on the one hand, a source of fiscal dependence of subnational governments and of predatory behaviour by the federal

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<sup>38</sup> The state or local government generally incurs a very large proportion of public expenditures and in such a situation the central government has to play the leading role in the process of the co-ordination efforts. On the other hand the central government usually commands a dominating position in raising public revenues.

government, and on the other hand, justifiable methods to correct VFI and HFI address the problem of interstate disparities, encourage expansion (contraction) in output goods with external benefits (costs) and enforce national priorities.

The other main objective of this chapter was to review theories of fiscal federalism which can be used as the basis for empirical evaluation of fiscal decentralisation in Malaysia. The FGFF posits that greater welfare gains can be generated from fiscal decentralisation and suggest various forms of intergovernmental transfers to correct potential inefficiencies and promote fiscal equity. These views are based on the assumption of uniform level of output by the central government and Pigouvian view of the government as a social maximiser. However, these two key assumptions have been criticised by SGFF scholars who view fiscal decentralisation differently. Over time, the field of fiscal federalism has been broadened as other topics emerged and these SGFF theories more focused perspectives on issues that are overlooked in FGFF, including among others, questions related to interjurisdictional competition and environmental federalism (Enrich 1996; Oates and Schwab 1996), market preserving federalism (McKinnon 1997; Weingast 1995) and decentralisation in developing economies or those in transition (Alves and Afonso 2007; Shah 1994; Bahl and Linn 1992). Due to these deficiencies in FGFF theories, this thesis will turn to SGFF theories in the next chapter to examine its theoretical premises and efficacies for fiscal federalism.

## **CHAPTER 3**

### **MARKET PRESERVING FEDERALISM: SECOND GENERATION THEORIES OF FISCAL FEDERALISM**

#### **3.1 Chapter Aims and Description**

After outlining the limitations of first generation theories of fiscal federalism (FGFF) in the last chapter, as second part of the literature review this chapter reviews the models of fiscal federalism advanced by second generation theories of fiscal federalism (SGFF). The chapter begins with a general discussion of the SGFF and how it was offered as an improvement to address the shortcomings of FGFF. In particular, the chapter will focus on the specific system of federalism envisioned from the perspectives of market preserving federalism (MPF) and fiscal incentives approach advocated by the SGFF. Even though SGFF offers some significant improvements over FGFF, critics have pointed out several shortcomings within SGFF and these are discussed in a section elaborating various critiques of the MPF theory. The features and shortcomings of MPF which were discussed on a theoretical basis in the previous sections are contextualised with an outline of China and India as leading examples of MPF. The chapter concludes with some reflections on the implications of MPF as a theory and its relevance for fiscal federalism in Malaysia to prepare the ground for the empirical analysis to be conducted in the following chapters.

#### **3.2 Second Generation Theories of Fiscal Federalism (SGFF)**

The frameworks for analysing decentralised systems in the first generation theories of fiscal federalism (FGFF) were broadly based on an assumption that decision makers act benevolently for the good of society as a whole at all times. Whilst providing an approach that was initially found to be useful for explaining as well as facilitating the process of decentralisation, this framework was subsequently found to be inadequate. Specifically, the assumption of benevolent actors it was predicated on, was found to be unrealistic. Many scholars have also highlighted various forms of common pool problems associated with centralised provision of local public goods, the so-called “race to the bottom”<sup>39</sup> and problems with soft budget constraints for subnational governments Rodden, Eskeland and

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<sup>39</sup> Zodrow and Mieszkowski (1986), Wildasin (1991), Wilson (1991) and, Wilson and Wildasin (2004).

Litvack (2003)<sup>40</sup>. Riker (1964) was one of the first scholars to clarify the political aspects of the federal performance, particularly political parties. In fact, Chhibber and Kollman (2009, 1998) have shown that historically the rise of decentralisation is closely linked with the political system as emergence of new parties at the national/regional level pressurise the central government for greater decentralisation which in turn leads to the growth of new political actors. At the most general level, there were also calls by other scholars for a new political economy of federalism (Inman and Rubinfeld 1998; Inman and Rubinfeld 1997a, 1997b; Inman 1989). In sum, there was a growing consensus among scholars that called attention to the role of self-interest and political motivation in the operation of federalism which was overlooked in the FGFF.

Qian and Weingast (1997) recognised the need for a theory beyond FGFF and named the emerging theory to replace it as SGFF. SGFF provides a new perspective on fiscal federalism in that it displaces the presumption of benevolent actors with the more tenable premise of self-interested actors. This shift towards reconceptualisation of public officials and social planners as self-interested actors emerged from a general critique of the lack of scrutiny of political bias of actors in public policy and public finance. Apart from this shift in the theoretical basis, SGFF models also enable analysts to provide a range of insights into fiscal federalism, especially the positive behaviour of decentralised systems and incentives that must be identified for policy formulation (Weingast 2006). In other words, rather than studying the performance of decentralisation in a state as a naturalistic causal process triggered by benevolent social planners, SGFF enables a more nuanced analysis of the economic performance of federal systems through the specific set of fiscal and political incentives facing subnational governments (Weingast 2009).

In general, four differences can be drawn between the SGFF and the FGFF. First, as noted in the previous chapter, the FGFF studies the performance of decentralised systems under the assumption of benevolent governments in the context of welfare maximisation, without acknowledgement of the private incentives of public officials. In contrast, SGFF literature extends and adapts the lessons from the FGFF to the context of these incentives and their effects on the dynamics of federalism.

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<sup>40</sup> Knight (2004), Besley and Coate (2003), Dillinger and Webb (1999), Inman and Rubinfeld (1997a), Knight (2004), Lockwood (2002), Poterba and Von Hagen (1999), Sanguinetti (1994), Weingast, Shepsle and Johnsen (1981) and Winer (1980).

Second, the SGFF models provide a new insight into fiscal federalism, especially the positive behaviour of decentralised systems. Beginning with an initial study by Bird (1992) in developing countries, scholars like Bardhan (2002) and Litvack, Ahmad and Bird (1998) have observed that decentralisation is neither good nor bad for efficiency, equity or macroeconomic stability, but rather that its effects depend on institution-specific design. Qian and Weingast (1997) and Weingast (2009, 2006) also called for an understanding of the differences among federal systems with a view to identify institutions that need to be supported to achieve market preserving or market enhancing federalism. According to Oates (2005), SGFF explores how various institutions align or fail to align the incentives of political officials with the citizens.

Third, the SGFF approach also provides new normative prescriptions for the design of federal systems, outlining how hypothetical principles of fiscal federalism, including those from FGFF, should be adapted, given the more realistic environments of motivated political choices (Weingast 2006). As Oates (2005) argues, this is an improvement over the FGFF in that while the FGFF theory is focused on the central features of federalism, it is unable to delineate the functions and benefits of federalism by taking cognisance of the fact that political/public officials provide public goods and preserve markets.

Finally, the FGFF model emphasises the importance of fiscal transfers for mitigating vertical and horizontal imbalances, while the SGFF approach emphasises the importance of incentives generated by local tax generation for fostering local economic prosperity. Discussing the significant implications for the design of fiscal transfer systems in the SGFF, Weingast (2009, 2006) claimed that equalisation goals can be achieved without diminishing the incentives of public officials to foster thriving local economies.

The SGFF theoretical paradigm has now grown to encompass a large and varied body of literature as an answer to calls for a new political economy of federalism. The body of work on SGFF draws from several strands of literature, much of which is outside the field of public economics, including principal-agent problems, economics of information, new theory of the firm, organisation theory, and theory of contracts (Oates 2005). A large body of work has covered the various forms of common pool problems in fiscal federalism, of which three stand out; the problem of race to the bottom when interjurisdictional competition has negative impacts (Fischel 2001; Revesz 1997; Wildasin and 1991; Wilson 1991; Zodrow and Mieszkowski 1986), the problem of cost externality when local public decisions burden other state and central governments, the problem of soft budget constraints when



expenditure in local governments is given a free hand (Qian and Roland 2010; Rodden 2005; Wibbels 2005; Rodden, Eskeland, and Litvack 2001; Dillinger and Webb 1999; Kornai 1986). At the same time, a closely related body of literature studied tax competition to understand how local governments generate revenue through taxation from the market (Wilson and Wildasin 2004). These studies also covered the 'fiscal interest models' that emphasise how tax systems affect the incentives of political officials (Wallis, Sylla, and Legler 1994). Another area of investigation is that of the incentives of federalism in mitigating or exacerbating corruption (Weingast 2009; Singh and Srinivasan 2006; Careaga and Weingast 2003) and removing soft budget constraints (Qian and Roland 2010). Relatedly, several scholars have investigated the self-enforcing rules necessary to maintain federal stability (De Figueiredo and Weingast 2005; Filippov, Ordeshook, and Shvetsova 2003).

One of the principal issues in the federalism literature is to examine how local level institutions can be designed to make them more responsive to their citizenry (Weingast 2006). According to Braun (2006), there are currently two theoretical approaches for understanding the relationship of federal structures and policy making in terms of effectiveness. The first is the theory of rational choice institutionalism, focusing on the structural role of the federal constitution and other institutions for political and economic behaviour. This approach is best represented in the seminal article by Barry Weingast on "market-preserving federalism" (Weingast 1995). The other approach with its main focus on the effectiveness of federal policy-making was advanced by Fritz Scharpf, and is based on "actor-oriented institutionalism" and strongly influenced by the game theory (Scharpf 1997). The theory of MPF advocated by Weingast (1995) is of interest to this study and the next section will delve into a detailed discussion of its theoretical premises. Basically, all federal systems decentralise political authority, though not all forms of decentralisation constitute federal systems. In general, federalism and decentralisation comprise a wide range of different political, legal constitutional and economic systems. These different institutional arrangements affect the performance of their local governments (Weingast 2009, 2006). Litvack, Ahmad and Bird (1998) observe that decentralisation is neither good nor bad for efficiency, equity or macroeconomic stability, but rather its effects depend on institution-specific design (Weingast 2006). And MPF is put forth by these theorists as the strongest contender for a viable and stable model of fiscal federalism.

### **3.3 Market Preserving Federalism (MPF)**

The SGFF restricts the government's role to an agency that ensures stable macroeconomic environments, develops good monetary policies, and provides national public goods such as defense (Parikh and Weingast 1997; Qian and Weingast 1997). In subsequent studies, Qian and Weingast (1997), McKinnon (1997) and other followers employed a range of ideas that built upon the ideas of FGFF, and investigated its implications for developing countries from the context of decentralisation and democratic governance. In order to distinguish their contributions from the previous (public good based) literature, they specifically labelled the SGFF approach to decentralised public organisation as MPF. Building on the earlier works of Brennan and Buchanan (1980), Epple and Zelenitz (1981), Inman (1988), and Inman and Rubinfeld (1997), the theory of market-preserving federalism (MPF) emphasises the importance of decentralisation and incentives for governments.

Weingast's foundational idea in the MPF theory is motivated by the 'fundamental political dilemma' that a government strong enough to protect property rights and enforce contracts is also strong enough to confiscate the wealth of its citizens' (Weingast 1995). In other words, Weingast assumes that there is a constant danger of 'confiscating wealth' from the hands of the private sector. The antagonism of the government with the markets in rent-seeking systems has led to the assumption that, more often than not, governments are revenue maximising actors (Levi 1988) who are also opportunistic by nature (Williamson 1975). Given the weak accountability constraints embodied in many public governance structures, Weingast was led to advocate a public governance structure which allows limited political intervention through economic checks and balances.

Drawing from Riker's (1975) work on the negative impact of government control of the economy, Weingast's model of MPF builds on Riker's basic ideas to address the particular problem of revenue maximisation (Braun 2006). In this context, MPF promotes a special type of federalism that links revenue generation with the local government's ability to preserve markets and foster economic growth (Sinha 2005). MPF has been designed with the view of creating a political order that respects the competitive forces of the market and does not encroach upon the markets through excessive revenue extraction (Braun 2006). The primary focus in MPF is to reduce the prevalence of rent seeking and patronage system among governments with a market-promoting approach where governments only derive revenue from the competition and economic activity generated in the local market through market-friendly policies (Parikh and Weingast 1997; Qian and Weingast 1997). In

other words, MPF encourages the approach to governance from one that primarily seeks revenue extraction to one that views revenue extraction as a secondary result that can only be derived from promotion of local economic activity. Governments that fail to foster markets risk losing capital and labour, hence valuable tax revenues to other areas. This shift in the type of government control of the economy geared towards market promotion is seen as a more desirable approach for reconciling revenue generation with economic activity.

A cornerstone of MPF theory is its belief in the value of competition as the most stable means of economic growth and that such competition can be created through the promotion of markets. Economists have long argued that federalism places subnational governments in competition with one another (Brennan and Buchanan 1980; Oates 1972; Tiebout 1956). Competition gives subnational governments the incentive to foster local economic prosperity rather than costly market intervention, service to interest groups, and corruption. Competition among jurisdictions limits a subnational government's ability to abuse its authority by predating on investments or by granting privileged positions, such as monopolies or above market wages to government workers. Competition derived from decentralisation would be able to control and limit the central government's interference in the lower level governments. Competition between subnational governments in attracting capital to their regions creates an externality which increases the opportunity cost of subsidising ailing firms, which in turn reduces the incentives to be bailed-out. Put another way, interjurisdictional competition provides political officials with strong fiscal incentives to pursue policies that provide for a healthy local economy. Reducing conditions of competition among the states would result in the absence of state policy experimentation and innovation.

Regulatory power over markets is a key player in shaping the economic destiny of a country (Weingast 2009, 2006). This power is inherently political and acquiring a sense of this political dimension can help us understand the reason why some countries are able to foster thriving markets while others manipulate markets for political purposes. There are some studies that dissect the ramifications of the type of political power in control for the markets. Based on the fiscal incentives logic, Shleifer and Vishny (1998) studied differences in local government support for the economy in Poland and Russia and found that local governments in Poland are far more supportive of business than in Russia. Shleifer and Vishny attribute this partly to difference in incentives available to government

officials and partly to difference in fiscal interests of the local government. Unlike Russia, Polish local governments relied on local taxes (or fees), thus fostering local economic prosperity and yielding greater revenue. The Polish government provided a supportive environment for business to flourish by adopting what Shleifer and Vishny (1998) call a helping hand rather than grabbing hand. This result was consistent with an earlier study by Zhuravskaya (2000) who found that local officials in Russian regions have very low fiscal incentives to foster economic growth.

Weingast (2009, 2006, 1997, 1995), Parikh and Weingast (1997) and Braun (2006) add that a secure political foundation is an important mechanism for a limited government organised under federalism. Braun (2006) argues that some countries were able to achieve advanced market systems partly due to the function of institutional structures that were able to reduce the uncertainty of market interaction and partly due to the provision of clearly defined property rights and reliable contract that encouraged investment. This self-enforcing design of political organisation constrains the power of the central government over both national issues and state protections, while the states being responsible for administering the contracts do not have the incentives to defect from the agreement by free riding.

Generally speaking, public officials generate public support for themselves through provision of market-enhancing public goods or through patronage of interest groups and rent creation (Weingast 2009, 2006). Both create values for individuals and groups as well as induce citizens to support those in power. Apart from generating support directly through creating value for citizens, the first route of provision of public goods contributes two additional effects. This approach would expand the local economy by increasing local revenue and relaxing the budget constraint. In return, this greater revenue capture increases the fiscal incentives of political officials to foster market growth. In contrast, the incentives to engage in rent-creation and corruption will increase when subnational governments depend more on the central government for revenue and have low local-revenue generating capabilities (Careaga and Weingast 2003). For instance, rents that are provided for constituents create value for their people, but do so, at the expense of other people in other regions. A comparison of statistics show that increasing the portion of total revenue derived from locally generated revenue leads political officials to substitute more market enhancing public goods for corruption (Weingast 2006). In contrast, the revenue maximisation of Leviathan in Brennan and Buchanan (1980) assumes that the officials have no goals other than revenue maximisation.

Grewal and Sheehan (2004) extended the analysis of political incentives in federalism and suggested that the assignment of revenue raising authority is a crucial determinant of the overall fiscal outcome from fiscal decentralisation. They show that a high degree of vertical fiscal imbalance in Australia has created conditions under which subnational governments depend heavily on fiscal transfers from the national government and become subservient to national policy decisions. Grewal and Sheehan (2004) argue that in spite of the fact that the Australian Constitution has been amended only on a few occasions since 1901, the nature of Australian federalism has nevertheless become unmistakably weak. The states have become heavily dependent on transfers and the Commonwealth government has become heavily involved in functions that were constitutionally in the states' domain, such as, health, education, transport and the environment. By assigning lower governments with regulatory authority over markets, SGFF encourages these governments to foster local economic prosperity and retain a pro-market focus (Weingast 2009, 2006; Grewal and Sheehan 2004). A formal political decentralisation to the local level without adequate devolution of economic powers to local governments cannot achieve any significant change in the division of responsibility between state and local governments. Parikh and Weingast (1997) state that such federal systems are only nominally federal, giving up the benefits of subnational government autonomy and failing to preserve the economic benefits of MPF.

An important benefit of the axiomatic approach to MPF is that it provides the basis for a comparative theory of federalism (Parikh and Weingast 1997). This approach allows us to predict the economic and political performance different characteristics and also facilitates the identification of the incentives facing political officials under different forms of decentralisation. In other words, MPF can analyse the difference in the conditions and incentives of subnational government and policy making which provides a comparative theory of federal performance. The comparative analysis helps explain why decentralised systems exhibit so much variance in behaviour, with some decentralised countries being very rich and others remaining very poor (Weingast 2009). Weingast (2009, 2006) revealed how the entrenchment of power in the hands of the central governments in Argentina, Mexico and India prevented the establishment of a federalist system that could meet market objectives. In contrast, some federal systems which had efficient markets were able to promote macroeconomic stability and economic growth. This situation leads the achievement of an advanced market system.

As MPF theorists believe this model to be a significant improvement over other theories, they are of the opinion that the success of a federalist system can be judged from its potential for providing a political system which can support an efficient system of markets (Oates 1999a). According to Jin, Qian, and Weingast (2005), the issue of aligning government incentives with market-promoting mechanisms is especially acute for transition economies that are just emerging from central planning or developing countries that are experiencing economic growth. Furthermore, theorists argue that MPF is potentially critical for developing countries where market interventions made by the central government frequently bestows some entities with monopolies and various forms of protection from competition as MPF limits the ability of all levels of government to create monopolies. It also discourages the establishment of massive state-owned enterprises whose primary political purpose is to provide jobs, patronage and other forms of economic intervention that plague developing countries (Brennan and Buchanan 1980). A subnational government that seeks to create monopolies, or arrange a privileged position for an interest group, will face extensive corruption and place firms in its jurisdiction at a disadvantage relative to competing firms from less regulative jurisdictions.

### **3.3.1 Five Conditions of MPF**

Effective interjurisdictional competition requires several institutional conditions (Weingast 2006). Since these conditions are implicit in the FGFF framework, most fiscal decentralisation systems in the last twenty years have been designed without attention to these conditions (Weingast 2009). The MPF theory repackages many of the insights of FGFF with inputs from the SGFF paradigm into a set of five conditions (Sinha 2005). These conditions stipulate a normative model for the design of federal systems and those federal systems that diverge from the MPF criteria are found to be unlikely to foster thriving markets. These five principal conditions as analysed by Weingast (2009, 1997) are explained below:

*-F1- A hierarchy of governments with a delineated scope of authority exists so that each government is autonomous within its own sphere of authority (the basis of federalism).*

The first condition (F1) is a fundamental characteristic of any federal system. It is derived from Riker's view on how to restrain central rulers in a federation, who suggested that a first characteristic of every federation is that it gives subnational governments a 'delineated scope of authority' with constitutionally guaranteed autonomy that may not be interfered with by the central government (Braun 2006). Federal systems delegate very different types

of powers to their subnational governments which can result in significant variation in their political and economic performance (Weingast 1997). The full benefits of MPF are curtailed in countries where the central government typically attempts to control or interfere with the subnational governments or the Constitution allows the central government to take over the states. This first condition is concerned with the formalisation of a federal system where authority for the state and national governments is delineated in an institutional framework. However, a formalised decentralisation alone is insufficient to preserve markets rather a system must have further conditions concerning the allocations of authorities and responsibilities among different level of governments. The next four conditions in Weingast's concept further specify the conditions to maintain and enforce a market-promoting federalist structure (Braun 2006).

*-F2- The subnational governments have primary authority over the economy within their jurisdictions protected from encroachments by the federal government.*

This condition parallels to the FGFF assignment principle and states that subnational governments must have considerable power to regulate local markets, tailor the provision of local public goods and services to local circumstances and set tax rates that ideally reflect local demand for public services (Oates 1972; Musgrave 1959). Autonomy in these economic matters at the local level is essential to decentralisation because if these powers remain at the discretion of the national government, it can easily make interventions on the economy at the local level, resulting in the violation of the system of federalism itself. When the national government controls subnational government revenue, subnational governments tend to become administrative arms of the national government, Mexico and India being two examples of such centralised federalism, which have only reaped compromised benefits of decentralisation.

*-F3- The national government has the authority to police the common market and to ensure the mobility of goods and factors across subnational jurisdictions.*

While the previous condition of MPF argued for autonomy of subnational governments in their local economies, the next condition delineates a supervisory role for the central government to establish a common market. The common market is created to prevent subnational governments from 'erecting trade barriers' as internal trade barriers short-circuit interjurisdictional competition (Weingast 2009). Federalism without a common market will demonstrate far less interjurisdictional competition and thus far less experimentations and adaptation of policies to the economy and hence federalism's constraints on subnational

policymaking. The federalism principle itself actually limits the central government to act within its scope and the role of the central governments is restricted to policing subnational governmental encroachment on the common market and checking subnational governments shirking regulations of the common market. From the MPF perspective, the central government still plays an important role because it must provide national public goods with interjurisdictional spillovers that would be underprovided if left to the subnational governments. Without the condition of F3, each subnational government would either presume the authority of or become something like a de facto national government in its jurisdiction (Parikh and Weingast 1997). For the lower governments, constraints imposed by F3 ensure that induced competition among lower jurisdictions has self-enforcing limits to prevent them from acting arbitrarily.

*-F4- Revenue sharing among governments is limited and borrowing by governments is constrained so that all governments face hard budget constraints.*

This condition emphasises the importance of hard budget constraints where all levels of governments are made responsible for the consequences of their fiscal decisions and their reliance on intergovernmental transfers and government borrowings is reduced. This condition of hard budget constraint restricts open-ended access to capital markets, especially borrowing from the central bank. Effective interjurisdictional competition requires a hard budget constraint which can push subnational governments to perform well without profligate spending and encourage them to tie local revenue with local economic prosperity (Weingast 2009, 2006). Constraints on their budgets encourage fiscal responsibility among subnational governments in a bid to make them more independent and reduce their dependency on central government and the whole nation. With this condition, the lower government is made responsible for its fiscal decisions and central government is placed at a distance so that any fiscal mismanagement of the subnational governments does not infect the whole system in the country. For instance, Argentina in the 1980s and Brazil in the 1990s, experienced hyper-inflation due to the lack of discipline of their subnational governments which forced their central government to bail them-out (Weingast 2009).

*-F5- The allocation of authority and responsibility has an institutionalised degree of durability, so that it cannot be altered by national government either unilaterally or under pressures from subnational governments.*

Finally, once a federal system with the requisite features has been established, F5 demands that the system is institutionalised to protect it from arbitrary changes. This



requires a legal framework that ensures proper enforcement of all the other conditions of MPF stated above and ensure continued commitment from the national and local governments. The federal structure must not be under the discretionary control of the central government (Parikh and Weingast 1997). This power reduces the independence of the states because the federal government can threaten those states which do not conform to the federal government's policy wishes (Dillinger and Webb 1999). In the absence of this condition, the central government can compromise subnational government autonomy, disrupt existent federalist structures and compromise credible functioning of the system in future. If the central government violates this condition or there is provision for arbitrary annulment of federal powers, it cannot really be considered federal at all (Parikh and Weingast 1997). This is the case in India where the central government has unilateral control over federal provisions in many ways. For instance, state boundaries can be redrawn by a simple majority in the Parliament and the President may dissolve state governments in circumstances such as threat to national security by external aggressors, breakdown of a state's Constitution, and financial crisis (Parikh and Weingast 1997).

While the first condition is the formal basis of MPF, Weingast (2009, 1997, 1995) explains that the four substantive conditions for MPF (F2-F5) also characterise a set of pathologies in federalism. The absence of one or more of these conditions implies some form of inefficiency or pathology which causes crippling economic interventions by governments (Weingast 1997). When conditions F2 and F5 are violated the result is a highly centralised federalism (powerful central government) which compromises market preserving qualities (Parikh and Weingast 1997). Condition F2 and condition F3 enhance each other and delineate a symbiotic relationship with minimal interference of both levels of government. If decentralisation remained at the discretion of the central government (in the absence of F2), the latter could intervene in the economy by using its discretion to compromise the system of federalism; but if the state government were given a free rein in their economic matters, central government can ensure compliance through the mechanism of a common market (Parikh and Weingast 1997). Therefore, the theory of MPF makes clear that assessing a particular federal system can promote markets that satisfy such five conditions.

The strength of MPF lies in its normative objection against the exercise of arbitrary authority by all levels of governments. This can be seen through constraints that are imposed for lower governments. First, the condition F1 provides for a non-interference clause where authority is clearly demarcated between the state and central government. Second,

competition among subnational governments induced by condition F2, places self-enforcing limits on their ability to act arbitrarily (Parikh and Weingast 1997). The third condition of F3 enables the central government to police subnational government from abusing the hierarchy, such as encroachments on the common market. The fourth condition of F4 stressing hard budget constraints reduces intergovernmental fiscal dependency. The ideal model of federal governance as prescribed by these conditions is one based on delimitation of arbitrary authority by both levels of government. The final condition of F5 puts the final check to keep authority delimited.

### **3.4 SGFF and Design of Fiscal Transfer Systems: Fiscal Incentives Approach**

Generally, this section discusses the implications of SGFF for fiscal transfer system. Different systems of taxation and fiscal transfer systems lead to different local governmental behaviour choice (Weingast 2006). SGFF is based on the principle that political incentives play an important role in determining the public choice made by local government officials and enhancing the federal performance of government. This basic underlying principle of political incentives also gave rise to the fiscal incentives approach advocated in SGFF (Weingast 2009). Building on the earlier works of Brennan and Buchanan (1980), Epple and Zelenitz (1981), Inman (1988), and Inman and Rubinfeld (1997), MPF theory emphasises the importance of decentralisation and incentives for governments. Weingast (2009) emphasised that, this fiscal incentives principle has been long known by the economists, but they have not always studied it systematically. A good example of the benefit generated from this principle is the interjurisdictional competition as emphasised by Tiebout (1956), in particular, the beneficial effects of local property tax discussed where interjurisdictional competition exists. Since the value of public goods is capitalised into the value of local property, this creates incentive for city managers to choose public goods that can maximise the property values as a way to attract scarce capital and labour to live and remain in their jurisdictions. Thus, property tax becomes an important component of local government fiscal structure, providing an incentive for local political officials to design policies that foster markets (Bahl and Linn 1992). The government officials prefer to implement policies that have greater possibility of increasing revenue whilst also allowing them to pursue their personal goals. The greater the revenue they generate, the easier it becomes for them to achieve their personal goals.

It must be added, however, that deficiencies in the FGFF approach to fiscal transfer system have actually been recognised earlier by many FGFF scholars including Shah (1997a and

1997b), McLure (1998) and Bahl and Linn (1992). Shah outlined cases of entrenchment of dependency in a series of influential papers on Mexico, South Africa and Pakistan, where funds transferred from federal revenue sharing covered up to 99% of expenditures in some provinces (Weingast 2006). Similarly, Bahl and Linn (1992) criticised the practice of making fiscal transfers through grants as it allowed the transfer of funds to local governments without making them accountable for their own fiscal resources. The availability of grants resulted in spending without obligation to increase revenue demotivates the subnational government officials from increasing efficiency in their operations and also to develop innovative methods of delivering public services. In these works by FGFF scholars, there is criticism of the dependency and lack of accountability bred by FGFF fiscal transfer systems, *albeit* in a nascent form that does not evolve into a full-fledged paradigm shift signalling a different system of fiscal transfer. It was scholars following the SGFF approach, such as Singh and Srivinasan (2006), who clearly identified how FGFF ignored the importance of the incentives from transfers on subnational government policy making or growth (increase income through public or private investment).

This section provides an understanding of how fiscal incentives affect policy choices. Since no general theory exists for these matters, Weingast (2009, 2006) concluded that a desirable fiscal system would be one that provides strong incentives affecting political choice of policies with respect to markets. The decision to choose pro or anti-market policies depends on the incentives provided by the fiscal system to local governments. The provision of fiscal incentives in the presence of interjurisdictional competition at subnational level is the key to a federal system that promotes pro-market policies (Weingast 2009, 2006).

In this fiscal incentive approach, Weingast advocated the implementation of incentives for subnational officials that will draw them toward market policies that generate more revenue within their fiscal system. When the officials capture revenue from broad taxes on the increased economic activity in the market, it will motivate them to create new market opportunities as a means of increasing the fiscal proceeds generated by markets. This will also lead to a further incentive to provide market-enhancing public goods. If fiscal incentives are not available, they would resort to raising revenue by selling monopoly rights, further leading local governments to restrict markets (Weingast 2009).

### 3.4.1 Fiscal Incentives and Economic growth

SGFF approaches have significant implications for the design of fiscal systems where equalisation can be achieved without diminishing the incentives of public officials to foster local economies (Weingast 2006). SGFF scholars such as Singh and Srivinasan (2006), Rodden (2003) and Careaga and Weingast (2003) emphasised the importance of revenue generation by subnational governments which is lacking in the FGFF model. There have been no systematic studies on these fiscal incentives except for a few studies calculating the proportion of local revenue captured by local governments (Weingast 2009). Although this single variable (local revenue) does not necessarily contribute to long-term economic growth, it can at least provide some interesting patterns for developing countries. For example, there has been research on the marginal retention rate for different periods by Careaga and Weingast (2003) in Mexico, Zhuravskaya (2000) and Blanchard and Shleifer (2000) in Russia, and Jin, Qian, and Weingast (2005) in China. These studies indicate that lower revenue captured by lower governments in comparison to the central government provide less incentives for subnational governments to provide policies that foster growth. In contrast to these low margin incentives for provinces in contemporary developing economies, the states in the US in the 19th century were able to retain up to 100% of increases in their local revenue. This principle of fiscal incentive has been followed in post-reform China where provinces were allowed to retain a high proportion of revenue. Figures show that 68% of all provinces in China achieved a marginal retention rate of 100% and accumulated 89% of additional tax revenue generated within the provinces (Jin, Qian, and Weingast 2005). It should be noted that the fiscal reform of 1993 changed the tax system of China and the provinces lost much of these retention rates (ADB 2005).

The opportunism displayed by higher governments in capturing the revenue gains from increased local economic activity reduces incentives for subnational governments to foster economic growth. However, this method does not include the poorest province, as it should be treated in a manner similar to the existing transfer systems. For other provinces, firstly the centre should keep track of revenue collection by provinces and secondly, a step function ensures the province derives a high marginal incentive to foster local economic prosperity. A high marginal transfer system ensures that taxpayers will prefer to bear the expenses of market-enhancing public goods when they receive a large fiscal return. Indeed, this transfer system is Pareto-improving as some provinces may get richer than others because the total amount retained by the centre is larger than if these provinces had grown

less. Inequalities among provinces may rise to a degree (Weingast 2006), but if several provinces get richer, the amount available to the centre for transfer to the poor provinces will be larger (Weingast 2009).

While a country that combines a traditional centralised taxation with a traditional fiscal transfer scheme (non-step function) is unable to foster economic growth as it ignores the high marginal incentives principle. Suppose the total revenue (federal and provincial) raised in a given province is 11 billion and the centre keeps 75% of the revenue or 8.25 billion and the province 2.75 billion. As noted, the problem with this scheme is that it provides the province with low marginal incentives to foster local economic prosperity since it captures only one-quarter of any increase in revenue (Weingast 2006).

If several provinces get richer, the amount available to the centre to transfer to the poor provinces will be larger than under the traditional transfer scheme. Again, this means everyone can be better off. Further, if competition among jurisdiction induces poorer provinces to emulate richer ones, their growth may increase too. Of course, this type of system can be politically manipulated. One danger here is that rich subnational governments can be punished through the ratchet effect so that the centre simply expropriates all the previous gains. Nonetheless, this scheme has strong potential since it increases the provinces' fiscal incentives to foster local economic growth (Weingast 2009).

### **3.4.2 Fiscal Imbalance**

Scholars from the SGFF argue that the FGFF transfer systems put too much emphasis on equity considerations and instead advocate a fiscal transfer system that is strategic and not merely based on equitable distribution as an absolute principle. Moreover, fiscal transfer systems demonstrate poor responsiveness to localities, so notwithstanding their altruistic equity focus, FGFF fiscal transfer systems have failed to correct vertical and horizontal imbalances in developing countries. SGFF argues that fiscal transfers that are negatively (or weakly positively) related to subnational income growth as this system gives local governments poor fiscal incentives to foster local economic growth. Indeed, a greater dependence on transfers, results in distorted markets and greater corruption and rent-seeking. In contrast, fiscal systems that allow growing regions to capture a major portion of new revenue generated by economic growth provide more incentives for local governments to foster local economic growth (Singh and Srinivasan 2006).

Consider a transfer system set by a formula that takes various economic and demographic characteristics, such as income and population, into account. Suppose that the formula is

fixed with reference to a given year, so that the centre allocates revenue of the same proportion each year, with the only variable across years being the size of the revenue pool to be divided among subnational governments. If there are  $n$  provinces, then the average province receives  $1/n$  of the total revenue pool, no matter how good or bad its policies. Let the total revenue pool be  $R$ , so that the average provinces receive  $R/n$  of the pool. Now let the provincial economy grow so that the revenue generated from the province increases by 1 unit. The total revenue pool is now  $R+1$ . The average provinces' share is now  $1/n$  of  $(R+1)$ , which equals  $R/n + 1/n$ . In other words, the provinces receive  $1/n$  of the total increase in revenue generated solely from its local economy. The province bears the full expenses for market-enhancing public goods but captures only  $1/n$  of the fiscal return, which leaves it very little incentive to further pursue growth in their local economy. Careaga and Weingast (2003) call the principle of these kinds of system as practised in India and Argentina, the 'fiscal law of  $1/n$ '.

Weingast (2009) highlighted the implications of SGFF for the design of a fiscal transfer system that is strategised towards high marginal fiscal incentives as well as horizontal equalisation. SGFF scholars proposed a non-linear function where the fiscal transfer is not merely made unquestioningly on the basis of a set quota but is modulated through a calculus accounting for anticipated gains in terms of local economic growth and deficits reduction. The principle of such a fiscal transfer system would be to simultaneously achieve all three goals – enabling horizontal equalisation, preventing tax competition and ensuring high marginal fiscal incentives. Following the FGFF logic, the design should have a mechanism to lower the tax burden on the economy and limit tax competition. However, following the SGFF logic, there needs to be a fiscal incentive approach where the transfer system rewards subnational governments that achieve and foster local economic growth.

### **3.4.3 Fiscal Responsibility**

The literature on fiscal transfer systems also discusses some transfer systems that are explicitly characterised by 'gap filling' where provinces with larger deficits receive larger transfers. Again, while these systems have an altruistic equity principle, these systems subsidise spending beyond revenue and reduce the urgency of fiscal deficit for local governments, which can otherwise push them to take steps to improve their performance. The prevalence of such systems has grown in the past decade in developing countries, particularly in India. Elaborating the poor incentives in fiscal transfer system in India, Singh and Srinivasan (2006) elaborate that while all the increase in local revenue goes to the

centre, the Finance Commission transfers have a series of weights for transfer that are rigidly demarcated. Here, 62.5 % of the fiscal transfer is negatively related to a state's income meaning that poorer states receive greater funds, 10% is based on population and the remainder is based on other criteria (Weingast 2009, 2006).

Indeed, in Argentina and Brazil in the late twentieth century, the local branches of the central bank allowed provinces to transfer debt to the central government, leading to massive financial problems. Weisner (2003) claimed that such situations in Latin America, including Bolivia, Brazil and Ecuador, are the results of design failure in transfer systems as their form of decentralisation was about entitlements to revenue rather than markets and incentives. These frameworks deviate from market-based principles as they allow easy access to large unconditional transfers to be captured by the subnational governments that increase public sector rent seeking. The result is an increase in transfer of revenue without an increase of policy responsibility, allowing subnational governments to use these funds for patronage rather than local public goods (Wiesner 2003).

Further, Qian and Roland (2010) strengthened the argument about the advantage of having a decentralised fiscal authority with competition as a useful tool for hardening the budget constraint. Soft budget constraints resulting from intergovernmental transfers, borrowing or a national bail-out further weaken fiscal incentives for subnational governments to make prudent decisions (Haggard and Webb 2004; Wibbels 2003; Rodden, Eskeland, and Litvack 2001; Dillinger and Webb 1999; McKinnon 1997; Kornai 1986). Soft budget constraints give poor incentives and lead to a range of financial and economic problems. The idea is that public officials are influenced by what type of policies affects their budget constraint. The incentive to soften budget constraints also depends on the extent of decentralisation of fiscal/ monetary authority. This is because if fiscal decentralisation is not complete, subnational governments also compete for intergovernmental transfers. The central government may have power to earmark these transfers for local public goods and subsidies, any strategic distortions by them further increase the opportunity cost of bail-outs, thus achieving harder budget constraints. Therefore, the crucial factors pertaining to the FGFF and SGFF approaches are that the financial mechanisms, particularly the establishing hard budget constraints for all levels of government.

The design of fiscal transfer system is not only a crucial issue for developing economies. Taking the example of rich countries, Courchene (1981) and McKinnon (1997) raised a related incentive problem with transfer schemes that were designed to provide substantial

subsidies to the poorest regions in Canada and Italy. McKinnon suggested that the revenue transfers in these countries create dependency and a soft budget constraint. Comparing this case to the economic revival of southern states in the US in the mid-20th century after a no-subsidy and hard budget constraint, McKinnon emphasised that this would have been unlikely if these states had been subsidised like Canadian maritime and the Italian Mezzogiorno.

#### **3.4.4 Fiscal Equivalence**

Originating from the work of Lindahl (1919) and Wicksell (1967), fiscal equivalence is based on the principle of maintaining a salutary equilibrium between those being taxed with those receiving the benefits (Weingast 2006). This term was firstly used by Olson (1969) and was widely discussed by Oates (1972) in his perfect correspondence theory. Emphasising the importance of equivalence, this literature highlights the series of incentive problems that arise when the political system delinks taxation and spending decisions, leading to expenditure unrelated to the income source from where the tax originates and causing spending decision to fail efficiency criterion (Weingast 2009, 2006; Winer and Hettich 2006).

As a citizen typically opposes paying taxes that provide benefits for others, meaning that higher governments have trouble in providing local public goods to small groups of citizens (Weingast 2006). However, political incentives prevent higher governments from providing local public goods efficiently and these incentives arise due to voters in a locality having the perception that the tax costs of their programs are spread across all localities. However, this creates a common pool problem in which voters and representative seek large efficient projects. In order to reduce this problem the higher government has to provide larger package of public goods through decision mechanism labelled as 'universalism' or something for everyone (Wallis and Weingast 2005; Inman 1988; Weingast 1979). Actually this is the factor that leads government at the higher level to over-provide local public goods and services by (Poterba and Jurgen 1999; Inman and Rubinfeld 1988; Weingast, Shepsle, and Johnsen 1981; Winer 1980). Furthermore, many public goods cannot be provided even in this efficient manner. A majority of voters are likely to oppose infrastructure projects with huge costs but concentrated economic benefits, even when the benefits greatly exceed the costs (Wallis and Weingast 2008). A related problem arises when the beneficiaries and decision makers are a small subset of the set of taxpayers financially responsible for local public goods. This setting is a common pool problem that creates a soft budget constraint.



Because the small group of decision makers only pays a portion of cost but receives all the benefits, they can provide benefits to themselves at the expense of other. Alternatively, when the set of taxpayers is small relative to the set of beneficiaries, local public goods are a possible solution to this problem.

Early scholars like Lindahl (1958) and Buchanan (1965) to Olson (1986) argue that the efficient provision of public goods requires equating the jurisdictional boundaries of the body providing public goods with the set of people affected by the public goods. The relevance for the intergovernmental transfers is that they are not incentive-neutral. Because they break the link between the set of tax payers and beneficiaries, these transfers may significantly affect the incentives to provide public goods (Weingast 2006).

### **3.5 Critiques of Market Preserving Federalism**

The concept of MPF has attracted a fair share of critical attention, with many scholars including Braun (2006), McKinnon (1997) and Rubinfeld (1997), most particularly Rodden and Ackerman (1997), questioning MPF's claims about preserving markets and enhancing economic welfare. Under the decentralisation principle advocated by the MPF theory, business regulation and taxation are conducted in a manner that protects property rights, encourages capital formation and stimulates economic growth. Sinha (2005) had an optimistic view of decentralisation based on the belief that positive incentives for politicians at all levels to pursue reform-oriented policies, but he also revealed that decentralisation's effects (negative as well as positive) on economic indicators vary significantly across countries. For instance, in Brazil, the subnational autonomy acted as a check against the central government's powers and subnational revenues finance most of the developmental programs in provinces in the 1990s, but the resultant macroeconomic performances were extremely unstable. Conversely, despite following a policy of fiscal centralism, economic reforms in India generated moderate to high economic growth in the 1990s. Therefore, recent scholarship has led many observers to be more sceptical about the benefits of decentralisation that were unequivocally lauded in earlier studies.

Rodden and Ackerman (1997) criticise the value of Weingast's model as a convincing general solution to the issue of federalism or a useful prescriptive model for the developing world. They find some faults in the direct link assumed by MPF between decentralisation and market competition and question the ability of federalism to preserve markets as federal systems differ too widely to have a uniform effect on the economy. However, in a reply to that question, Parikh and Weingast (1997) argued that nothing inherent in

federalism either promotes or preserves markets and these mechanisms need to be strategically incorporated in federalist structures in different contexts.

From McKinnon's perspective, the Weingast model fails to fully characterise the nature of political structures that would comprise a market preserving federalist system. To him, there is insufficient detail in the MPF model to serve as a basis for reliable policy analysis, especially in terms of redistribution as well as hard budget constraint issues. Although Rubinfeld (1997) prefers that the structure proposed by Weingast be improved rather than rejected, he along with Rodden and Ackerman (1997) have found that the normative basis for an implementable model is lacking in MPF theory.

The defining characteristic of MPF is its emphasis on decentralisation of economic regulatory powers to subnational governments accompanied by the principle that subnational governments should be able to compete with each other. However, Weingast does not discuss how this condition can be fulfilled if the subnational governments are sufficiently and equally equipped with financial resources. By taking South Africa as an example, Braun (2006) showed that competition among local governments is not possible in South Africa due to lack of tax resources, so cooperative federalism is necessary for subnational governments as they depend on the financial help of the central government (Braun 2006).

Rodden and Ackerman (1997) and Rubinfeld (1997) have further argued that the excessive concern about the risks of central government intrusion into the system prevent Weingast's MPF model from a more balanced and nuanced analysis of the role of political institutions. These scholars claim that in its almost pathological aversion to government intrusion, MPF overlooks the positive role that a central government can play in an effective federalist system. Here, McKinnon (1997) argued that an active central authority, that encourages economic efficiency, ensures equitable political participation and respects basic individual rights, can promote long-term growth with an effective federalist system.

Many scholars like Cooter (2003), Kotsogiannis and Schwager (2006), Shah (1997), Shleifer and Vishny (1993) and Weingast (2009, 2006) argue that decentralisation can result in less corruption, in part, because competition among subnational governments puts constraints on the behaviour and policy choice of political officials. However, this has been contradicted by Treisman (2000) who revealed that federal systems are more corrupt than non-federal ones. Rodden and Ackerman (1997) have cast some doubt on the viability of MPF by drawing on Indian examples to argue that corruption would not necessarily

decrease when power was decentralised. Using evidence on civil service transfers in India, Rodden and Ackerman (1997) showed that corruption was still likely to occur in such systems of economic decentralisation. However, Parikh and Weingast (1997) argued that despite high levels of civil service transfers in Gujarat, economic growth in that Indian state was higher than most other states. In particular, not all forms of decentralisation affect corruption, hence it is important for a decentralisation strategy to satisfy all the conditions of the MPF theory to prevent corruption (Weingast 2009, 2006; Qian and Weingast 1997; McKinnon 1997; Weingast 1997).

Another strand in this literature has outlined how the unqualified emphasis on competition in MPF is not necessarily always desirable as competition among small governments may result in a race to the bottom and economically inefficient public policies. Unlike MPF, the principle of economic federalism assumes that the central government is responsible for providing pure public goods that can correct inefficiencies (through regulations, taxes or subsidies) arising from production or consumption externalities across jurisdictions. In this case, economic federalism assigns the central government the task of correcting such misallocations, a mechanism that is lacking in MPF (Rubinfeld 1997). In some extreme cases, however, fiscal decentralisation also has a disadvantage, particularly, in terms of systems where there is revenue decentralisation with externality of inflation. In this system, each subnational government receives full benefit from its revenue generation but the burden of costs of inflation are borne by other regions too (Qian and Roland 2010). Rodden and Ackerman (1997) have expressed some scepticism about the durability and credibility of decentralisation that can be fostered in the MPF model. In their view, the ability of federalism to facilitate growth also depends on factors outside the MPF model and that some of the conditions outlined in MPF can even become self-defeating. For example, the clause of devolution of authority to subnational governments in F1 is untenable because national and subnational political leaders as well as interest groups with redistributive agendas have incentives to centralise certain kinds of economic regulations. Further, as F2 deprives the central government of its power to make substantive economic regulations, it will probably not be capable of policing the common market and providing other national public goods, thus leading to the failure of condition F3.

Most importantly, Rodden and Ackerman (1997) made a trenchant critique of MPF in relation to the equity consideration. Rodden and Ackerman's (1997) negative view of decentralisation emerges from their belief that a pure MPF would be incapable of

addressing the issue of equitable redistribution because competitive subnational governments without a strong central government would have little incentive to engage in redistribution to the poor and this would be compounded by the hard budget constraint which reduces possibility of state expenditure on welfare. Indeed, Rodden and Ackerman (1997) admit that India is a federalist and their main interest does not conform to MPF. They further argue that some conditions in the MPF model may, in fact, exaggerate rather than ameliorate some important institutional impediments to development. They defend the theory of cooperative among democratically elected governments as an alternative to competitive federalism for enhancing economic efficiency and equity. Rubinfeld (1997) also elaborated on this problem of equitable distribution by focusing on interjurisdictional inequality. Citing their case study with South Africa, Rubinfeld argues for the need of substantial intergovernmental revenue sharing. Echoing the comments of Rodden and Ackerman (1997), Rubinfeld states that without this revenue sharing of soft budget constraint, the market-preserving federalist system is unable to achieve the redistributive goals essential for South African economic experiment.

These authors explicitly defend the theory of cooperative federalism among democratically elected governments as an alternative to competitive federalism in order to enhance economic efficiency and equity. An effectively designed revenue sharing system, one which distributes funds to places as well as people, can achieve a number of important national political goals and encourage economic growth. McKinnon (1997) supported Weingast's argument that modern federations do not meet the requirements for MPF, largely because their central governments play important redistributive roles that deviate from the principle of clear delineation of authority between governmental units, limit the autonomy of the subnational governments, introduce soft budget constraints, and allow allocation of authority to be frequently altered.

Further, in solving the problem of tax avoidance, Rubinfeld (1997) suggested that an appropriately designed system of indirect taxes (which are less visible than direct taxes to taxpayers) might be the most effective solution to achieve redistributive goals and maintain the broad political support that is necessary for long-term economic growth. Since many jurisdictions in South Africa have been unable to collect adequate revenues from taxpayers, implementing the F4 condition of hard budget constraint suggested by MPF theory, subnational governments should have sufficient taxing autonomy to balance their own budgets. On the other hand, Rubinfeld (1997) believed that a consistent, predictable system

of revenue sharing (contrary to assumptions F2 and F4 of the Weingast framework), which is insensitive to political bargaining between local and central governments, is also consistent with a hard budget constraint.

In terms of F5, the Weingast MPF model requires a system that ensures durable allocation of authority and responsibility, and for good reason, given the need for long term stability and growth. But given the volatile political framework as well as institutional differences in political governance, particularly, in developing countries, the assurance of the longevity or durability of a federal arrangement is an unfeasible expectation. Rubinfeld (1997) gives the example of South Africa to argue that a durable allocation approach is unlikely to be successful, simply because transition policies for the federalist system may be quite distinct from the long term policies for the country.

Rodden and Ackerman (1997) expressed some major concerns about the extent to which the conditions proposed by MPF could actually hold in practice, particularly in developing countries. They acknowledged the logic of MPF as a concept, but criticised the difficulty of achieving MPF conditions in practice as well as the capability of MPF as a guide to institutional reform in developing countries. McKinnon (1997) have criticised Rodden and Ackerman (1997) by pointing out that even though their points were interesting and insightful, they did not suggest an alternative, more preferable model of how federal governments can be best organised. While they are critical of MPF, they are unable to come up with tenable alternatives despite their extensive fieldwork in developing countries such as India. Thus, in the absence of a comparative theory of federalism like MPF, they appear to have trouble distinguishing among different federal systems (Parikh and Weingast 1997).

### **3.6 China and India as Experiments of Market Preserving Federalism**

Most studies in the literature focus on Western countries to illustrate the principle of federalism (Montinolla, Qian, and Weingast 1995). Some researchers have even used this model in a retrospective manner for historical case studies to explain investment, entrepreneurial activity, and high growth rates in England in the eighteenth century and the United States in the nineteenth and early twentieth centuries. However, MPF has also become a subject of interest in the literature on federalism in developing countries and has particularly been used as a benchmark for comparing China and India (Singh 2009). For example, Rodden and Ackerman (1997) used India as a case study for MPF, and Singh (2009) and Lalvani (2003) compared India and China using MPF as a scale. Qian and

Weingast (1997) focused on modern China as they believe it to be the most striking example of the economic benefits of federalism along with the former Soviet Union, and in a more recent study Jin, Qian, and Weingast (2005) compared Chinese style federalism with Russian style federalism.

Federalism in China has been scrutinised by many economists, politicians and law practitioners. Although China is not constitutionally a federation, as a *de facto* federal system, it is one of the fastest growing economies in the world (Weingast 1997). In the past three decades China has transformed itself from a centrally planned economy to an emerging market economy, achieving an average growth rate of 9% per annum, quadrupling its GDP per capita and raising the living standards of ordinary citizens (Lalvani 2003). The current structure of governance bears prominent features of fiscal decentralisation *albeit* with several tiers of governance stratified across provinces and local governments. The country has made substantial effort to break down its highly centralised fiscal management system with various forms of fiscal contracting systems (1979-1993) and the recentralisation of fiscal power under the current tax sharing system (1994-present) (Shen, Jin and Zhou 2012). Fiscal decentralisation is widely recognised as an essential component in China's transition to a market economy and remarkable economic performance after its transition from a centrally planned economy. Some observers have suggested that particularly after the 1980s reform<sup>41</sup>, the aggressive growth in new private sectors led to strong growth in markets which can be roughly characterised in MPF's terms as 'thriving' (Lin, Tao, and Liu 2003).

The question of whether fiscal decentralisation has contributed to China's economic success over the past three decades is still open to debate, however some scholars argue that fiscal decentralisation has been conducive to China's economic development. Qian (1999) suggested that the fiscal contract system (1980-1993) provided material incentives that stimulated subnational governments to promote local economies. Qian and Weingast (1997) argued that the fiscal contract system enabled subnational governments to avoid revenue predation from the centre and therefore retain financial resources for investments that promoted economic growth. Lin and Liu (2000) have asserted that fiscal decentralisation is one of the key driving forces of China's remarkable economic performance via improvement in efficiency rather than increase in investment. Jin, Qian,

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<sup>41</sup> Economic reforms introducing capitalist market participation.

and Weingast (2005) suggested that fiscal decentralisation reforms considerably strengthened the fiscal incentives of provincial governments, which in turn created provincial economic development and reform. Some studies have, however, offered evidence suggesting that fiscal decentralisation is detrimental to China's economic growth. Yang (2012) and Young (2000) showed evidence suggesting that fiscal decentralisation fragmented the national market, encouraged local protectionism, induced duplicate investments, and hence negatively affected economic development.

The 1994 fiscal reform in China created a framework of intergovernmental fiscal relations between the central and local governments, and is considered the most intensive and far-reaching institutional restructuring for intergovernmental fiscal relations since 1949. Given the background of the overall direction of government policy at the time, the reform established a basic framework of China's tax system for meeting the requirements of a market economy (Gao 2008). A major effort was made by the central government to establish its own revenue collection bodies which in effect centralised the revenue system for the first time since the economic reform started in 1978 (Shen, Jin, and Zou 2012). The reform was essentially an attempt to deal with basic revenue problems by a few measures: curbing the fiscal decline and providing sufficient resources, especially to the central government; simplifying the tax structure by reducing tax types and rates; and unifying the tax burden on taxpayers. It also put central-local revenue-sharing on a more transparent, objective basis by replacing negotiated contracts with a rule-based system of tax assignment (Shen, Jin, and Zou 2012). The tax-sharing reform explicitly defined taxes as central taxes, shared taxes and local taxes.

In order to guarantee the stable growth of fiscal revenue and to establish a tax system that would be appropriate for the socialist market economy system, the central government strengthened its fiscal power along with the changes in the division of revenue sources through measures aimed at capturing core taxes and establishing centralised tax administration. The central government has rapidly centralised the most lucrative sources of revenue, including value-added tax (VAT), resource tax, and personal and corporate income tax. In the case of the VAT, the four layers of local government—provincial, prefectural/city, county, and township—together share only 25% of VAT intake. In 2002, the central government further ordered local governments to give 50% of personal and enterprise income tax over to the central government. On the other hand, in spite of the fact that 45% of total tax revenue currently accrues to provincial governments, the authority to

adjust all tax rates, abolish an existing tax or impose new taxes is still vested in the central government. Since all taxes in China are imposed by the central government, local governments have a degree of latitude in determining the rates of only minor taxes, but even for these they are only allowed to set tax rates within a limited range (Ahmad 2008). Thus, under the circumstances, the only way local governments can increase their tax revenue is by enlarging their tax base by offering all kinds of incentives to investors. In some cases, the competition among local governments for business investment has also resulted in wasteful duplication of infrastructure (ADB 2005).

As a result of this, local governments remain heavily dependent on fiscal transfers on central government since 1994 reform (Grewal 2008a). Like many other federations, the Chinese federal system also suffers from a vertical fiscal imbalance, as the central government receives more than 55% of budget revenue but is responsible for only 30% of budgetary expenditure. Tax revenues in China are not decentralised to the same extent as public expenditures. Local revenue as a share of total government revenue dropped rapidly after the 1994 tax centralisation while the local expenditure as a share of total government expenditure lingered around 70%. The process of recentralising revenues upward and devolving expenditures downward extends from the central to the provincial to the prefectural to the county and ultimately to the township and village level. Each level pushes fiscal responsibilities down to lower levels while asserting the largest possible claim on revenue residuals. At the grassroots levels—the county and township levels — local governments are left with no choice but either predate on local residents, enterprises, and financial institutions or simply not provide the primary public services. In the process, the link between government expenditure and revenue is broken seriously for all four layers of China's local governments (provinces, prefectures, counties and townships), creating in turn perverse fiscal incentives for all governments.

As is apparent from the foregoing discussion, recent literature has paid a lot of attention to China as an example of MPF, but based on his incomplete contracts theory argument, Grewal (2008a) not only points to the vertical imbalance and fiscal dependency in the Chinese federal system, but in a subsequent paper, Grewal (2010) raises the point that the fiscal approach in Canada is much closer to the theoretical framework of MPF than many other nations. Even though the British North American Act 1867 established the Canadian federation with a dominant federal government, Canadian provinces today enjoy much greater fiscal autonomy than what they inherited from the Constitution. Despite the



continuing debate about the centralising impact of the federal spending power, Canadian's provinces virtually have access to all major taxes as well as priorities for public spending. With a low dependence of provinces on federal fiscal transfers, federalism in Canada appears to be closest to MPF. This raises the question of whether China can be considered as a leading example for MPF theory as has been widely alleged by Weingast (1995) and Qian and Weingast (1997), when Canada's governance system shows the closest resemblance to the theoretical edifice of MPF.

According to Gao (2008), during its operation in the past thirteen years, China's current tax system has played a significant role and has achieved its primary goals of increasing government revenue, enhancing government's ability for macroeconomic control and regulation, equalising regional economic and social development and accomodating the development structure of economic globalisation. However, the 1994 reform has led to conflicting results for the MPF framework in China as the hard budget constraints do not even exist for local governments in China. Under China's 1994 budget law, the lower governments are not allowed to borrow either from domestic or foreign sources, but they have been borrowing for many years to finance both capital and recurrent expenditure. Local governments have created their own financing vehicles in the form of companies from which the lower governments can borrow. Although practiced informally or illegally, local borrowing has played an important role in local economic development and in alleviating local fiscal pressure, particularly for those localities struggling to make ends meet. The significant improvement of local infrastructure in almost all jurisdictions in the last decade is partially attributed to local borrowing. However, illegal local borrowing, usually operating behind the screen, is difficult to control and susceptible to corruption, and this seriously damages local governments' accountability. Indeed, almost all local governments provide loan guarantees for SOEs<sup>42</sup> directly or indirectly, although it is neither allowed by the budget law. Local governments also provide loan guarantees to the central bank for local financial institutions to avoid financial risk. Local government gained substantial control over the credit supply and emboldened overlending and underpricing of loans, which led to the excessive expansions of banks' credit and a mounting number of bad and non-performing loans. Ultimately the borrowers of nonperforming loans may default, requiring the lender to absorb the loss. Local governments also take on indirect borrowing through various channels, such as local-owned enterprises or Trust and Investment Companies (TICs).

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<sup>42</sup> State Owned Enterprises.

Local enterprises in charge of providing public services, can and do borrow from banks and on the capital market. Given these conditions of local financial stress and insufficient financial support from the upper levels, such local borrowing essentially finances much subnational spending.

As a result, debts have become the major problem with many local governments on the verge of bankruptcy due to debt services. It is estimated that the total local borrowing was over USD120 billion by the end of 2004 (Wei 2004). The total debt of grassroots governments was around USD 40 billion by the end of 2001, over half of which was borrowed by townships (Shen, Jin, and Zou 2012). In 1998, the central government had to bail out local government by issuing 270 billion Yuan of government bonds to recapitalise the state-owned banks (Jin and Zou 2003). In 2011-2013 the lower governments have conducted two comprehensive audits of lower government debt. According to the Audit Report to the national congress in June 2002, the total debt for 49 counties (cities) audited was about USD 8 billion, about 2.1 times of the yearly disposable fiscal resources. The total debts would be even higher if implicit debts such as unpaid civil servants salaries and farmers' services were included (Shen, Jin, and Zou 2012).

Judging from the above information, intergovernmental fiscal transfers play an important role in China which is far from the MPF principles, in fact now they realise that the hard budget constraints are not a good model for them. In fact, China's decentralised fiscal system has not coped well with the problem of mushrooming inequality (Shen 2007). Given the objective of improving local public services and proofing balanced economic development, the present system of fiscal decentralisation fails to promote fairness and equity, enabling all Chinese to share the fruits of reform and development. Therefore, Grewal (2008b) emphasises that China deserves to have a clearer and coherent principle of distribution of fiscal transfers that could help in better achieving national economic priorities. Instead of fiscal capacity equalisation, his finding shows that targeted fiscal transfers offer a potentially useful instrument that can help the Chinese government to make real progress in achieving the goal of a harmonious society.

Moving on to the case of India, there has been a de jure federal system since Independence in 1947, but it was constitutionally enfranchised as a federal state in 1950. A part of the purpose of federalism in India was to address the problem of maintaining harmony among different ethnic and religious groups, but there has been a debate about whether India's federalism system fits the MPF system (Parikh and Weingast 1997; Rodden

and Ackerman 1997). Sinha (2005) argues that an analysis of MPF criteria in relation to India's federal fiscal system must be analysed independently of its growth rates.

In the Indian case, economic decentralisation lags considerably behind China, as states remained for decades heavily dependent on not only central government fiscal transfers, but also planning priorities (Grewal 1975). This situation changed in later years, especially after the Constitutional reform in 1992 and the states have been able to pursue economic policies with greater freedom. This reform provided more autonomy to district governments, and states were tasked to provide oversight over district budgets. A problem with decentralisation in India before the reform was structural imbalances between states, where one state may have had more power to raise revenues and allocate expenditures compared to another state (Martinez-Vazquez and Rider 2005). However, the essentials of the intergovernmental transfer system (including Planning Commission and central-ministry-mediated transfers) have remained relatively unchanged. In particular, the transfer system is still a contributory factor to soft budget constraints at the state level. States were highly dependent on fiscal transfers and loans from the federal government to finance subnational public goods (Singh 2009).

Decentralisation in the 1990s in India was in part the unintended product of economic liberalisation policies initiated in the mid-1980s to early 1990s. The reform provided stronger autonomy for district governments and greater control over economic policies for state governments in matters of private investment (Singh and Srinivasan 2006). At the same time, political decentralisation to the local level began with constitutional amendments to create third-tier governance at town and village level with stronger locally-elected governments. However, formal political decentralisation to the local level without adequate devolution of economic powers to local governments has not achieved any significant change in the division of responsibility between state and local governments. As a significant transfer of funds did not accompany this higher level of fiscal decentralisation, several district governments had difficulties in providing adequate public services (Rao and Singh 2003) in sharp contrast to the 1980s reforms in China.

Beginning in 1991, economic reforms abolished many central regulations regarding licensing, locational control and trade. Procedural simplification and a change in location policy followed. Factories could be established beyond twenty-five kilometres of major cities. Sinha (2005) argues that these changes in the regulatory framework unintentionally contributed to decentralisation as a dual process unfolded. For example, the abolition of

central regulations made the pre-existing state-level regulatory machinery more salient and overt for investors, and re-regulation of liberalisation by many state-level officials enhanced provincial roles in investment policy. This process, despite relative fiscal centralism compared to China, generated moderate to high growth in the 1990s and reforms have become self-sustaining since then.

The acceleration of growth rates after 1994 is not consistent with the predictions generated by the fiscal or market preserving theories. Yet, most puzzling for arguments about economic federalism, a market-federalist system is emerging despite the disproportionate fiscal power of the central state. These puzzling developments can be explained by looking at changes in India's federal system after 1989 which showed that India can no longer be coded as an anti-MPF case. After 1991, regional states exercised 'primary authority' over industrial and economic policies within their jurisdictions (condition 2 of MPF). The states play an increasing role in bargaining with international actors with respect to attracting foreign direct investment and in pursuing global integration (as do the Chinese provinces). The states establish tax rates for foreign investment firms and establish overall rules. This enhancement of regional autonomy has accompanied the introduction of partial hard budget measures (condition 4 of MPF). The 1997-1998 central budget made it more difficult for the central government to borrow from the central bank, ensuring some degree of central bank independence. Indeed, the Reserve Bank of India had refused to bankroll the states' deficits so as to impose a hard budget constraint on the states (McCarten 2003; Rao 2000).

Sinha (2005), however, argues that such increasing fiscal protections by themselves are not sufficient to sustain economic reforms. In India, the practice of imposing president's rule (Article 356) to suspend or expel a state government, gives unprecedented power to the central government. Yet, with changes in the larger political context, the imposition of president's rule has become difficult.<sup>43</sup> In 1994, the Supreme Court ruled against the misuse of Article 356 and held that any proclamation under it is subject to judicial review. Thus, this ruling transforms central-regional government relations significantly by giving the federal compact a new institutional force and states greater immunity from a hostile central

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<sup>43</sup> As happened in Bihar, Tamil Nadu, West Bengal and Uttar Pradesh confirm this conclusion. Since June 1998, soon after the BJP government took office in New Delhi the head of AIADMK party and a coalition partner in the BJP-led government, urged the central government to dismiss the government of the regional party DMK in the state of Tamil Nadu (Sinha 2005).

government. This is in contrast to China where subprovincial governments have much greater responsibility, and as Singh (2009) emphasises, the implementation of economic decentralisation in China required the existence of a party hierarchy that stretched down effectively to the local level. Bureaucratic hierarchies in India did not serve this role, although they could perhaps have done so if central authorities, as in China, had made local economic success a benchmark for bureaucratic career advancement (Qian, Roland, and Xu, 1999).

In both countries, the greatest problems arise at the local level, with lack of adequate tax bases for expenditure responsibilities assigned either by law (India) or through politico-bureaucratic decisions (China). This leads to the presence of soft budget constraints, especially at the local level for China, and at the state level for India. Thus, both countries may benefit from similar reforms to achieve more efficient decentralisation to the local level—greater sources of own revenue, transfers that do not distort incentives, and budget constraints that are firmer and subject to market discipline (ADB 2005; Qian 1999).

With specific regard to India's status on the MPF criteria, condition F2 can be marked as 'fail' because of the dominant role of the central government in economic planning, regulation, taxation and redistribution. The central government does not work to promote competition among the states, resulting in no policy experimentation and innovation among the states. As a result, the interventionist national policies of central government overwhelmed the states, reduced their economic efficiency and crippled the Indian economy. This violation of F2 also has a flow-on effect on India's failure to meet criteria F3 and F4. This shows that the MPF theory will be successful if the decentralised government follows all the conditions are provided as one package. Indeed, after the early 1990s local government reforms, India seems to only satisfy the last condition for MPF, namely, institutionalised allocation of political authority, more closely than China.

This review of federal systems and their economic repercussions in India and China lead us to agree with Sinha (2005) that the characterisation of India as a centralised federation and of China as a market preserving federal case arises as a result of an undue focus on administrative and fiscal dimensions. Four of the five conditions outlined by the MPF theory relate to economic or fiscal matters. However, federalism's impact on the success of economic reforms in both countries is mediated by political institutions and political relations. Hence, the MPF theory fails to analyse the effects of significant changes in the fiscal features of both India and China. In the post-liberalisation phase (starting in 1991 in

India), decentralisation in economic dimensions is evident. In 1994, China's national government moved towards fiscal recentralisation in an attempt to enhance its diminishing taxing and fiscal capacity. Despite these fiscal changes, economic reforms continue to be self-enforcing and have generated moderate to high economic growth in the two countries. Although there is a well-defined hierarchy of governments, both countries lack full internal common markets and demonstrate soft budget constraints at the local government level. Despite these challenges, India has still managed to improve its economic performance since the late 1990s around the same period when China experienced similar rapid growth. Clearly, an explanation centered on the fiscal attributes of the system is insufficient.

### **3.7 Implications for Malaysia**

MPF is not perfect, and its requirements have not fully been met by many countries. Nevertheless, MPF yields some highly desirable principles of fiscal decentralisation on a sustainable basis. For example, the real crux of decentralisation is distributing the decision-making process to different levels of government. Basically, all federal systems decentralise political authority, though not all forms of decentralisation constitute federal systems. In general, federalism and decentralisation comprise a wide range of different political, legal constitutional and economic systems. These different institutional arrangements affect the performance of their local governments (Weingast 2009, 2006). Litvack, Ahmad and Bird (1998) observe that decentralisation is neither good nor bad for efficiency equity or macroeconomic stability, but rather its effects depend on institution-specific design (Weingast 2006). And MPF is put forth by these theorists as the strongest contender for a viable and stable model of fiscal federalism.

The paradigm shift in theories of federalism brought about by MPF is relevant to Malaysia as it holds considerable promise as an institutional framework to achieve and sustain long-term growth by focusing on the provision of a secure political foundation for fostering markets and commerce. With its focus on fostering markets and curtailing arbitrary government control, MPF is clearly aligned with the current politico-economic agenda in Malaysia. MPF provides a suitable theoretical framework to understand the market-oriented approach adopted in the NEM with its goal of transforming Malaysia into a developed economy.

The most important characteristic of MPF is that subnational governments should be fiscally autonomous and able to compete with each other and this condition can only be fulfilled if the subnational governments are sufficiently and equally equipped with fiscal resources

(Braun 2006). There is a severe situation of fiscal centralisation in Malaysia and tax competition among the states remains relatively low simply because they have limited revenue powers. This situation has deepened inefficiencies in governance as jurisdictional competition cannot serve as a disciplinary device to punish any inappropriate market intervention by state government officials. It is necessary for the states to have a guaranteed level of revenue to stem any type of opportunistic behaviour by the federal government and promote internal competition between the states. Subnational and urban governments are more likely to provide market enhancing public goods when they capture a large portion of the increased tax revenue generated by greater economic activity. This SGFF idea prompts us to focus on the importance of incentives generated by local taxation generation or fiscal decentralisation for fostering local economic prosperity.

In the MPF literature, efficiency consideration is the key to the achievement of long term growth. However, this argument needs to be validated from the context of fiscal centralisation, particularly expenditure efficiency across state governments. In respect to fiscal decentralisation especially for expenditure dimension, all these positive impacts may not materialise if no efforts are made in controlling the spending behaviour of subnational governments. This study then tries to relate the financial difficulties currently faced by the state governments to their behaviour in respect with the intergovernmental grants particularly from the aspect of fiscal responsibility and accountability. The question will be to ascertain the extent to which the current fiscal system in Malaysia is capable of providing the right incentives to state officials to meet the needs of their local constituencies while observing proper fiscal discipline without exceeding their spending capacity.

Despite being a centralised federalism system with characteristics that are far from being consistent with the requirements of MPF, Malaysia has been able to maintain its status as an upper-middle income country. This contradicts the argument put forth in the theoretical literature on MPF that federal systems that only satisfy a few or none of the conditions typically have much poorer economic performance. Past studies have used the argument of economies of scope to justify the system of fiscal centralisation for the economic progress achieved by Malaysia (Rosly 2006). However, Malaysia has been languishing in the middle income trap for the last three decades, which has caused much concern in the government and led to the launch of the New Economic Model (NEM) with the objective to achieve and sustain long-term economic growth.

The MPF literature also advocates hard budget constraints to improve state fiscal management to reduce the burden on the federal government resulting from the subnational governments' deficits. Even though the level of dependency of the state governments in Malaysia on federal transfers is relatively low as it stood at less than 30% of state governments' revenue (Jalil 2008), this does not mean that the country is free from problems usually associated with countries that are highly dependent on federal transfers. In order to achieve and sustain long term economic growth, the effectiveness of decentralisation must be followed by hard budget constraints and these conditions need to be examined in the context of Malaysia.

The MPF literature provides a good framework to further understand intergovernmental relations from broader aspects such as political incentives, corruption, soft budget constraints and so on. Given the normative nature of the model, the MPF can also be interpreted to devise prescriptive models that are relevant to the Malaysian context. Also, the perspicacity of MPF in analysing the functioning of federalism and its comparative approach has been recognised. In the Malaysian context, this will help to understand the practical obstacles in the implementation of fiscal federalism and also address issues of corruption with the fiscal federalism system in Malaysia to mitigate the widespread rent-seeking behaviour and political corruption in the system. The literature review provides sufficient evidence of the noteworthy reasons to examine the performance of the centralised fiscal federalism system in Malaysia. Therefore, this study uses MPF as a template for evaluating Malaysia particularly in terms of the effect on fiscal decentralisation on the regional economic performance. To the best of our knowledge, our work is the first attempt at analysing fiscal federalism in Malaysia using SGFF ideas of MPF and fiscal incentives. There are three previous studies on fiscal federalism by Noh (1991), Bakar (2004) and Jalil (2008) examining the intergovernmental transfers and fiscal behaviour of Malaysian states in the literature. The scope of this study was structured to evaluate the same issues but through the theoretical lens of MPF. Thus, both conceptually and fundamentally (or methodologically), the current investigation differs from the earlier works.

While we argue for the need to interrogate the applicability of MPF in Malaysia, we also understand that this theory is not without flaws and that the equalisation aspect, in particular, may suffer from the revenue raising system suggested by MPF. The application of MPF may mean that some less developed provinces/states with no tax capacity will fall behind and the horizontal imbalance may be worsened. Many scholars have focused on



equity consideration in developing countries, and this perspective was also emphasised by Noh (1991) in her comprehensive study on fiscal federalism in Malaysia in 1970s and 1980s. However, as the unquestioned adherence to the equity principle was criticised earlier in the literature, research over the years has shown evidence that fiscal transfers based on equalisation principles actually demonstrate poor responsiveness to localities to correct vertical and horizontal imbalances (Singh and Srinivasan 2006). Therefore, fiscal transfer systems in Malaysia need rethinking from a fiscal incentives perspective so that it is able to address equalisation while providing state officials with fiscal incentives.

## **CHAPTER 4**

### **MALAYSIA'S PUBLIC FINANCES: ISSUES IN GOVERNMENT EXPENDITURE, REVENUE AND BORROWING**

#### **4.1 Chapter Aims and Description**

Given the current discussion over the issue of reform in fiscal federalism, the purpose of this chapter is to present a critical review of the federal system in Malaysia by raising concerns about the potential efficiency losses resulting from centralisation in the system. The chapter begins with an overview of the federal system in Malaysia, including the assignment of fiscal functions between different levels of government and the structure of intergovernmental fiscal relations. This is followed by two main sections detailing financial statistics for government expenditure, revenue and deficit for the federal and state governments respectively for two decades from 1990-2009. Next, the chapter briefly describes federal/state financial relations, focusing specifically on the existence of the highly centralised structure of the fiscal system in Malaysia. The chapter ends with a brief conclusion reiterating the deficiencies in the current institutional setup of fiscal federalism in Malaysia, and how it inhibits the aims of fiscal decentralisation. By establishing the grounds for deleterious effects of centralisation, this discussion prepares the ground for a better appreciation of the potential contribution of market preserving federalism (MPF) to reflect on the ways in which MPF recommendations can be implemented in Malaysia.

#### **4.2 Malaysia: Federal System**

By many standards, Malaysia as a nation has a highly centralised governance structure. Although the country is constitutionally established as a federation, Malaysia has a more centralised government compared to other federal systems, even those in the developing countries. Historically, the theme of the establishment of a strong central government had been stated in the Federal Agreement since the establishment of the Federation of Malaya (Bakar 2004).<sup>44</sup> Malaysia is a federation with three levels of governments: federal, state and

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<sup>44</sup> With this agreement, a truly federal system of government became a reality after the first federal idea in 1895 and the Malayan Union in 1946. However, it did not guarantee the autonomy of the states as the federal government had complete legislative powers, except in matter related to Islam and Malay custom (Bakar 2004).

local. The Constitution establishes the intergovernmental assignment of public responsibilities by specifying the area of federal, state and joint responsibility for expenditure and taxation. The distribution of financial burdens or commitments to expenditure is stated in Article 82 of the Federal Constitution. State governments are in charge of fewer revenue and expenditure responsibilities and most revenue and expenditure assignments are controlled by the federal government. State governments have very limited participation in delivering functions, even in important sectors such as education, health and infrastructure.

The concentration of authority at the federal level is the result of two features of the Malaysian institutional setting—first, the historical origins of Malaysian federalism; and second, the dominance of a single political alliance, the National Front Party (Barisan Nasional or BN), which has formed the federal government for 57 years and facilitated a stronger centralised federalism. In such a situation, the assignments of sources of revenue and expenditure have favoured the federal government and have allowed it to intervene in functions that would be more efficiently provided by state governments. The centralisation of authority in the hands of the central government, even for provision of local services like education, health and infrastructure, raises questions about the efficiency of outcomes. It has been made sufficiently clear in the relevant literature that decentralisation of governance can deliver greater allocative efficiency, because local governments are closer to the electorate and are better placed for meeting the heterogeneous preferences of its constituencies for many public goods and services (Oates 1999a, 1972). Indeed, state governments will have comparatively lesser productive/technical inefficiencies from the cost of producing goods and services as they are closer to the population, while central governments will also have to spend on information-gathering and administration (Linder 2002). This situation has prompted many scholars, such as Shah (1999), Prud'homme (1996) and Linder (2002), to investigate why the federal government does not transfer some of the functions to state governments, which are often able to provide better service and operate at a lower cost in many situations.

In order to inspect the potential for decentralisation in Malaysia from the perspective of MPF, it is important to have a closer look at the degree of centralisation in the Malaysian federal system. A proper assessment can help to compare the actual assignment of functions in Malaysia with the normative distribution proposed in MPF in Chapter 3, and determine which functions are better transferred from federal to local governments to

capitalise on benefits of decentralisation. The current division of functions between different levels of government in Malaysia is presented in Table 4.1.

<b>Table 4.1 Distribution of functional expenditure responsibilities by levels of government</b>	
<ul style="list-style-type: none"> <li>Federal</li> <li>* External affairs</li> <li>* Defence</li> <li>* Internal Security</li> <li>* Civil and criminal law and administration of justice</li> <li>* Federal citizenship and naturalisation; aliens</li> <li>* Federal government machinery</li> <li>* Finance</li> <li>* Trade, commerce and industry</li> <li>* Shipping, navigation and Fishery</li> <li>* Communication and transport</li> <li>* Federal works and power</li> <li>* Survey, inquiries and research purposes</li> <li>* Education</li> <li>* Medicine and Health</li> <li>* Labour and social security</li> <li>* Welfare of Aborigines</li> <li>* Professional Licensing</li> <li>* Federal Holidays, standard of time</li> <li>* Unincorporated societies</li> <li>* Agricultural Pest Control</li> <li>* Publications</li> <li>* Censorship</li> <li>* Theatres and Cinemas</li> <li>* Co-operatives societies</li> <li>* Prevention and extinguishment of fires</li> </ul>	<ul style="list-style-type: none"> <li>State</li> <li>* Muslim Laws</li> <li>* Land</li> <li>* Agriculture and Forestry</li> <li>* Local government</li> <li>* Local public services; boarding houses, burial grounds, pounds and cattle trespass markets and fairs, licensing of theatres and Cinemas</li> <li>* State works and water</li> <li>* State government machinery</li> <li>* State holidays</li> <li>* Inquiries for state</li> <li>* Creation of offences and indemnities related to state matters</li> <li>* Turtles and riverine fishery.</li> </ul>
<ul style="list-style-type: none"> <li>Shared Functions</li> <li>* Social Welfare</li> <li>* Scholarship</li> <li>* Protection of wild animals and birds, national parks</li> <li>* Animal husbandry</li> <li>* Town and country planning</li> <li>* Vagrancy and itinerant hawkers</li> <li>* Public health</li> <li>* Drainage and irrigation</li> <li>* Rehabilitation of mining land and eroded land</li> <li>* Fire safety measures</li> <li>* Culture and sports, housing</li> </ul>	<ul style="list-style-type: none"> <li>Supplementary List for Sabah and Sarawak</li> <li>* Native Law and custom</li> <li>* Incorporation of state authorities and other bodies</li> <li>* Ports and harbours other than those declared land</li> <li>* Cadastral land surveys</li> <li>* In Sabah, the Sabah Railway</li> </ul>
	<ul style="list-style-type: none"> <li>Additional Shared Functions for Sabah and Sarawak</li> <li>* Personal Law</li> <li>* Adulteration of foodstuff and other goods</li> <li>* Shipping under fifteen tons</li> <li>* Water power</li> <li>* Agricultural and forest research</li> <li>* Charities and charitable trusts</li> <li>* Theatres, cinemas and other places of amusement</li> </ul>

Source: Government of Malaysia, Constitution of Malaysia, Ninth Schedule.

It is evident from Table 4.1 that national public goods like defence and foreign affairs are appropriately assigned to the federal government along with functions that have

macroeconomic and distributional implications, such as monetary policy and income taxes. Since the services provided by the levels of government have a strong impact on people's living standards, Musgrave has argued that the distributive function should be a federal responsibility. Interference in the activities of other levels of government comes mainly through the programs under the New Economic Policy (NEP) which have the redistributive objective. A few public services, such as water, power and drainage and irrigation, are jointly administered by two or more levels of government. State governments perform some public functions that are specifically designed for them, such as land, forests and religious affairs, while local governments under the state government have exclusive responsibility in cleaning and beautification of towns, streets, parks, cemeteries, public markets etc. The Constitution also explicitly states the shared functions like social welfare, scholarship, town and country planning, for example, state governments provide scholarships to students from their respective states (Nambiar 2007).

The Ninth Schedule of the Constitution delineates functions between local, state and federal jurisdictions. It is evident in this schedule that the federal government controls a wide array of exclusive powers and only residual matters are under state responsibility. In addition to the sharing of functions being heavily skewed towards the federal government, the federal law is normally given the authority to override the state law in case of any inconsistencies. Though the Ninth Schedule has clearly assigned the functions delegated at the state level, these are couched as shared responsibilities and with regard to these areas, the federal law can supersede state authority. This diminishes the clarity of jurisdictional boundaries and the freedom of the state to act, thus limiting the performance of state governments. As a result, the states always play a secondary role in every function since the federal government can always intervene in these shared functions.

Since the functional structure is highly centralised, this has a bearing on the access to expenditure with the federal government dominating the expenditure budget. Conversely, the expenditure data from different levels of government in Malaysia allows us to make some broad inferences about the functions covered by each level of government. Table 4.2 shows the large participation of the federal level in infrastructures expenditures compared to the other developing countries which shows that the Malaysian federal level is intervening in spheres of state responsibilities. To make matters worse, the privatisation policies adopted by the federal government since 1983 are justified for the sake of efficiency, and functions that are constitutionally assigned to the states, such as water

supply, sewerage and refuse disposal, have now been privatised (Bakar 2004). Apart from privatisation policies, centripetal forces are also strong through federal sponsored projects in the states, such as in land-related development projects. Clearly, the importance of the state fiscal functions has gradually declined, leaving the states with functions of secondary importance, such as maintenance of federal projects.

The assignment of functions in Malaysia deviates significantly from the prescribed norms of fiscal federalism (Shah 1994). The matrix comparing distribution of functions across federal/state/local governments in different countries shows the extent of power of the federal government in Malaysia, arguably, making it the most centralised government (see Table 4.2 below).

<b>Table 4.2: Expenditure assignment for local functions in the developing countries</b>					
<b>Country</b>	<b>Industry &amp; Agriculture</b>	<b>Education</b>	<b>Health</b>	<b>Social Welfare</b>	<b>Police</b>
Argentina	F,S, L	F, S, L	F, S, L	F,S	F,S
Bangladesh*	L	L	L	L	L
Bolivia*		F, L	F, L	F, L	
Brazil	F, S	F, S, L	F, S, L	F, S, L	F, S
Bulgaria		F, L	F, L	F, S, L	F, L
China*	F,S, L	F, S, L	S, L		
India	F,S	F, S, L	S, L	F, S	S
Indonesia*	F,S, L	F, S, L	F, S, L	S, L	L
Malaysia	F,S	F	F, S	F, S	F
Mexico	F	F, S	F, S	F	S, L
Nigeria	F,S	F, S	S, L		F
Pakistan	F,S, L	F, S, L	S, L	F, S, L	L
Philippines*	F	S, L	F	S, L	S, L
Russia	F,S, L	F, S, L	F, S, L	S, L	F, S, L
Thailand*	F	L	L	F	L

Note: \* These countries are not formal federations.

Source: Shah (1994) and Shah and Shah (2006).

F stands for federal level, S for state and L for local level

The table shows that the federal government completely dominates the two sectors of education and police, and the state governments share some responsibility in industry/agriculture, health and social welfare, but there is no autonomous jurisdiction for state governments and no role for local governments. Police and also fire protection are

exclusively federal responsibility despite the fact that theoretically these services have relatively few benefit spillovers beyond local jurisdictions. In contrast, police sector is shared between the federal and lower governments in Argentina, Bulgaria and Brazil, or completely delegated to state governments in India, Philippines, Indonesia and also in the USA and Canada (Shah 1994). As education has relatively significant spillover benefits beyond state boundaries, it is assigned exclusively to the federal government in Malaysia. Further, since 1977, the federal government has also paid for the salaries of all religious school teachers whereas religion is a very important state function. However, in all other countries in this table, education is predominantly shared between all levels of government or completely allocated to state/local government as in Thailand, Philippines and Bangladesh. Even in developed countries like Australia and the USA, the two main functions of education and health services are shared by state/federal governments. Housing, agriculture and rural development, works, transport, trade and industry in Malaysia are placed as a shared function between state and federal government (Noh 1991), but there is no role for local governments in these areas.

Given this situation, a few scholars have recommended that some functions, such as education, health care and transportation are intrinsically more appropriate for decentralisation (Jalil 2008; Nambiar 2007). The excessive influence of federal government could potentially deteriorate the accountability and budget flexibility of the state governments as well as create a conflict between the federal government and state government. If the state functions lead to conflicting national policies, then the federal government should play a coordination role. But excessive control of the federal government in all areas of service provision will only propagate long time lags, bureaucratic inefficiencies and ineffectiveness in serving local needs. Coming to Malaysia's record on the front of revenue assignment, Malaysia along with South Africa and Australia have been characterised as having highly centralised taxing powers (tax base and rate, determination and tax collection) controlling 75% or more central revenues (Shah 2007). The high degree of centralised revenue-raising powers within the federal government is expected, given the dominance of federal government in the distribution of government functions. The current major sources of federal government revenue are identified in Table 4.3.

**Table 4.3: Malaysia: Summary of federal and state government revenue sources**

<b>FEDERAL</b>	<b>STATE</b>
<b>Tax Revenue</b> <b>1. Direct Taxes</b>  i) Income Tax Individuals Companies Corporations Petroleum Tax Development Tax ii) Tax on property and Capitalization Gains Real property gain tax Estate duty <b>2. Indirect Taxes</b> i) Taxes on International Trade Export Duties; Palm Oil, Petroleum Import Duties Tobacco, Cigar and Cigarettes Petroleum, motor vehicles, surtax on imports ii) Taxes on Production and Consumption Excise Duties; Heavy fuel Oils Petroleum, Spirits, Motor vehicles Sales Tax Service Tax iii) Others; Stamp Duties Gaming Tax Betting and Sweepstakes Lotteries Casino Pool Betting Duty <b>Non-Tax Revenue and Non Tax Receipts</b> 1. Road Tax 2. Licences 3. Service Fees 4. Fines and Forfeitures 5. Contribution from Foreign Government and international Agencies 6. Refund of Expenditures 7. Receipts from Other Government Agencies 8. Royalties	<b>Tax Revenue</b> 1. Export Duties on Timber & other forest products for Sabah & Sarawak Excise Duty. 2. Forests 3. Lands & Mines 4. Entertainment duties  <b>Non-Tax Revenue and Non-Revenue Receipts</b> 1. Licenses and Permits 2. Royalties 3. Service Fees 4. Commercial undertakings, Waters, Gas, Port Harbors 5. Receipts from Land Sales 6. Rents as State Property 7. Zakat Fitrah and Bait-ul-Mah is similar to Islamic religious revenue 8. Proceeds, Dividends and Interests 9. Federal Grants and Reimbursements.

Source: Government of Malaysia, Constitution of Malaysia, Ninth Schedule.

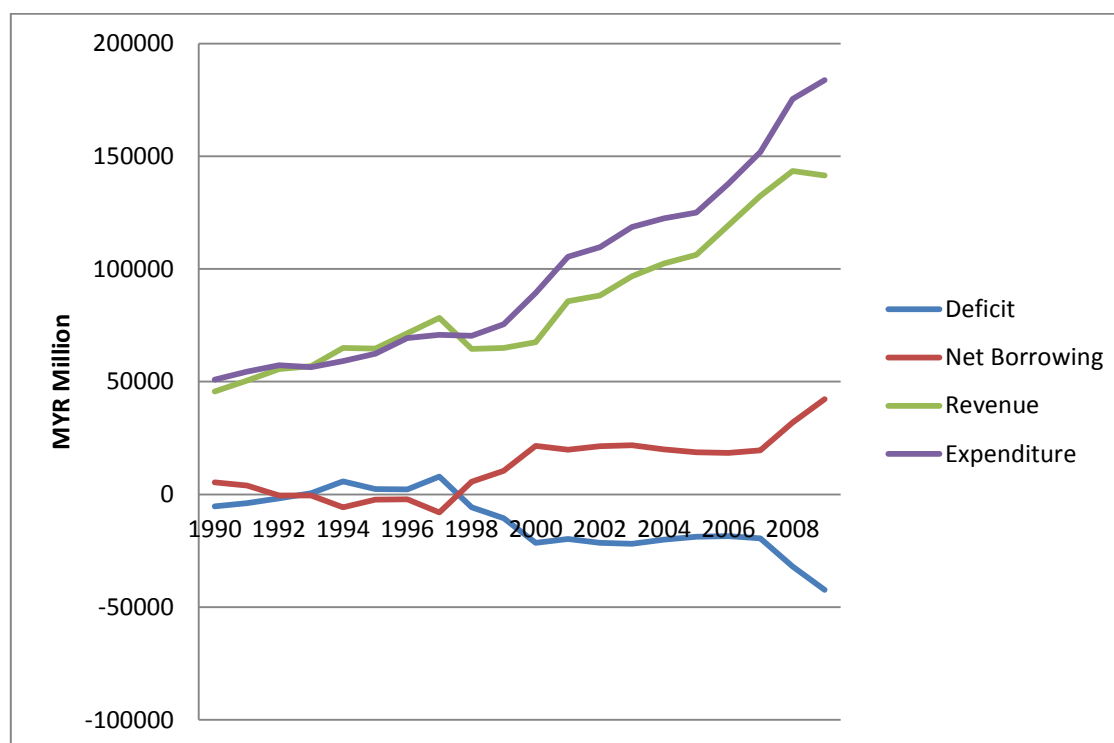


The table shows that the broadest and richest tax bases of the country are exploited by the federal level. The federal government has exclusive access to income taxes, taxes on property and capital gain, consumption taxes, taxes on natural resources taxes on foreign trade and the important licenses, fees and charges. Under the Malaysian Constitution, taxes can only be levied under the federal law. The federal government has exclusive powers to levy and collect all taxes and other forms of revenue except for few minor sources which are assigned to the states.

### 4.3 Federal Government Finances

After explaining the structure of federal system in Malaysia, in the distribution of inter-governmental functions, the discussion now turns to the ramifications of this arrangement on the actual functioning of federal/state finances in Malaysia. This section reviews the details of federal government finance in Malaysia for expenditure, revenue and fiscal balance from 1990 to 2009. Figure 4.1 and Table 4.4 present the data on federal government finances for the period of twenty years from 1990 to 2009.

**Figure 4.1 Federal government finance, 1990-2009 (MYR Million)**



Source: Ministry of Finance, Economic Report (various issues).

### **4.3.1 Federal Government Expenditure**

The most significant feature is the rapid growth in federal expenditures over revenues by a substantial amount particularly during 1990-2009, which contributes to the high deficits and borrowings from 1998 to 2009, especially in 2008 and 2009. Table 4.4 shows total operating and development expenditures expanded by three times in real terms since 1990, accelerating from MYR 50,931 million in 1990 to MYR 1,838,321 million in 2009.

The average annual growth rate was 7% for the entire period, 4% between 1990 and 1995, 7.6% between 1996 and 2000, 7.6% between 2001 and 2005, and 10.2% for the next four years. Federal government operating expenditure rose rapidly from MYR 38,673 million in 1990 to MYR 140,113 million in 2009, by about 262% in real terms. The amount accounted for 76% of the total expenditure of the federal government in 2009 similar to 1990 and an average of 74% per annum throughout the twenty years. In the 1990s, a higher budget allocation was given to the special maintenance programme to ensure quality, efficient and better public services facilities would be maintained. For example, the expenditure for supplies and services and emoluments were significantly higher at 21.6% compared with 12% in 1993 (Economic Report 1994/1995). This operating expenditure continued to increase in the early 2000s to sustain domestic demand through higher public sector consumption. There was a 10% salary adjustment for civil servants, extension of pension age from 55 to 56 years and increase in overtime allowances for doctors as well as gratuities and grants for armed forces and police personnel. More importantly, during this period, outlays on supplies and services continued to rise largely on account of increased activities in repair and maintenance to improve and upgrade the delivery of public services (Economic Report 2005/2006). Federal development expenditure (net development expenditure) increased substantially from MYR 12,258 million in 1990 to MYR 43,707 in 2009, which was almost a fourfold increase in real terms. The bulk of the development expenditure was channelled to economic and social sectors, particularly to provide public amenities, improve public transportation and reduce regional disparities. Other infrastructure projects such as road bridges and water supply in the rural areas were also built to support and revitalise the agricultural sector, which has been identified as the third engine of growth in eradicating rural poverty. Following the previous trends, the development expenditure in 2009 mainly came from economic services, which accounted for the largest allocation of 52%, followed by social services (35.4%), security (8.5%) and general administration (4.1%) (Economic Report 2009/2010).

<b>Table 4.4: Federal government finances, 1990- 2009 (MYR million, 2005=100)</b>																				
	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Revenue	45620	50478	55541	56927	64995	64716	71523	78293	64583	64989	67494	85609	88290	96777	102400	106304	119253	132342	143441	141516
Operating Expenditure	38673	41944	45388	43991	46090	46451	53832	53490	50775	51724	61693	68599	72627	78611	94057	97744	103952	116447	137791	140113
Current Surplus/ Deficit	6946	8534	10153	12936	18905	18265	17690	25234	13808	13265	5801	17011	15663	18167	8344	8561	15301	15895	5650	1403
Total Expenditure	50931	54391	57299	56444	59201	62352	69295	70789	70281	75497	89297	105430	109701	118647	122406	125028	137698	151886	175393	183821
Development Account																				
Gross Development Expenditure	16518	14179	13709	13824	14823	17846	17952	18862	20616	25049	30484	37911	38034	41125	29736	30534	34563	38377	38462	44170
Less: Loan Recoveries	4261	1731	1797	1371	1713	1944	2489	1563	1110	1276	3174	1079	960	1088	1387	3250	817	2938	861	463
Net Development Expenditure	12258	12447	11912	12453	13110	15901	15463	17299	19506	23773	27605	36832	37074	40037	28350	27284	33746	35439	37602	43707
Overall Surplus/Deficit	-5311	-3913	-1759	483	5794	2364	2227	7935	-5698	-10508	-21509	-19821	-21411	-21870	-20006	-18724	-18445	-19544	-31952	-42305
Sources of Financing																				
Net Domestic Borrowing	5861	4680	2093	512	2302	0	1584	-2453	12573	6007	13871	14397	6423	24297	26425	12700	17133	24409	-425	-5607
Net Foreign Borrowing	-1185	175	-4486	-4279	-6253	-2077	-2672	-2013	2073	3238	943	6772	8479	-3829	125	-3503	-2948	-4081	32005	50740
Change in Assets	635	-941	4152	3284	-1843	-287	-1140	-3469	-8948	1264	6695	-1348	6509	1402	-6544	9527	4260	-783	372	-2827
Total Financing	5311	3913	-501	-483	-5794	-2364	-2227	-7935	5698	10508	21509	19821	21411	21870	20006	18724	18445	19544	31952	42305

Source: Ministry of Finance, Economic Report (various issues).

The relative importance of the expenditure to the Malaysian economy can be further analysed through annual changes in the share of GDP illustrated in Table 4.5. The annual percentage changes ranged from -1.5% to 18.5 %, but in general this fluctuation in percentage was marked by an upward trend for three years then dropping down again. For example, the federal government expenditure achieved almost 10%-15% growth in the years between 2006 and 2008 but immediately dropped to 4.8% in 2009 due to global financial crisis.

<b>Table 4.5: Federal government expenditure,1990-2009 (2005=100)</b>			
<b>Year</b>	<b>Expenditure MYR Million</b>	<b>Annual Change %</b>	<b>Expenditure/GDP %</b>
1990	50931	-	27.7
1991	54391	6.8	27.2
1992	57299	5.4	26.9
1993	56444	-1.5	24.0
1994	59201	4.9	23.0
1995	62352	5.3	22.1
1996	69295	11.1	22.3
1997	70789	2.2	21.0
1998	70279	-0.7	21.8
1999	75496	7.4	22.7
2000	89003	17.9	22.9
2001	105430	18.5	27.8
2002	109701	4.1	27.1
2003	118647	8.2	27.1
2004	122406	3.2	25.1
2005	125028	2.1	23.9
2006	137697	10.1	24.8
2007	151886	10.3	25.0
2008	175393	15.5	26.4
2009	183821	4.8	30.3

Source: Ministry of Finance, Economic Report (various issues).

The share of federal expenditure in GDP has also fluctuated widely, falling from about 28% in 1990 to as low as 21% in 1997, then increasing to almost 28% in 2001, followed by sharp reductions in 2004 (25.1%) and 2005 (23.9%), and a sharp increase to 30.3% in 2009. This high volatility in federal expenditure to GDP ratio over the years indicates that the federal government had taken several policy measures to face domestic and global economic challenges. For example, during the 1990s before the Asian financial crisis, there were reductions in the public expenditure that resulted from the implementation of privatisation policy

of the 1980s. The private sector became the engine of growth, and public expenditure was reduced from 27.7% in 1990 to 21-22% in 1997 and 1998 respectively. In the years immediately after the crisis (1999-2001), the Malaysian economy fell into its deepest recession and the federal government embarked on an expansionary fiscal policy to stimulate economic activity. As the external environment further deteriorated with the US-led invasion on Iraq and the outbreak of the severe acute respiratory syndrome (SARS) in 2003, the government undertook further fiscal stimulus packages to resuscitate the economy. As the global recession deepened after the global financial crisis of 2008-2009, two further fiscal stimulus packages were introduced.

#### **4.3.2 Federal Revenue Assignment**

Direct and indirect taxes are the main sources of revenue for the federal government. All these taxes are collected by two agencies under the Ministry of Finance—the Inland Revenue Board (IRB) and the Royal Malaysian Customs (RMC). Table 4.6 and 4.7 (see page 115 & 116) shows how the federal government's revenue had more than a threefold increase during the period under study. The revenue rose steadily from MYR 45,620 million in 1990 to around MYR 78,293 million in 1997 before declining to MYR 64,583 million in 1998 as a result of the Asian financial crisis. After 2001, the revenue increased almost twofold from MYR 88,290 million in 2002 to MYR 141,516 million in 2009.

Prior to 1990, the contribution of indirect taxes to federal revenue was greater than direct taxes in absolute and relative terms. However, the situation changed after the 1990s, with direct taxes taking the lead (Bardai 1993). The shift in relative importance from indirect to direct taxes was due to the decline in trade taxes and rapid increase in direct tax revenue from income taxes which comprised individual, company and petroleum income tax. Other factors contributing to the increase in income tax revenue included greater economic growth which broadens the income tax base and substantial increase in petroleum income tax collections (Noh 1991). Indirect taxes or taxes on international trade, taxes in the production of goods and services, consumption taxes and the more lucrative user-charges constituted the balance 23% of total tax revenue (on average).

All income tax revenues fluctuated during the period of analysis. Table 4.6 shows that the percentage of revenue collected from company income tax to total revenue increased but more pronounced from 15.2% in 1990 to 30.5% in 1998 and slowly declined to 19% in 2009. The average share in the 1990s was 22% compared to 24.3% in the 2000s. The revenue from personal income tax increased from MYR 3,873 million in 1990 and increased steadily to MYR

10,454 million in 2002 before it fluctuated on a declining trend and then reached MYR 13,907 in 2009, leading to a fourfold expansion since 1990 (Economic Report, various issues). The lower income tax collection at the end of the 2000s was attributed to the weak economic activities. The share of revenues from the company income taxes also increased in absolute terms from MYR 6,949 million (15.2%) in 1990 to MYR 26,940 million (19.2%) in 2009. It expanded about four times on an upward trend *albeit* at fluctuating rate in the 1990s and 2000s. In the early 1990s the government continued to improve its tax structure leading to the introduction of a number of tax measures in 1998 with higher tax reliefs and more incentives. The corporate investment tax rate was further reduced from 34% in 1993 to 32% in 1994 making it more competitive relative to its neighbouring countries.

The relatively poor performance in the 1990s was attributed to a combination of factors namely; the depressing effects of international economic recession on the economy as well as Asian financial crisis. In the 2000s, the GDP growth was improving but at a slower rate, owing to various tax incentives and exemptions given over the years to stimulate business activity as well as the reduction in corporate tax from 26% in 2008 to 25% in 2009. Most categories of tax revenue increased especially with greater contribution from direct taxes, particularly, corporate taxes. Furthermore, with prices for crude oil rising from an average of USD 42 in 2004 to USD 57 per barrel in 2006, all oil-related revenue and dividend also saw a significant increase. There was a dramatic rise in revenue from petroleum income tax, doubling from only MYR 4,086 million in 1990 to MYR 10,607 million in 2001 and fluctuated at an increasing pattern to MYR 24,292 million in 2009 (Economic Report, various issues). From Table 4.6, the share of petroleum income tax in total revenue decreased from 11.9% in 1991 to as low as 3.8% in 1996 before slowly increasing to 37% in 2009.

In 2008, the global financial crisis weakened the external sector and made the business community cautious and risk-averse. At this time, intervention by the government was crucial to support the local economic activities; hence two stimulus packages were announced in December 2008 and March 2009 for an expansionary fiscal stance. There was a fall in tax revenue in 2009 reflecting slower private investment and consumption activities as well as lower profitability of businesses. Revenue from indirect taxes depended heavily on export, import including surtax, excise duties and sales taxes. Export and import duties together accounted for 14.2% of revenue in the 1990 then remained decreasing at 2.1% in 2009 (Table 4.6). Other indirect taxes such as consumption taxes are also important. Among the excise taxes, the tobacco consumption tax is currently assigned to the federal level and it seems to conform to

the prescription suggested by the theory. This implies that it is impossible for state governments to exploit these kinds of taxes to increase their tax revenue. Overall, most types of income tax revenue except for stamp duties are volatile, indicating that income taxes are lack stability in the revenue stream of the federal government.

Table 4.6 reveals that the contribution of non-tax revenue and non-revenue receipts is also significant to the federal government revenue which accounted for 22.5% of total federal revenue in the 1990s and 27% in the 2000s and quadrupled from MYR 10,734 million in 1990 to MYR 45,307 million in 2009 (Economic Report, various issues). Revenue from these sources largely comprises licences and permits, service fees, fines and forfeitures, rent, interest and return on investment, road tax, including from Federal Territory (Wilayah Persekutuan) and petroleum royalties and gas cash payments. The role of these non-tax revenues was quite significant in the 1990s especially the revenue generated from the divestment of public companies shares like Tenaga Nasional Berhad (Electricity Company), TELEKOM Malaysia Berhad (Telecommunication Company) and Heavy Industries Corporation of Malaysia (HICOM) (Economic Report 1994/93). This scenario is contrary to the early 2000s when non-tax revenues declined due to lower petroleum royalties and investment income as a result of insignificant production and lower prices of crude oil. Overall, the federal revenue structure had undergone substantial changes during the 1990-2009 and the federal government revenue grew at an average annual growth of 6%.

**Table 4.6: Major federal government revenue sources-percentage distribution, 1990-2009 (2005=100)**

Year	Direct Taxes								Indirect Taxes							Non-Tax Revenue					Non-Revenue Receipts
	Revenue	Tax Revenue	Company Income Tax	Individual Income Tax	Petroleum Income Tax	Stamp Duties	Others	TOTAL	Export Duties	Import Duties	Excise Duties	Sales Taxes	Service Taxes	Others	TOTAL	License & Permits	Petroleum Royalties	Interest On Income	Others	TOTAL	
1990	100.0	72.0	15.2	8.5	9.0	2.2	0.4	35.2	6.7	7.5	7.7	8.3	0.4	2.1	36.7	NA	2.1	NA	NA	23.5	4.5
1991	100.0	75.9	15.7	8.8	11.9	2.1	0.4	38.9	6.0	8.1	8.4	8.1	0.4	2.0	36.9	NA	2.6	NA	NA	21.9	2.3
1992	100.0	73.3	19.2	8.8	8.7	2.0	0.6	39.2	4.3	7.9	7.8	7.9	0.8	2.1	34.1	NA	2.0	NA	NA	24.5	2.2
1993	100.0	76.5	20.5	10.2	6.9	2.9	0.5	40.9	3.5	8.0	8.9	8.3	1.5	2.4	35.6	NA	1.8	NA	NA	22.2	1.2
1994	100.0	75.8	21.4	9.2	4.5	5.1	0.6	40.8	2.3	8.6	8.7	8.4	1.7	2.6	35.0	NA	1.3	NA	NA	22.9	1.3
1995	100.0	81.8	23.0	12.2	4.3	4.3	0.8	44.5	1.7	8.7	10.4	9.6	2.0	2.6	37.2	NA	1.4	NA	NA	16.6	1.6
1996	100.0	81.1	24.3	10.6	3.8	4.6	1.0	44.4	1.8	8.6	9.9	9.4	2.1	3.0	36.8	NA	1.5	NA	NA	17.7	1.2
1997	100.0	81.6	25.4	9.8	5.9	4.1	1.1	46.3	1.6	8.3	9.2	9.4	2.2	2.9	35.3	NA	1.5	NA	NA	17.4	1.0
1998	100.0	79.9	30.5	12.2	7.1	2.1	1.0	52.9	1.1	6.0	6.3	6.8	2.6	3.4	27.0	NA	1.9	NA	NA	19.2	0.9
1999	100.0	77.3	26.8	10.9	4.9	2.7	1.1	46.4	1.1	7.3	8.0	7.6	2.5	3.5	30.8	NA	1.7	NA	NA	21.6	1.1
2000	100.0	76.3	22.5	11.3	9.7	2.9	0.7	47.1	1.7	5.3	6.1	9.6	2.7	3.1	29.1	NA	2.8	NA	NA	22.8	1.0
2001	100.0	77.3	26.1	11.9	12.4	2.1	0.5	52.9	1.1	3.7	5.2	9.2	2.4	2.4	24.4	NA	2.5	NA	NA	21.7	1.0
2002	100.0	80.1	29.5	11.8	9.1	2.1	0.5	53.1	1.0	4.2	5.7	11.1	2.7	2.2	27.0	NA	1.9	NA	NA	18.9	1.1
2003	100.0	70.1	25.9	8.6	9.1	2.2	0.6	46.4	1.2	4.0	5.4	8.6	2.2	1.9	23.6	NA	2.3	NA	NA	25.0	5.0
2004	100.0	72.5	24.5	9.0	11.5	2.4	1.5	49.0	1.6	3.8	6.5	6.9	2.4	2.3	23.5	NA	2.5	NA	NA	26.7	0.8
2005	100.0	75.8	24.8	8.1	13.7	2.3	1.4	50.4	2.0	3.2	8.1	7.3	2.4	2.5	25.4	NA	3.1	NA	NA	23.6	0.6
2006	100.0	70.1	21.4	8.3	16.7	2.0	1.4	49.8	1.9	2.2	6.9	5.3	2.2	1.8	20.3	NA	3.4	NA	NA	29.1	0.7
2007	100.0	68.0	23.0	8.3	14.6	2.4	1.2	49.6	1.7	1.8	6.4	4.7	2.2	1.7	18.4	NA	3.0	NA	NA	31.4	0.5
2008	100.0	70.7	23.6	9.4	15.1	2.2	1.1	51.4	1.7	1.8	6.7	5.2	2.1	1.8	19.2	NA	3.7	NA	NA	28.8	0.6
2009	100.0	67.1	19.0	9.8	17.2	2.1	1.3	49.4	0.7	1.3	6.3	5.4	2.1	1.8	19.4	NA	3.0	NA	NA	32.0	0.8

Source: Ministry of Finance, Economic Report (various issues).



### 4.3.3 Federal Government Deficit and Debt

An implicit comparison of federal expenditure and revenue in the above sections makes it clear that federal expenditure was far ahead of federal revenue throughout the entire period of this study. The government has consistently suffered from a fiscal deficit as a result of excessive federal spending, and the situation was further aggravated by global recession and high interest rates in the international markets. The financing of the federal deficits came mainly from domestic and external borrowings. Table 4.7 shows the overall trends in federal deficit from 1990 to 2009.

Table 4.7: Federal government deficit, 1990-2009 (2005=100)						
Year	Revenue	Expenditure	Deficit	Deficit/GDP	Annual Changes	
					Deficit %	GDP %
	MYR Million					
1990	45620	50931	-5311	-2.9		
1991	50478	54391	-3913	-2.0	-26.3	8.8
1992	55541	57299	-1759	-0.8	-55.1	6.5
1993	56927	56444	483	0.2	-127.5	10.3
1994	64995	59201	5794	2.3	1098.7	9.3
1995	64716	62352	2363	0.8	-59.2	10.0
1996	71523	69295	2227	0.7	-5.8	10.2
1997	78293	70789	7935	2.4	256.3	8.4
1998	64583	70280	-5697	-1.8	-171.8	-4.4
1999	64989	75496	-10508	-3.2	84.4	3.3
2000	67493	89003	-21509	-5.5	104.7	16.7
2001	85610	105430	-19821	-5.2	-7.8	-2.4
2002	88290	109701	-21411	-5.3	8.0	6.8
2003	96777	118647	-21870	-5.0	2.1	8.0
2004	102401	122406	-20006	-4.1	-8.5	11.6
2005	106304	125028	-18724	-3.6	-6.4	7.0
2006	119253	137698	-18445	-3.3	-1.5	6.1
2007	132342	151887	-19544	-3.2	6.0	9.5
2008	143441	175393	-31952	-4.8	63.5	9.5
2009	141516	183821	-42305	-7.0	32.4	-8.8

Source: Ministry of Finance, Economic Report (various issues).

Clearly from Table 4.7, we can see that the government has remained in fiscal deficit most of the time. Beginning with a fiscal deficit of about MYR 5,311 million, the scale progressively shifted towards a fiscal surplus delivering a surplus of MYR 7,935 million in 1997. But from 1998

onwards, expenditure again exceeded revenue with fiscal deficit continually growing from MYR 5,697 million in 1998 to MYR 42,305 million in 2009. As a percentage of GDP, federal surplus was around 0.2-2.4% during 1993-1997, dropped to -5.5% in 2000, a trend reflecting the acceleration in expenditure and expansionary countercyclical measures. The ratio thereafter declined to a value lower than the 1990s level in response to the contractionary fiscal measures.

However, the government's commitment to strengthen its budgetary position is evidenced by the marked narrowing position of its budgetary deficit from 5.5% of GDP in 2000 to 3.2% in 2007. The significant success in reducing this deficit has been achieved both by enhancing revenue as well as improving the efficiency and effectiveness of government expenditure (Economic Report 2007/ 2008). In late 2008-2009, developments in the external environment continued to impact the fiscal position of the federal government despite steady revenue collection. Weak private investment, sluggish export performance and higher export incurred due to the implementation of the stimulus packages had weakened the financial position of the federal government. Most of the deficits that occurred as discussed above were primarily due to planned deficit budgeting following a fiscal expansion programme for stabilisation, allocation and distribution purposes in response to prevailing economic difficulties or to meet specific development objectives (Bakar 2004). Thus, the federal government has been assigned borrowing powers by the Constitution, apart from its productive revenue sources, allowing it to resort to domestic and external borrowings to finance budgetary deficits.

Table 4.8 summarises the net federal government borrowing (gross borrowing less repayments and prepayments) from 1990 to 2009 along with a tally of annual change in the amount of borrowings expressed in percentage terms. Net domestic borrowing, mainly comprising government securities, treasury bills and investment, expanded by seventeen times from MYR 3,026 million in 1990 to MYR 50,593 million in 2009 (in real terms). However, in 1994, the balanced budget did not necessitate the federal government to raise borrowing to finance its expenditure. Nevertheless, some borrowings were undertaken in 1994 for purposes of debt management as well as to create additional financial instrument particularly for Islamic banking (Economic Report 1994). For the 1990s era, the borrowing achieved its peak in 1998 (MYR 12,860 million) in which the government had to rely on the non-inflationary domestic services and at the same time to ensure it will not crowd-out the private sector. Apart from domestic sources, the government is also raising additional borrowing from external sources. In early 2000s, the total borrowings by the federal government was about MYR 13,578 million in 2000

increased to MYR 25, 771 in 2004 and sharp decreased to MYR 9,197 and finally increased to MYR 50,593 million in 2009.

Table 4.8: Net federal government borrowing, 1990-2009						
Year	Total	Domestic	Foreign	Annual Changes		
				Total	Domestic	Foreign
	MYR Million			%	%	%
1990	3026	5861	-1185			
1991	3275	4680	175	8.2	-20.2	-114.8
1992	-1691	2093	-4486	-151.6	-55.3	-2664.5
1993	-2759	512	-4279	63.2	-75.5	-4.6
1994	-3006	2302	-6253	9.0	349.5	46.1
1995	-1635	NA	-2077	-45.6	NA	-66.8
1996	-886	1584	-2672	-45.8	NA	28.7
1997	-3729	-2453	-2013	320.9	-254.8	-24.6
1998	12860	12573	2073	-444.9	-612.6	-203.0
1999	8346	6007	3238	-35.1	-52.2	56.2
2000	13578	13871	943	62.7	130.9	-70.9
2001	19675	14397	6772	44.9	3.8	618.4
2002	14096	6423	8479	-28.4	-55.4	25.2
2003	19586	24297	-3829	38.9	278.3	-145.2
2004	25771	26425	125	31.6	8.8	-103.3
2005	9197	12700	-3503	-64.3	-51.9	-2910.1
2006	14696	17133	-2948	59.8	34.9	-15.8
2007	21486	24409	-4081	46.2	42.5	38.5
2008	35181	-425	32005	63.7	-101.7	-884.2
2009	50593	-5608	50740	43.8	1220.7	58.5

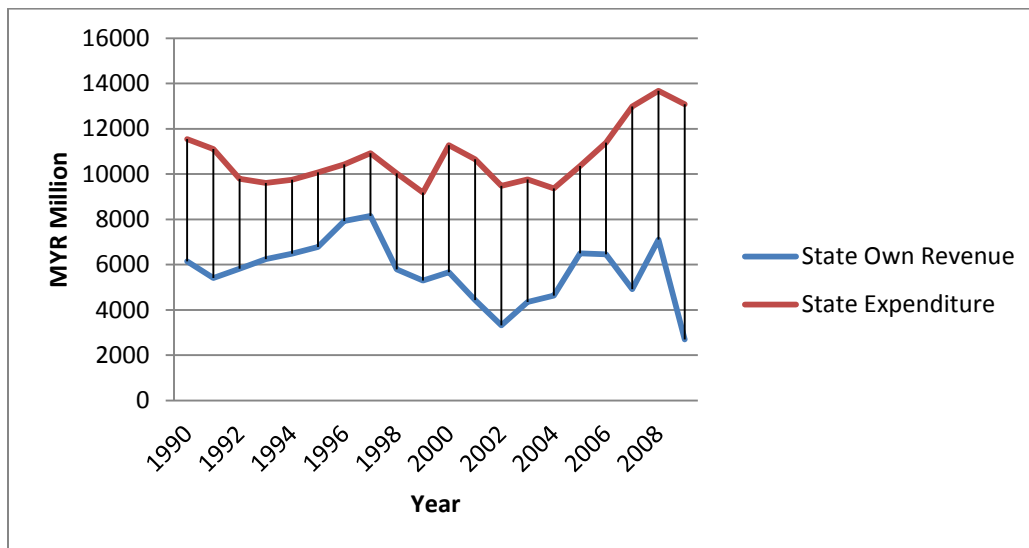
Source: Ministry of Finance, Economic Report (various issues).

#### 4.4 State Government Finances

State receipts constitute state's own revenues, federal grants, federal loans and state borrowings from domestic markets. As in federal finance, state expenditures consist of operating and development expenditures. Figure 4.2 and Table 4.9 show the trends in receipts and expenditures of state governments from 1990 to 2009.

Similar to the federal government's predicament, finances of the state governments in Malaysia show that state receipts were lower than state expenditures. Figure 4.2 demonstrates that the Constitutional assignment of taxes and divisions of functions has resulted in persistent overall deficits in the state government's finance.

**Figure 4.2 State government finances 1990- 2009**



Source: States Financial Statements (various issues).

The average annual growth rates during the twenty years were 6% for state receipts compared to 4% for state expenditures with decline in state receipts mainly attributable to decrease in state's own revenue sources (Table 4.9). In fact, total receipts shrank by 16.8% in real terms from MYR 8,042 million in 1990 to MYR 6,692 million in 2009, whereas total expenditures increased by 13% in real terms from MYR 11,542 million in 1990 to MYR 13,085 in 2009 on account of higher operating and development expenditures. Table 4.9 firstly shows that state sourced revenues were highly unstable—falling in absolute terms in 1991, 1998, 1999, 2001, 2002, sharply in 2007 and drastically in 2009. As these are figures for all states combined, some states must have experienced even greater shocks to revenues. Planning for the medium term and long term would be impossible under such circumstances. Second, federal grants also exhibit high volatility from year to year—falling in absolute terms in 1992, 1995, 1996, 2001, and 2004. Thus, in some years, when reductions in federal grants occurred on top of reductions in states' own revenues, fiscal situation must have been made worse for the states. Third, it is remarkable that in 1996, despite two years of falling federal grants, the state sector registered a surplus of MYR 11 million. In some states, this must have meant falling expenditures, even if aggregate expenditure is shown to have increased that year. Fourth, from 1997 onwards, the states have always had a deficit that have gradually increased in size, indicating that even with federal grants most states find it difficult to finance their expenditure and states still need additional revenue sources to finance this gap.

**Table 4.9: State governments consolidated finances, 1990- 2009 (MYR million, 2005=100)**

Year	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
<b>Revenue</b>	8042	7489	7645	8185	8477	8635	9786	10047	7787	7587	8457	6443	5437	6607	6894	9002	9119	8524	10788	6692
State Sources	6141	5406	5817	6240	6486	6778	7920	8156	5791	5303	5661	4435	3315	4346	4633	6502	6451	4919	7101	2000
Federal Grants	1813	1976	1725	1822	1893	1790	1781	1845	1953	2206	2714	1982	2093	2240	2225	2437	2568	3552	3655	3922
Federal Reimbursements	88	107	103	123	99	67	85	46	43	78	82	26	29	20	36	63	99	53	32	70
<b>Expenditure</b>	11542	11098	9789	9609	9751	10070	10429	10917	10034	9177	11275	10652	9479	9762	9363	10358	11392	12986	13680	13085
Operating	6595	6946	5660	5175	5329	4880	5403	5011	4982	4662	5640	5610	5281	5426	5664	6020	6310	6711	7216	6992
Current Surplus/Deficit	1446	543	1985	3009	3148	3756	4382	5036	2805	2925	2817	833	156	1181	1230	2982	2809	1813	3572	-300
Development Expenditure	4947	4152	4129	4434	4422	5191	5025	5906	5052	4515	5635	5042	4198	4336	3698	4338	5082	6274	6464	6093
Loan Recovery	223	312	436	386	1211	674	654	638	539	682	290	179	411	570	187	201	388	451	279	259
<b>Net Development Expenditure</b>	4724	3839	3693	4047	3211	4516	4371	5268	4513	3832	5345	4863	3787	3766	3511	4137	4694	5823	6185	5834
<b>Overall</b>	-3278	-3297	-1708	-1038	-63	-761	11	-232	-1708	-907	-2528	-4030	-3630	-2585	-2281	-1155	-1885	-4010	-2613	-6134
Sources of Financing	NIL	34	502	1664	NIL	812	1010	322	NIL	NIL	480	591	773	1080	647	1642	1056	1079	1795	-1611
Net Federal Loans	NIL	NIL	175	154	280	-1600	-2148	-1293	695	755	-456	1235	-222	-470	761	-3120	-2189	-1183	-3569	1109

Source: Ministry of Finance, Economic Report (various issues).

#### **4.4.1 State Government Expenditure**

State expenditures grew faster than state's own revenues throughout the 1990-2009 period. The average annual growth rates of state expenditures were 11% between 1990 and 2009, 13% between 1990 and 1995, 6% between 1996 and 2000, 0.4% between 2001 and 2005 and 9% between 2006 and 2009. On average, the state government's operating expenditure increased by 6% per annum, from MYR 6,595 million in 1990 to MYR 6,992 million in 2009. It grew at about the same pace as total state expenditure, 4% per annum between 1990 and 2009, 2% per annum between 1990 and 1995, 7% per annum between 1996 and 2000, 5% between 2001- 2005 and 8% between 2006-2009. The annual percentage changes varied significantly from year to year with a fluctuation trend and more positive percentage change after 2003 except for 2009 where there was an insignificant drop to 3.1% (Table 4.9). In 2009, operating expenditure constituted about 53% of total expenditure due to higher emolument, cost of supply and services as well as purchase of assets constituting 63.6% of total operating expenditure (Economic Report 2009/2010).

There was uncertainty in the trend in state development expenditure than operating expenditure, the annual percentage changes fluctuated around -16% to 25% over this period. The scale of expansion during 1990- 2009 period was 23% in real terms, the state governments had spent for development between MYR 4,000–MYR 5,000 million in 1990 to 2006 and exceeded MYR 6,000 between 2007 and 2009.

Although the Asian financial crisis in 1997-1998 slowed down the economy, in the 2000s state governments continued to incur higher operating and development expenditures to improve public amenities and service quality to the people. In 2000, a large proportion of state expenditure was allocated for public infrastructure and provision of low-cost housing for the poor. In fact, the expenditure for public housing was MYR 399 million in 1999 but had increased by 62.2% to MYR 558 million in a few years. In 2005-2006, most of the development expenditure was taken up by spending on agriculture and rural development, public utilities and construction of rural roads. In 2008, development expenditure increased to MYR 6,464 million, taking up about 47% of total expenditure, on account of further spending on housing as well as public infrastructure and amenities. In 2009, the portion of development expenditure dropped slightly from 2008 (from MYR 6,464 million to MYR 6,093 million), although the state governments continued to finance agriculture and rural development, housing, public amenities, drainage and irrigation, water supply projects as well as upgrading physical infrastructures in supporting business and industrial activities in states (Economic Report 2009/2010).

In general, state expenditure is financed by three sources namely state's own revenue, federal grants and reimbursements, and borrowings. Table 4.10 clearly shows the breakdown of the financing of state expenditures from 1990 to 2009. State's own revenues financed about 26% - 40% of state expenditures during 1990-2009, while federal grants and reimbursements contributed between 16% and 31% of total state government expenditure. In other words, even with transfers, the state governments still need additional resources to fill this gap indicating that federal transfers failed to bring financial relief to the state governments. As compared to the previous year, the impacts of increased deficit and the Asian financial crisis were collectively noticeable in 2001 in which both state owned revenue as well as federal grants and reimbursement fell to the lowest level of 26.5% and 18.8% respectively. In particular, the reduction in the federal reimbursement was due to the federal government had increasingly implemented projects autonomously rather than unanimously involved the state governments concerned.

<b>Table 4.10: Sources of state government revenues, 1990- 2009 (as a percentage of state expenditure)</b>			
<b>Year</b>	<b>Own Revenue</b>	<b>Federal Grants &amp; Reimbursements</b>	<b>Federal Loans</b>
1990	29.5	16.2	NIL
1991	25.9	18.5	NIL
1992	28.9	18.4	1.8
1993	40.4	19.9	1.6
1994	32.9	20.2	2.9
1995	31.7	18.8	-15.9
1996	40.2	17.7	-20.6
1997	39.5	17.3	-11.8
1998	30.8	19.8	6.9
1999	33.1	24.8	8.2
2000	27.3	24.7	-4.0
2001	26.5	18.8	11.6
2002	33.5	22.3	-2.3
2003	33.8	23.1	-4.8
2004	38.4	24.1	8.1
2005	32.1	24.1	-30.0
2006	31.9	23.5	-19.2
2007	31.3	27.8	-9.1
2008	28.5	26.7	-26.1
2009	27.6	30.6	8.5

Source: Calculated from Table 4.9.

As a result of inadequate financing sources, the contribution of federal loans was the highest at around 11.6% in 2001, which then fell to a negative contribution around -2% and -30% in the following years before increasing to 8.5% in 2009. The loans from the federal government are purposely used to finance development expenditure, particularly in agriculture and rural development projects, industrial estates, low cost housing, water supply and other miscellaneous expenditures like office buildings, palaces and payment of salaries. Table 4.11 shows the gross state government borrowing from 2000-2009. It fluctuated from MYR 708.7 million in 2000 and reached the peak at MYR 1,304 million in 2005 before dropping to MYR 651.8 million in 2006. However, it increased back to double in 2007 and 2008 due to the significant increase in both operating (emolument, supplies and services, and salary adjustments) and development (agricultural and rural sector, housing, public amenities as well as upgrading of infrastructure) expenditures and finally dropped again to MYR 1,088 million in 2009.

<b>Table 4.11: Gross state government borrowing, 2000-2009</b>	
<b>Year</b>	<b>MYR million</b>
2000	708.7
2001	1495.1
2002	802.8
2003	598.3
2004	2131.4
2005	1304.1
2006	651.8
2007	1257.1
2008	1399.1
2009	1087.6

Source: Budget Division Department, Ministry of Finance.

Article 111(12) of the Constitution stipulates that the state is only allowed to borrow from the federal government or from a bank or other financial sources approved for the specific purposes determined by the federal government for a period not exceeding five years. Although the article allows for other sources of financing, the state government's borrowing comprises mainly loans from the federal government (up to 95%) and local financial institutions only contribute about



5%. The federal government prescribes the terms and conditions for all loans raised by the state or guaranteed by it (Noh 1991). It has also been alleged that state governments are not given equal access to federal loans with political machinations restricting loans especially to states under the control of opposition.<sup>45</sup> In addition, the state governments are too small to venture into the capital market and the capital market is not developed enough to welcome a new player (Jalil 2008). As far as their borrowing activities are concerned, the state governments are highly dependent on the federal government.

#### **4.4.2 State Government Revenue**

State own revenue consists of two major components, namely total receipts/revenues from own sources and non-revenue receipts. State's own sources of revenue mainly come from non-tax sources, such as royalties from petroleum, gas and forestry, sales of goods and services, dividends and interests on investment as well as fees from licences and permits, commercial undertakings, receipts from land sales and rents on state property (Nambiar 2007). As for tax revenue sources, the revenue collection is largely from natural resource related taxes such as land and land-related taxes (mines and forests), entertainment tax and the excise duty on local liquor (toddy). There are also taxes for the provision of services such as water, electricity, ports and harbours, zakat and fitrah (Muslim alms). Apart from revenues, state receipts are also supplemented with non-revenue receipts which mainly comprise federal grants and reimbursements, federal loans and state borrowings from domestic markets.

The tax powers of state government in Malaysia are highly restrained, and tax autonomy for states allowing them the responsibility to determine the base and rate of their own taxes is constrained. Although some states have discretion in setting tax rates, the tax base is completely governed by federal jurisdiction. Theoretical literature suggests that it is preferable to allocate 'source-based' taxes to the national government leaving states to meet their obligations from 'residence-based' taxes such as consumption taxes (Wilson 1986). But, as explained earlier the federal government oversees most tax revenues, whether it is service and road taxes, which can be better managed by state governments, or a relatively trivial tax source like entertainment. State governments also have no mandate to initiate or develop the oil industry in their own states and they do not have any right to benefit in the gains accrued from this industry.

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<sup>45</sup> Currently there are three states are under opposition party after the 2013 General Election; Penang, Selangor and Kelantan. In 1978, when Kelantan was taken over by the opposition party (PAS), the state's debt stood at MYR 74 million, but in December 1990, the state government's debt increased to MYR 711.67 million including MYR 10 million in annual interest payment alone (Jalil 2008).

The federal government taxes the producer company (Sarawak Shell, Sabah Shell or Esso), thus, receiving far more revenue from petroleum than the petroleum-producing states (Loh 2008). Looking at indirect tax collection, entertainment tax was found to be relatively insignificant as not all state governments enjoyed this revenue, particularly in less developed states like Kelantan, Kelantan, Perlis and Terengganu (Bakar 2004).

Table 4.12 and 4.13 show that state own revenues (for states in Peninsular Malaysia)<sup>46</sup> had a competing trend between tax revenue and non-tax revenue from 1990 to 1997, while most of the time, non-tax revenue contributed more than tax revenue ranging from 49-60% throughout the twenty year period. However, due to the Asian financial crisis, in 1998 to 2001 the situation was reversed as non-tax revenue dropped to 45-50% from 57% in 1997. During 2002-2008, it climbed back to its leading role with 52-54% declining slightly to 49% in 2009. State non-tax revenue fell from MYR 2,032 million in 1990 to MYR 1,739 million in 1995 before increasing over the next two years to MYR 2,436 in 1997, and then grew unsteadily to MYR 1,768 million in 2009. During this period, revenues from tax sources grew at an average rate of 2% per annum, slightly lower than that of the state tax revenue.

State tax revenues increased slowly throughout the period under review from MYR 1,371 million in 1990 to MYR 1,844 million in 2009, as it increased at the rate of 4% per annum during 1990-2000, decreased to 5% per annum during 2001-2005 and back to 4% increase in 2006-2009. This fluctuating trend during the three phases was due to the existence of economic breaks which had significant effects. The share of state taxes in total state own revenues fluctuated from year to year, averaging 47% for the entire 1990-2009 period. During this period, total tax revenue performed better, particularly on land taxes which had been revised from 52% to 54% by most states in 2006.

State's own revenues (in Peninsular of Malaysia's states) increased from MYR 3,403 million in 1990 to MYR 3,612 million in 2009. In the late 1990s, receipts from petroleum royalty in the three beneficiary states of Sabah, Sarawak (Borneo states) and Terengganu declined by 10.9% to MYR 872 million due to lower crude petroleum royalty. The federal government pays 5% of royalty annually as stipulated by the Act<sup>47</sup> to petroleum-producing states like Sabah, Sarawak and Terengganu. Apart from that, 10% of the export duties on tin, iron and other minerals were

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<sup>46</sup> Sabah and Sarawak are excluded due to data limitation.

<sup>47</sup> Ownership and control of petroleum and gas, though natural resources, are transferred to the federally owned and controlled company, Petronas (Petroleum Nasional Berhad). Petronas is empowered to contract out exploration and production of petroleum under the Petroleum Development Act (PDA) 1974.

also transferred to the states from which these minerals were derived. However, in terms of contribution to its own revenue source, it was still a very significant source, accounting for 70% of total revenue (Wee 2006)

Overall, state's own sources of revenue accounted for 56-81% of the total revenues/receipts and were mainly derived from non-tax sources. Apart from the issue of state tax allocation, there is the issue of efficiency in tax efforts made by the states. It has been argued by some that states do not use their tax bases very efficiently (Noh 1991), and that if taxes were administered better by the states, more revenue would be collected and fiscal gap could be reduced. The World Bank (1992) also suggested that more revenue could be collected from forestry. As a whole, in line with the efforts of the federal government in tax administration and enforcement, state governments have also intensified revenue collection efforts, particularly targeting assessment arrears and unpaid fees by taking several measures including imposing caveats on properties.

**Table 4.12: Peninsular Malaysia: State government own revenue, 1990-2009 (MYR million, 2005=100)**

Year	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Tax Revenue	1371	1411	1443	1579	1370	1455	1733	1873	1714	1643	1695	1423	1495	1543	1603	1579	1753	1858	1861	1844
Non Tax Revenue	2032	1463	1387	2299	1841	1739	2458	2436	1377	1390	1387	1399	1682	1757	1991	1748	1885	2203	2044	1768
<b>Total Own Revenue</b>	3403	2875	2830	3878	3211	3193	4191	4309	3092	3033	3081	2823	3177	3300	3594	3327	3639	4062	3906	3612
Non-Revenue Receipts	1610	1669	1100	1775	1307	1952	1676	1068	1064	1029	1139	1142	992	966	1500	2196	2390	2215	2485	2860
<b>Total State Receipts</b>	5013	4543	3930	5653	4519	5145	5867	5377	4156	4062	4220	3964	4168	4265	5094	5522	6029	6277	6391	6472

Source: States Financial Statement (various issues).

**Table 4.13: Peninsular Malaysia: State government own revenue, 1990-2009 (MYR million 2005=1000, percentage distribution)**

Year	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Tax Revenue	40	49	51	41	43	46	41	43	55	54	55	50	47	47	45	47	48	46	48	51
Non Tax Revenue	60	51	49	59	57	54	59	57	45	46	45	50	53	53	55	53	52	54	52	49
<b>Total Own Revenue</b>	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100

Source: States Financial Statement (various issues).

#### 4.4.3 State Government Deficit and Debt

While most of the deficits of the federal government were mainly due to planned deficit budgeting, the state government's fiscal deficits were due to scarcity of resources (as state revenues were slower than state expenditures) to finance their constitutionally assigned functions for meeting the expenditure required to provide a minimum standard of public services at the state level. In fact, statistics show that despite the exponential growth in the size of the economy and national income over the last two decades, total receipts for states shrank by 16.7% in real terms from MYR 8,042 million in 1990 to MYR 6,692 million in 2009 (see Table 4.9).

Table 4.14 shows that although the state deficit as a percentage of state SGDP declined from 3% in 1990 and remained at around 1-2% in 1990-2009, its share in total expenditure ranged from 24 to 79% throughout the twenty years.

<b>Table 4.14: State government deficits of own sources, 1990-2009 (2005=100)</b>							
Year	Own Revenue	Expenditure MYR Million	Deficit	Annual Changes (%)	Deficit as % of		
					SGDP	SE	SOR
1990	6141	11542	-5401		3	46.7	87.9
1991	5406	11098	-5692	5.4	2.8	51.2	105.3
1992	5817	9789	-3972	-30.2	1.8	40.6	68.3
1993	6240	9609	-3369	-15.2	1.4	35.1	54
1994	6486	9751	-3265	-3.1	1.3	33.5	50.3
1995	6778	10071	-3293	0.9	1.2	32.7	48.6
1996	7920	10429	-2509	-23.8	0.8	24.1	31.7
1997	8156	10917	-2761	10.0	0.9	25.3	33.9
1998	5791	10034	-4243	53.7	1.4	42.3	73.3
1999	5303	9177	-3874	-8.7	1.3	42.2	73.1
2000	5661	11276	-5615	44.9	1.8	50	99.2
2001	4435	10652	-6217	10.7	2	58.4	140.2
2002	3315	9479	-6164	-0.9	1.9	65	185.9
2003	4346	9762	-5416	-12.1	1.6	55.5	124.6
2004	4633	9363	-4730	-12.7	1.3	50.5	102.1
2005	6502	10358	-3856	-18.5	1	37.2	59.3
2006	6451	11392	-4941	28.1	1.2	43.4	76.6
2007	4919	12986	-8067	63.3	1.8	62.1	164
2008	7101	13680	-6579	-18.4	1.4	48.1	92.6
2009	2700	13085	-10385	57.9	2.3	79.4	384.6

Source: Calculated from Table 4.9.

SGDP = State Gross Domestic Product , SE= State Expenditure, SOR= State Own Revenue

The annual fluctuations for the twenty year period were even greater, with percentage changes ranging from as low as -30% to as high as 63%.

The deficit in state's own revenue ratios varied between 32% and 385% during this period with no clear patterns of change over the twenty years. The state government deficits was at MYR 5,401 million in 1990, increased to MYR 5,692 in 1991 before declining to MYR 3,972 million and MYR 2,761 million during 1992-1997. However, in 1998 the deficit increased to MYR 4,243 and it rose up again to MYR 10,385 million in 2009.

In sum, the figures in this table lead us to conclude that most of the time a state's own revenue source has been sufficient to finance only around half of the state's public expenditure with the remaining half being financed from federal transfers and borrowings. This goes to show the extent of dependence of the states on the federal government.

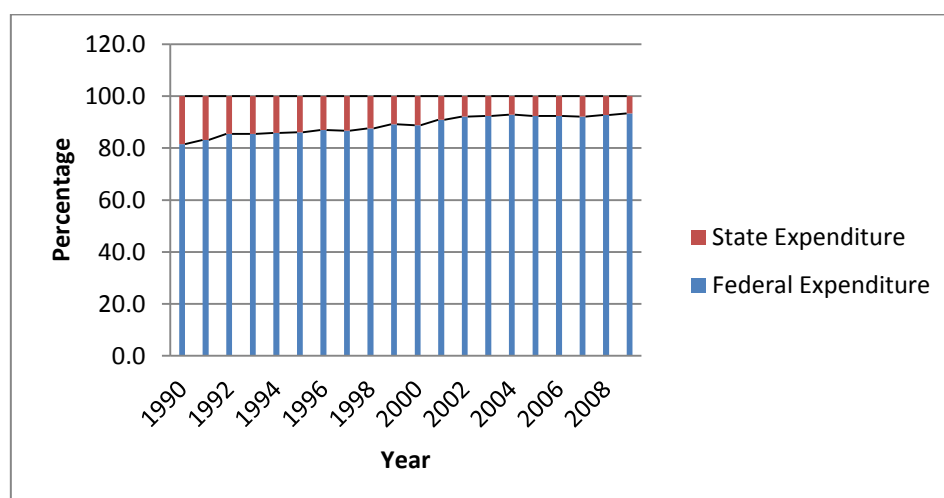
#### 4.5 Comparison of Federal and State Governments Finances

After the statistical review of the federal and state finances for the last two decades, this section turns to a comparative summary of expenditure and revenue at the federal and state government level. This comparative view will help to shed some light on the nature of intergovernmental financial relations to highlight the vertical imbalance in the Malaysian federal system as the federal government excludes the states from many expenditure functions and taxation powers.

##### 4.5.1 Federal and State Governments Expenditures

Figure 4.3 and Table 4.15 compare the expenditures of the federal government and state governments.

**Figure 4.3 Federal and state government expenditure (percentage)**



Source: Ministry of Finance, Economic Report (various issues).

**Table 4.15 Federal and state government expenditures, 1990-2009 (2005 =100)**

Year	Total	Federal	State	Total GDP	Federal GDP	State SGDP
1990	62473	50931	11542	33.9	27.7	6.3
1991	65489	54391	11098	32.7	27.2	5.5
1992	67088	57299	9789	31.5	26.9	4.5
1993	66053	56444	9609	28.1	24.0	4.1
1994	68951	59201	9751	26.8	23.0	3.8
1995	72423	62352	10070	25.6	22.1	3.6
1996	79724	69295	10429	25.6	26.8	3.5
1997	81706	70789.3	10917	24.2	21.0	3.4
1998	80314	70279.5	10034	24.9	21.8	3.4
1999	84673	75496	9177	25.4	22.7	3.0
2000	100278	89002	11275	25.8	22.9	3.6
2001	116082	1054230	10652	30.6	27.8	3.4
2002	119179	109700	9479	29.4	27.1	2.9
2003	128409	118647	9762	29.3	27.1	2.8
2004	131769	122406	9363	27.0	25.1	2.5
2005	135386	125028	10358	25.9	23.9	2.6
2006	149090	137698	11392	26.9	24.8	2.8
2007	164872	151886	12986	27.1	25.0	2.9
2008	189074	175393	13680	28.4	26.4	2.9
2009	196905	183821	13085	32.5	30.3	2.9

Note: Total consolidated federal-state expenditure excluding federal grants and net federal loans to states.

Source: Ministry of Finance, Economic Report (various issues) and State Financial Statement (various issues).

Total consolidated federal-state expenditure, excluding federal grants and net federal loans to the states, increased by 215% in real terms from MYR 62,473 million in 1990 to MYR 196,905 million in 2009. During this period the total federal expenditure (net transfers) tripled in real terms and state government expenditure increased by 13.4% from MYR 11,542 million in 1990 and MYR 13,085 million in 2009 (Table 4.15). In all, total federal-state expenditure, as a percentage of GDP decreased unsteadily from 34% in 1990 to 24% in 1997, before fluctuating and ultimately settled at the highest level of 32.5% in 2009. Federal expenditure accounted for 21-30% of GDP, while state expenditure stood at about 2.5-6.3% of SGDP. The decrease in relative importance of state spending over that of federal

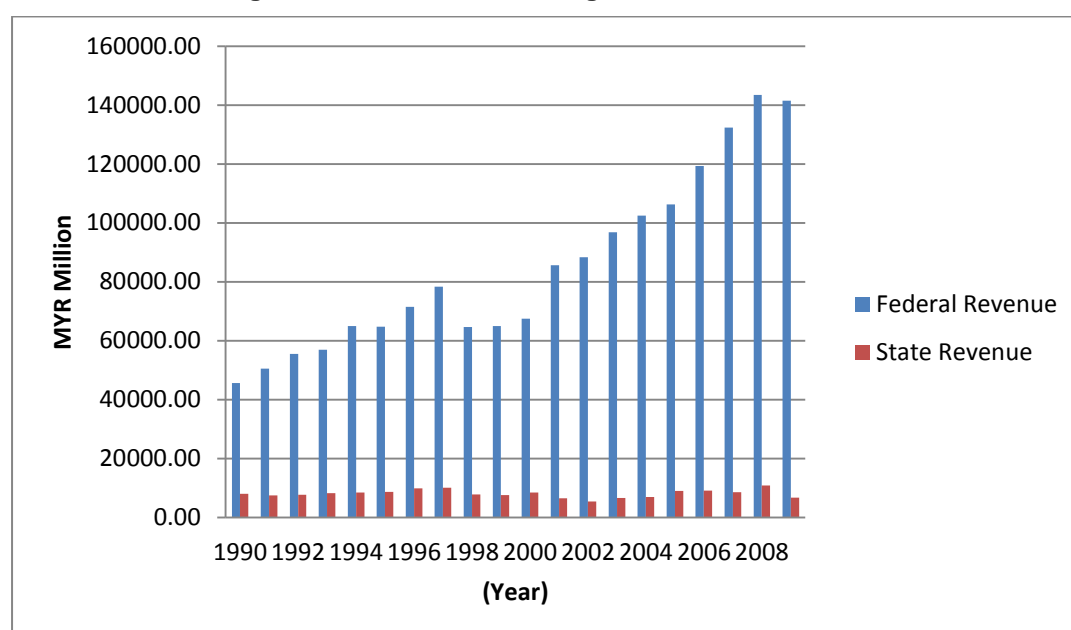
spending was brought about by decreased in operating and development expenditures of state governments during the period of the study.

#### 4.5.2 Federal and State Government Revenues

Allocation of revenue powers between the federal and state governments is clearly spelt out in the Constitution with the balance of power greatly in favour of the federal government and has remained so since independence in 1957 when the Constitution was formed. Thus, it is acknowledged that revenue sources of the federal government are enormous, while the state governments' revenue sources are limited and benefit little from the GDP growth.

Figure 4.4 and Table 4.16 prove the trends in federal and state revenues for the 1990-2009 period, where the federal revenue increased by 210% over the twenty year period in real terms but state revenue actually decreased by 16.7%. This situation reflects difficulties on the part of the state governments in raising revenue, even during periods of remarkable economic growth, let alone during economic recession.

**Figure 4.4 Federal and state government revenues, 1990-2009**



Source: Ministry of Finance, Economic Report (various issues).



<b>Table 4.16: Federal and state government revenues, 1990- 2009 (2005=100)</b>						
Year	MYR Million			Index 1990		
	Total	Federal	State	Total	Federal	State
1990	53661	45620	8042	100	100	100
1991	57967	50478	7489	108	111	93
1992	63186	55541	7646	118	122	95
1993	65112	56927	8185	121	125	102
1994	73472	64995	8477	137	142	105
1995	73351	64716	8635	137	142	107
1996	81308	71523	9786	152	157	122
1997	88340	78293	10047	165	172	125
1998	72370	64583	7787	135	142	97
1999	72576	64989	7587	135	142	94
2000	75951	67494	8457	142	148	105
2001	92052	85609	6443	172	188	80
2002	93727	88290	5437	175	194	68
2003	103384	96777	6607	193	212	82
2004	109295	102401	6894	204	224	86
2005	115306	106304	9002	215	233	112
2006	128372	119253	9119	239	261	113
2007	140866	132342	8524	263	290	106
2008	154229	143441	10788	287	314	134
2009	148208	141516	6692	276	310	83

Source: Ministry of Finance, Economic Report (various issues) and National Audit Department, General Audit Report (various issues).

Table 4.17 shows that over the twenty year period, the peninsular states raised about 6% of total federal-state revenue and about 2% of federal-state tax revenue, with the share in the 1990s marginally higher than that of the 2000s period. The share of state non-tax revenue to the total revenue had decreased from the maximum 4% in 1990 to the minimum 1.2% in 2009 and 2%-3% for non-revenue receipts. Correspondingly, the share of federal revenue averaged about 94% of the total revenue, 71% of total taxation revenue and about 22% of total non-tax revenue. Hence, the rise in federal revenue during this period determined the growth pattern of federal-state revenue.

**Table 4.17: Federal and state government shares in total federal-state revenues, 1990-2009 (in percentage)**

Year	Federal Revenue				Peninsular Malaysia: State Revenue			
	Tax	Non-Tax	Non-Revenue Receipts	Total	Tax	Non-Tax	Non-Revenue Receipts	Total State Receipts
1990	64.8	21.2	4.1	90.1	2.7	4.0	3.2	9.9
1991	69.6	20.1	2.1	91.7	2.6	2.7	3.0	8.3
1992	68.5	22.8	2.1	93.4	2.4	2.3	1.8	6.6
1993	69.6	20.2	1.1	91.0	2.5	3.7	2.8	9.0
1994	70.9	21.4	1.2	93.5	2.0	2.6	1.9	6.5
1995	75.8	15.4	1.5	92.6	2.1	2.5	2.8	7.4
1996	75.0	16.4	1.1	92.4	2.2	3.2	2.2	7.6
1997	76.4	16.3	1.0	93.6	2.2	2.9	1.3	6.4
1998	75.1	18.0	0.8	94.0	2.5	2.0	1.5	6.0
1999	72.7	20.3	1.1	94.1	2.4	2.0	1.5	5.9
2000	71.8	21.4	0.9	94.1	2.4	1.9	1.6	5.9
2001	73.9	20.8	0.9	95.6	1.6	1.6	1.3	4.4
2002	76.4	18.0	1.0	95.5	1.6	1.8	1.1	4.5
2003	67.1	23.9	4.7	95.8	1.5	1.7	1.0	4.2
2004	69.1	25.4	0.8	95.3	1.5	1.9	1.4	4.7
2005	72.1	22.4	0.6	95.1	1.4	1.6	2.0	4.9
2006	66.7	27.7	0.7	95.2	1.4	1.5	1.9	4.8
2007	65.0	30.0	0.5	95.5	1.3	1.6	1.6	4.5
2008	67.6	27.5	0.6	95.7	1.2	1.4	1.7	4.3
2009	64.2	30.6	0.8	95.6	1.2	1.2	1.9	4.4

Source: Calculated from Economic Report (various issues) and General Audit Report (various issues).

Lastly, Table 4.18 shows that, total federal-states revenue as a ratio to GDP decreased at a fluctuating rate from 27.5% in 1990 to 18% in 2000 before increasing to 24% in 2009. The federal share as a ratio of GDP fell from 24.8% in 1990 to 23.3% in 2009, while the state share of SGDP also shows a decreasing trend from 1.4% in 1990 to 0.6% in 2009, indicating reduced contribution of state revenue.

**Table 4.18: Ratios of federal-Peninsular Malaysia's state revenues to GDP/SGDP, 1990- 2009 (in percentage)**

Federal-State					Federal				State			
Year	Total	Tax	Non-Tax	Non-Revenue Receipts	Total	Tax	Non-Tax	Non-Revenue Receipts	Total	Tax	Non-Tax	Non-Revenue Receipts
1990	27.5	18.6	6.9	2.0	24.8	17.8	5.8	1.1	1.4	2.0	1.6	4.9
1991	27.5	19.8	6.2	1.4	25.2	19.1	5.5	0.6	1.3	1.3	1.5	4.1
1992	27.9	19.8	7.0	1.1	26.0	19.1	6.4	0.6	1.2	1.2	0.9	3.3
1993	26.6	19.2	6.4	1.1	24.2	18.5	5.4	0.3	1.3	1.8	1.4	4.5
1994	27.1	19.7	6.5	0.8	25.3	19.2	5.8	0.3	1.0	1.3	0.9	3.2
1995	24.7	19.2	4.4	1.1	22.9	18.7	3.8	0.4	1.0	1.2	1.4	3.7
1996	24.9	19.2	4.9	0.8	23.0	18.6	4.1	0.3	1.1	1.6	1.1	3.8
1997	24.9	19.6	4.8	0.6	23.3	19.0	4.1	0.2	1.1	1.4	0.6	3.2
1998	21.3	16.5	4.3	0.5	20.0	16.0	3.8	0.2	1.2	1.0	0.8	3.0
1999	20.7	15.6	4.6	0.5	19.5	15.1	4.2	0.2	1.2	1.0	0.7	2.9
2000	18.4	13.7	4.3	0.5	17.4	13.2	4.0	0.2	1.2	1.0	0.8	2.9
2001	23.6	17.8	5.3	0.5	22.6	17.4	4.9	0.2	0.8	0.8	0.6	2.2
2002	22.8	17.8	4.5	0.5	21.8	17.4	4.1	0.2	0.8	0.9	0.5	2.3
2003	23.1	15.8	5.9	1.3	22.1	15.5	5.5	1.1	0.8	0.9	0.5	2.1
2004	22.0	15.5	6.0	0.5	21.0	15.2	5.6	0.2	0.7	0.9	0.7	2.4
2005	21.4	15.7	5.1	0.5	20.3	15.4	4.8	0.1	0.7	0.8	1.0	2.5
2006	22.6	15.4	6.6	0.6	21.5	15.1	6.3	0.2	0.7	0.8	1.0	2.4
2007	22.8	15.1	7.2	0.5	21.8	14.8	6.8	0.1	0.7	0.8	0.8	2.3
2008	22.5	15.5	6.5	0.5	21.6	15.2	6.2	0.1	0.6	0.7	0.8	2.1
2009	24.4	16.0	7.8	0.7	23.3	15.7	7.5	0.2	0.6	0.6	1.0	2.2

Source: Calculated from Economic Report (various issues) and National Audit Department, General Audit Report (various issues).

#### 4.6 Summary and Conclusion

This chapter has shown that the federal system in Malaysia is highly centralised and the distribution of functions is highly skewed towards the federal government. Basically, all levels of government are responsible for their own expenditures resulting from their own commitments or jurisdictions, but the fiscal decisions of the state governments have to be in line with the federal government policy otherwise their decisions can be overruled. As a result, the outcome of this institutional arrangement is a highly centralised system of fiscal federalism in which there is little scope for genuine fiscal decentralisation. This situation has

led quite a few scholars to dismiss the Malaysian system as a 'flawed federation' (Holzhausen 1974).

The allocation of expenditure responsibilities between the federal and the state governments, as specified in the Constitution, generally, seems to conflict with the normative principles developed in the literature review chapter. Clearly, there are significant departures from the norms of decentralisation of power in the hands of state/local governments; the functional structure in Malaysia is not only highly centralised but seems to insidiously promote greater centralisation over time. The devolution of several powers of the federal government to more local levels is needed because local governments can be more responsive to variations in local needs and perhaps more accountable to those being served.

There is also a question of whether the states are efficient enough to exploit their available fiscal sources. In absolute terms, the total consolidated state government revenue for all states in Malaysia fluctuated over the two decades from 1990 to 2009 implying that the state government's capacity for revenue collection has diminished. The average annual growth of federal government revenue between 1995 and 2000 was about 4.4%, but it was approximately 9.8% between 2000 and 2005. This trend indicates that the sources of revenue for federal government are growing, but the sources of revenue for the state government are declining.

Whether state governments have their own sources of revenue is a crucial point for the practice of fiscal decentralisation. If fiscal decentralisation is to be a reality, state government must control their own revenues to finance the services that they provide (McLure 1997). Without some discretion to vary the level and composition of their own tax revenue, state governments can hardly achieve either local fiscal autonomy or local accountability or reduce the fiscal gap caused by expenditure.

## **CHAPTER 5**

# **FEDERAL FISCAL TRANSFERS AND REGIONAL BALANCES IN MALAYSIA**

### **5.1 Chapter Aims and Description**

Detailed analysis of federal/state finances in the previous chapter highlighted some of the embedded problems of fiscal imbalance in Malaysia as a result of its highly centralised federal structure. This chapter turns to a discussion of the extent of vertical and horizontal fiscal imbalances in Malaysia. The constitutional provisions and administrative arrangements for federal grants in Malaysia are discussed and the growth patterns of these transfers over the years are analysed. Finally, the chapter presents data on the intergovernmental grants and loans allocated to different states for tackling interstate disparities, and then it discusses the implications of these fiscal transfers.

### **5.2 Fiscal Imbalances in Malaysia**

As it was made clear in Chapter 4, the federal government collects most of Malaysia's tax revenues whereas the states rely heavily on fiscal transfers from the federal government to finance their expenditures. This section reviews the extent of vertical and horizontal imbalances in Malaysia, and ends with a reflection on the repercussions of regional disparities on the middle-income trap problem faced by Malaysia.

#### **5.2.1 Vertical Fiscal Imbalance (VFI)**

There is no consensus in the theoretical and empirical literature on a definition for vertical fiscal imbalance or VFI. Normally, the indicator in empirical literature links VFI to the concept of transfer dependency, in which fiscal transfers (grants and loans) are alternately regarded as a share of subnational spending (Jin and Zou 2001), subnational total revenues (Baskaran 2010; Rodden 2002), or central government revenues (Bahl and Wallace 2007). But mostly VFI is simply measured as the fiscal gap between state's own revenues and own spending (Bird and Tarasov 2004).

Table 5.1 shows the extent of vertical imbalance in the 1990-2009 period as measured by the fiscal gap.

<b>Table 5.1: State governments: vertical imbalance (MYR million, 2005=100)</b>									
Year	Total Revenue (Million)	Own Revenue (Million)	Expenditure (Million)	% (iii) of (ii)	% (iii) of (iv)	% (ii) of (iv)	Financing Gap (-) (Before transfer) %	Financing Gap (-) (After transfer) %	VFI*
(i)	(ii)	(iii)	(iv)	(v)	(vi)	(vii)	(viii)	(ix)	(x)
1990	8042	6141.2	11542.0	76.4	53.2	69.7	-46.8	-30.3	0.71
1991	7489	5405.6	11098.0	72.2	48.7	67.5	-51.3	-32.5	0.74
1992	7645	5816.7	9789.0	76.1	59.4	78.1	-40.6	-21.9	0.71
1993	8185	6240.1	9608.7	76.2	64.9	85.2	-35.1	-14.8	0.6
1994	8477	6485.5	9750.6	76.5	66.5	86.9	-33.5	-13.1	0.67
1995	8635	6778.4	10070.5	78.5	67.3	85.7	-32.7	-14.3	0.68
1996	9786	7920.5	10428.9	80.9	75.9	93.8	-24.1	-6.2	0.60
1997	10047	8155.6	10917.2	81.2	74.7	92.0	-25.3	-8.0	0.61
1998	7787	5791.0	10034.2	74.4	57.7	77.6	-42.3	-22.4	0.69
1999	7587	5303.3	9176.6	69.9	57.8	82.7	-42.2	-17.3	0.67
2000	8457	5661.2	11275.5	66.9	50.2	75.0	-49.8	-25.0	0.73
2001	6443	4434.9	10651.8	68.8	41.6	60.5	-58.4	-39.5	0.74
2002	5437	3315.4	9478.6	61.0	35.0	57.4	-65.0	-42.6	0.66
2003	6607	4346.4	9761.5	65.8	44.5	67.7	-55.5	-32.3	0.66
2004	6894	4632.7	9362.6	67.2	49.5	73.6	-50.5	-26.4	0.62
2005	9002	6501.5	10358.0	72.2	62.8	86.9	-37.2	-13.1	0.68
2006	9119	6451.4	11391.9	70.7	56.6	80.0	-43.4	-20.0	0.68
2007	8524	4919.0	12985.8	57.7	37.9	65.6	-62.1	-34.4	0.69
2008	10788	7100.9	13680.4	65.8	51.9	78.9	-48.1	-21.1	0.71
2009	6692	2700.3	13084.7	40.4	20.6	51.1	-79.4	-48.9	0.72

Note: ii- Own source revenue plus federal transfers and federal reimbursement

iii- Includes tax and non-tax revenue (minus federal transfers)

iv- Includes operating and development expenditures

x- Calculated by the author based on \*Eyraud and Lusinyan (2011).

Source: Ministry of Finance, Economic Report (various issues).

On average, total consolidated own source revenue of the states represents 70% of the total states' revenue (see Column v). The highest share of own source revenue was in 1997 at 81.2%, and the lowest share was 40.4% recorded in 2009. Looking at the share of state expenditure that could be financed by the own revenue (Column vi), it is clear that whilst 42% of expenditure could be financed from own revenue in 2001, this ratio fell to only about 21% in 2009. Thus, according to this measure, VFI in 2009 was twice as high as it was in

2001. The role of federal transfers has increased correspondingly to fill this gap and the states have become more dependent on the federal government.

However, in most years, federal transfers are insufficient to fill the fiscal gap. On average, the total state revenue, including fiscal transfers (see Column vii) could only finance up to 75.8% of total expenditures, indicating that even federal transfers failed to bring financial relief to the state governments. In some years, total state revenue was more than enough to finance expenditure, while in other years states' expenditures were under-financed. Consequently, in some years state expenditures were over-financed due to better state government revenue performance as shown during 1992-1996 (see Column vi) but the federal transfers remained significant. Although this is favourable for the states to build up their reserves, this situation actually affects their budget planning or predictability of the amounts of forthcoming grants (Bakar 2004; Ariff 1991) which also indicates that the design of federal transfers has no built in mechanism.

Our analysis also uses the measure of VFI developed by Eyraud and Lusinyan (2011) who set the share of subnational own spending not financed through own revenues as an indicator (see Column x). This indicator measures the mismatch between spending and revenue decentralisations that widens when countries devolve more spending powers than revenue powers to subnational governments (Karpowicz 2012). Following Eyraud and Lusinyan (2011), vertical fiscal imbalance can be defined as follows:

$$VFI = 1 - \frac{\text{State Government Own Revenue}}{\text{State Government Own Spending}} \quad (5.1)$$

State government (SG) spending can be financed from either state government own revenue, transfers received by the state government, or borrowing:

$$SG \text{ spending} = SG \text{ own revenue} + \text{transfer received by SG} + SG \text{ net borrowing} \quad (5.2)$$

Going by the figures in Table 5.1, VFI has not reduced in twenty years, but it fluctuated between 0.6 and 0.74 from 1990 to 2009. Such insignificant change indicates that VFI has not been altered through direct decentralisation decisions. As a centralised fiscal federalism system, there have been no changes in state government fiscal policy or in intergovernmental relations that strengthen state government fiscal discipline (Eyraud and Lusinyan 2011). Thus, in the case of Malaysia, there has been little reduction in VFI over the twenty year period, and the wide VFI has resulted from devolution of more spending rather than revenue to state governments leading to higher transfers and/ or borrowing.

Analysis of individual states data in Table 5.2 shows that gaps between the expenditure needs and own revenues persisted throughout this twenty year period in all states. The fiscal gap per capita to total state expenditure ratio increased substantially in almost all states except Sarawak. On average, state expenditures increased at faster rates than own revenues in Johor, Kedah, Kelantan, Pahang, Perlis, Selangor and Terengganu during 1990-2009. Specifically, Perlis had the largest fiscal gap, about 71% of total state expenditure, Sarawak had the smallest fiscal gap with 13.8%, and the remaining states had fiscal gap ranging from 69% (Kedah) to 27.6% (Terengganu).

During the 1990-2000 period, all states experienced similar patterns except for Kelantan, Melaka, Perak and Selangor, and during the 2001- 2009 period, all states except for Sabah, Negri Sembilan, Pahang and Penang. It is also significant to note (see Figure 5a, Appendix 1) that there is not only large interstate disparity in fiscal gap across the country, but even the two revenue rich states of Sabah and Terengganu experienced high levels of fiscal gap. As discussed earlier, this disparity was attributable to their differences in revenue-raising capacity due to favourable endowment of natural resources (petroleum, timber and other mineral), which provide guaranteed revenue inflow to the states (in the form of tax royalties or tax sharing).



Table 5.2: State fiscal gap as a percentage of state expenditures, 1990-2009														
YEAR	JOHOR	KEDAH	KELANTAN	MELAKA	NEGRI SEMBILAN	PAHANG	PERAK	PERLIS	PENANG	SELANGOR	TRENGGANU	SABAH	SARAWAK	ALL-STATE
1990	1.0	51.7	48.9	64.3	23.9	65.4	32.4	48.1	17.9	51.6	-6.9	38.4	14.6	46.5
1991	50.9	64.5	63.4	35.0	35.0	57.9	42.3	67.3	0.3	58.8	7.7	32.8	7.2	47.0
1992	61.4	67.6	48.6	19.5	17.5	60.8	43.1	73.0	16.1	48.7	16.9	5.8	36.1	44.9
1993	55.5	53.2	39.2	-76.1	-178.8	55.1	44.5	42.2	12.0	34.3	10.7	27.9	27.4	37.0
1994	57.1	64.9	50.6	38.5	-1.7	67.0	41.3	75.0	18.5	19.6	21.1	6.4	49.7	43.6
1995	59.5	70.5	43.4	73.3	31.7	73.5	45.6	71.3	41.6	24.2	27.1	24.0	37.6	45.1
1996	60.9	62.5	61.7	52.7	14.6	71.5	35.9	78.0	41.2	-9.0	29.4	32.0	39.5	41.5
1997	40.9	74.8	62.6	70.2	14.4	70.7	36.2	67.7	43.6	22.2	24.7	32.4	41.2	42.4
1998	60.4	72.6	66.9	68.7	31.3	73.0	75.4	73.0	53.0	44.9	25.2	31.4	51.1	49.3
1999	70.4	71.0	77.8	48.3	59.4	76.7	45.3	81.6	55.3	59.5	29.0	31.9	42.6	47.7
2000	76.9	61.3	57.4	54.1	55.9	72.0	45.1	75.1	62.0	59.1	25.2	38.7	53.7	51.3
2001	65.7	71.6	71.3	44.3	63.6	66.9	52.5	72.9	62.5	65.4	-18.5	25.0	20.8	38.1
2002	65.6	67.5	71.5	81.0	69.3	59.2	55.4	71.9	14.5	60.7	-44.6	37.9	0.9	33.9
2003	62.9	73.4	78.1	78.8	60.5	61.3	53.2	78.6	1.4	55.2	-19.5	27.6	-16.8	24.6
2004	53.5	66.1	77.4	74.1	56.6	68.5	49.9	66.6	-9.4	49.3	29.1	20.0	-24.8	20.2
2005	65.8	73.8	74.9	69.3	65.0	70.2	55.6	72.5	-15.2	49.1	69.9	69.8	-33.3	33.2
2006	64.6	78.9	77.6	64.4	52.5	63.7	54.8	72.0	16.1	45.4	79.0	50.8	-21.3	32.4
2007	59.7	71.3	67.0	58.0	60.9	65.3	57.9	74.2	19.2	50.3	81.4	42.2	-6.0	32.7
2008	67.6	79.0	74.0	75.3	68.3	75.8	53.8	77.6	23.5	57.8	83.5	43.7	-40.5	24.1
2009	72.2	81.8	76.0	73.0	64.0	71.7	57.4	75.7	32.1	69.3	81.1	37.5	-3.5	33.3
AVERAGE	58.6	68.9	64.4	53.3	33.2	67.3	48.9	70.7	25.3	45.8	27.6	32.8	13.8	38.4

Source: Calculated from States Financial Statements (various issues).

Given the general acceptance that there is a permanent 'fiscal gap' between expenditure obligations and tax revenues at the state level, the wider fiscal gap, from the state's point of view, meant a stronger bargaining position for the states to get a larger share of federal grant. Hence, the question arises: Should more tax sources be allocated to the states, or should the states be given more fiscal autonomy, and be expected to reduce fiscal profligacy by working within hard budget constraints? As remedial measures have been taken by the federal government in the course of time, the problem of vertical imbalance has become less severe. However, the debates on fiscal federalism in Malaysia at the present time are more focused on the issue of remedying horizontal imbalance rather than vertical imbalance.

### **5.2.2 Horizontal Imbalances/Regional Disparity**

Malaysian states are significantly different from one another in terms of area, population density, natural resources, economic structure and levels of economic and social development. The Third Outline Perspective Plan (2001-2010) used the Development Composite Index to classify Malaysian states as either more or less developed. Despite the various development plans for the past several decades, regional disparity between states still persists, particularly between the developed western states and less-developed eastern and northern states in Peninsular Malaysia as well as in East Malaysia (Sabah and Sarawak). Historically, this is attributable to the fact that the British colonial government developed better infrastructure in the west coast of Peninsular Malaysia, where the tin and rubber industries were located. Table 5.3 and Figure 5b (Appendix 2) reveal the principal disparities among states in terms of size, population, economic activity and natural resources. Perlis, the smallest state in terms of area, is less than 1% the size of Sarawak; Sarawak, Sabah and Pahang make up about 71% of the total area. Perlis's population of 0.24 million people is only 7% of the most populated state of Johor. However, Penang has the highest population density ratio<sup>48</sup> of 1490 compared with Sarawak's 44, Sabah's 20, Pahang's 42 and Terengganu's 79. Selangor, Penang, Melaka and Johor are the most highly urbanised states, while Perlis is predominantly rural. Selangor, Penang and Johor are the manufacturing states in Malaysia and their role in the economy has grown over the years.

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<sup>48</sup> For 1000 persons per square kilometres.

<b>Table 5.3: Selected economic and social indicators of states, 2009.</b>									
State	Area Square Kilometre ( <sup>'000</sup> )	Population (million)	Density Per Square Kilometre	Percentage of Urbanisation	Labour Force ( <sup>'000</sup> )	Incidence of Poverty, % (2009)	SGDP MYR million (2005=100)	SGDP Per Capita (2005=100)	Mean Monthly Household Income Per Capita
Johor	1907.7	3.3	1.7	73.7	1350.0	1.3	52594.0	16088.0	3835.0
Kedah	946.8	2.0	205.0	43.4	732.6	5.3	19500.0	9750.0	2667.0
Kelantan	1502.6	1.6	102.0	36.3	517.8	4.8	10467.3	6405.1	2536.0
Melaka	165.3	0.8	493.0	78.5	290.9	0.5	15733.6	20658.6	4184.0
Negri Sembilan	665.6	1.0	153.0	61.2	402.2	0.7	21521.6	21515.2	3540.0
Pahang	3593.3	1.5	42.0	48.0	622.3	2.1	26084.3	17198.1	3279.0
Perak	2096.7	2.4	112.0	63.2	923.7	3.5	30896.0	12727.1	2809.0
Perlis	81.4	0.2	282.0	38.3	84.3	6.0	3057.4	12900.0	2617.0
Penang	104.4	1.6	1490.0	86.0	707.1	1.2	45785.9	29028.0	4407.0
Selangor	795.7	5.2	674.0	97.2	2173.0	0.7	125645.4	24257.7	5962.0
Trengganu	1293.2	1.1	79.0	55.2	405.6	4.0	15583.3	13900.0	3017.0
Sabah	7361.3	3.2	44.0	55.8	1345.3	19.2	33545.4	10479.7	3144.0
Sarawak	12449.0	2.5	20.0	54.4	1024.2	5.3	53205.5	21251.6	3581.0

Source: Ministry of Finance, Economic Report 2009. \* including Perlis, \*\* including Terengganu, \*\*\* including Sarawak.

Based on state shares in total economy (see Figure 5b, Appendix 2), all states are dependent on agriculture, but the agricultural sector is relatively more important in Johor, Pahang, Perak, Sabah, and Sarawak. The state specialisation of economic activity is heavily dependent on natural resources. Mineral and energy resources are unevenly distributed among the states. The economic mainstay for Sabah and Sarawak is mining as it made the largest in contribution to respective SGDPs, at 13% for Sabah and 22% for Sarawak in 2009. Tin was once concentrated in Perak and Selangor but is currently depleted. Tin production in the country is now overtaken by petroleum and natural gas produced in Sabah, Sarawak and Terengganu. Indeed, these two commodities are the country's valuable exports and have contributed about 40% of the country's total revenue. Other mineral ores are mined in smaller quantities like bauxite in Johor, gold in Sarawak and Terengganu and iron ore in Kedah, Perak and Johor.

The overall picture that emerges from interstate disparities is a wide disparity in income and welfare across states. The disparities across states can be seen through average annual growth rate of SGDP per capita reflecting economic well-being of states, and a composite index of development, providing a more comprehensive measure of well-being of states as well as individuals. These are illustrated below in Table 5.4 and 5.5.

<b>Table 5.4: SGDP per capita by states, 1990-2009 (MYR million, 2005=100)</b>					
<b>Year/ State</b>	<b>1990</b>	<b>1995</b>	<b>2000</b>	<b>2005</b>	<b>2009</b>
Johor	9859.8	13990.7	14172.9	15495.8	16088.4
Kedah	5206.6	7778.7	8306.3	9135.9	9750.0
Kelantan	3727.9	4542.7	5071.1	5462.3	6405.1
Melaka	10119.2	16048.5	16520.2	18201.9	20658.6
Negri Sembilan	11447.4	15713.0	16622.6	18534.8	21515.2
Pahang	10180.7	13104.2	14196.1	15582.4	17198.1
Perak	5664.4	8478.5	10063.0	11348.2	12727.2
Perlis	7465.5	9753.7	11298.9	12148.6	12900.4
Penang	16898.8	25013.2	24771.2	27454.9	29028.0
Selangor	23334.8	28344.0	20027.1	22109.7	24257.7
Terengganu	8987.2	10561.8	12381.0	13335.6	13900.0
Sabah	8207.2	8716.8	8575.9	9409.5	10479.7
Sarawak	15255.6	19718.3	18945.4	20700.0	21251.6
All State	10928.7	14780.2	14382.9	15865.3	17163.7
<b>weighted CV</b>	<b>53.6</b>	<b>53.1</b>	<b>44.1</b>	<b>44.6</b>	<b>44.1</b>

\*The greater the values of weighted CV, the larger will be disparities.

Source: Economic Planning Unit, Prime Minister's Department, Department of Statistic and Ministry of Finance, Economic Report (various issues).

Analysis of SGDP is important as it reveals the level of income generation within the state, and the extent of the income that is channelled to the people for maintaining their standards of living. Higher SGDP implies larger bases for potential state government revenue collections. In general, data on SGDP per capita shows greater inequality among the states than development index. The much larger variation in SGDP per capita is primarily due to differences in natural resource endowments and sources of growth among the states. Penang, Selangor, Melaka, Negri Sembilan, and Sarawak retain their top rankings for the entire period. Kedah, Perlis, Terengganu<sup>49</sup>, Sabah and Perak persistently have SGDP per capita below the all-state average. The remaining states of Johor and Pahang fluctuated around the all-state average over the twenty year period. Terengganu is a petroleum-producing state, but is sixth lowest in terms of SGDP per capita, just slightly better than Perlis, Perak, Sabah, Kedah and Kelantan. Kelantan ranked the lowest throughout the 1990-2009 period with its SGDP per capita at 100% below the all-state average and at 20% in 2000 and 22% in 2009 of the output of the richest state (Penang). The weighted coefficient variation (weighted CV) values suggest that there were reductions in disparities over this period, reflecting the increase in the economic performance in Malaysian states. This is the result of the various policy efforts of the government to alleviate regional disparities in its five year plans. For example, in the Ninth Malaysia Plan 2006-2010, there are five main thrusts towards balanced regional development: i) accelerating development in lesser developed states through improving infrastructure, social facilities amenities in the rural areas; ii) improving the quality of life in rural and urban areas; iii) establishing new regional development authorities (RDAs) in Sabah and Sarawak; iv) enhance higher economic growth through developing growth centres and growth corridors transcending state boundaries; and v) enhancing development of border states through ASEAN sub-regional development cooperation in the Indonesia-Malaysia-Thailand Growth Triangle (IMT-GT), the Brunei Darussalam-Indonesia-Malaysia-Philippines East ASEAN Growth Area (BIMP-EAGA), and the Joint Development Strategy for Border Areas (JDS) (Habibullah, Dayang-Affizzah, and Puah 2012).

However, the differences between the methods used and span of data have produced different results. Hooi, Nuyen and Su (2013) used weighted CV for measuring  $\delta$ -convergence of interstate income disparities and have found that interstate SGDP per capita increased during the period from the mid- 1980s to the early 2000s. The application of another distinctly different method by Phills and Sul (2009, 2007) has indicated that Malaysian states

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<sup>49</sup> Terengganu's revenue from the petroleum activities has been classified under the Supra category in the 2000s resulting in low SGDP per capita (see Table 5.4).

as a group experienced divergence in SGDP per capita during much of the study period. Indeed, the states can be grouped into three clubs, within each of which the members of the club experienced convergence toward a common growth rate. At the same time, they found that the interstate disparities in household income have generally declined and also lower than disparities in output per capita. More importantly, the differences in such outcomes signal the need for better understanding of the mechanisms by which output (SGDP) disparities might be transformed into lower disparities in terms of household income and other broader socio- economic development indicators (Hooi, Nguyen and Su 2013).

Table 5.5 shows the levels of economic and social advancement of different states as measured by the index of development. This composite index combines ten social and economic indicators for states on an equal weightage, including: labour force participation rate, percentage of population between 6-19 years enrolled in school, doctors per 100, 000 population, percentage of urban population, percentage of population with piped water, percentage of population with electricity, motorcars and motorcycles per 1000 population, percentage of population above poverty line income, SGDP per capita and mean monthly household income per capita.

<b>Table 5.5: Malaysia: Economic Development Index, Social Development Index and Development Composite Index by state, 1990- 2005 (1990=100)</b>									
Indicator	Economic Development index			Social Development index			Development Composite index		
	1990	2000	2005	1990	2000	2005	1990	2000	2005
<b>More developed states</b>									
Johor	102.9	131.6	159.0	101.6	134.3	151.6	102.2	132.9	155.3
Melaka	100.8	131.7	164.4	105.5	132.5	157.8	103.2	132.1	161.1
Negri Sembilan	100.7	129.7	157.3	104.9	134.1	159.0	102.8	131.9	158.1
Perak	99.4	131	154.1	100.6	133	156.4	100	132	155.2
Penang	110.6	142.1	168.5	108.3	136.3	158.3	109.5	139.2	163.4
Selangor	112.6	137.3	167.5	107.0	140.6	151.5	109.9	139	159.5
<b>Less developed states</b>									
Kedah	93.9	123.7	147.6	95.7	128.5	154.9	94.8	126.1	151.2
Kelantan	90.4	117.9	142.0	92.2	120.8	145.9	91.3	119.4	143.9
Pahang	96.7	123.2	148.8	100.9	128.2	153.0	98.8	125.7	150.9
Perlis	94.9	123.2	146.8	98.7	128.5	162.1	96.8	125.8	154.4
Terengganu	95.2	125	141.4	96.1	124.7	155.8	95.7	124.8	148.7
Sabah	89.9	117.1	128.0	83.6	110.4	150.2	86.8	113.8	139.1
Sarawak	92.6	122.1	146.5	89.0	126.2	152.1	90.8	124.2	149.3

Source: Ministry of Finance, Third Outline Perspective (2001-2010) and Ninth Malaysia Plan (2006-2009).

Basically, the economic development indices of the more developed states exceeded the national average of 100 in three periods except for Perak in 1990. In 1990, the index for Selangor/ Penang was about 1.2-1.3 times those for Sarawak and Sabah. The indices for all developed states are greater than the all-state average (100) from 1990 to 2005. In 2000, just like economic development index, all states showed improvement in the two other indicators of social and composite development above the all-state average. But in 2005, all states, including less developed states with indices of 128.0-148.8 expanded tremendously. Sabah scored the least for all the three indicators during these three years (1990, 2000 and 2005), while Kelantan and Sarawak were in second place in their relative position. A composite index, which combines the first eight socio-economic indicators indicates that Sabah, Kelantan and Sarawak have comparatively lower levels of living standard compared to other states, as Sabah and Sarawak dropped significantly in their relative positions. In terms of the overall index of development, Penang, Selangor, Melaka and Negri Sembilan retained their top ranking; followed by Johor, Perak, and Pahang and Perlis in the middle; Kedah, Terengganu, Kelantan, Sarawak, and Sabah at the bottom.

The development gaps between states can also be analysed in terms of capital investment inflows in states (new manufacturing investments). Table 5.6 shows the amount of capital investment approved in different states consisting of domestic and foreign investments, while Table 5.7 reveals foreign direct investment (FDI) inflow for the states. The direction of investment was more focussed on developed states (Selangor, Johor, Penang, Perak, Negri Sembilan and Melaka), while Perlis and Kelantan attracted the least investment at a total of MYR 4,967.86 million and MYR 3,494.74 million respectively. This bias toward developed states was due to the availability of infrastructures such as air and sea transport hubs, financial centres and support services.

**Table 5.6: Total capital investment inflow by state, 1990- 2009**

YEAR	JOHOR	KEDAH	KELANTAN	MELAKA	NEGRI SEMBILAN	PAHANG	PERAK	PERLIS	PENANG	SELANGOR	TRENGGANU	SABAH	SARAWAK	ALL- STATE
1990	9.7	17.7	0.1	1.7	5.2	2.0	3.2	0.0	6.4	15.6	34.0	0.9	3.5	100
1991	18.1	2.2	0.3	23.3	4.3	0.4	12.9	0.4	4.5	12.4	17.6	1.7	1.7	100
1992	11.0	1.0	0.0	0.7	6.8	3.2	16.6	0.1	3.9	16.9	9.9	2.4	27.5	100
1993	9.8	9.5	1.7	3.1	7.2	11.8	7.3	3.9	3.5	28.2	8.7	2.0	3.2	100
1994	10.3	27.0	0.1	7.4	8.4	2.5	2.0	5.3	3.8	13.1	14.5	2.7	2.9	100
1995	21.7	10.5	4.2	2.7	9.6	2.1	4.5	1.4	7.0	18.0	7.1	7.9	3.4	100
1996	21.3	18.1	0.2	4.4	5.3	5.0	2.2	4.0	8.4	11.7	5.7	1.6	12.2	100
1997	21.3	21.0	1.6	2.4	4.0	11.8	2.3	0.4	5.0	14.9	7.4	6.1	1.9	100
1998	22.0	3.3	0.3	3.9	3.8	9.8	2.0	0.1	9.6	13.0	23.8	3.1	5.3	100
1999	17.2	4.0	0.1	18.8	2.4	2.0	7.6	0.0	26.2	13.3	6.8	0.1	1.4	100
2000	9.5	3.8	0.1	3.4	7.2	9.0	9.4	0.0	12.8	21.1	0.2	1.0	22.3	100
2001	14.6	4.0	1.0	18.0	11.6	1.7	4.5	0.1	16.7	24.0	0.1	1.2	2.7	100
2002	18.1	4.0	0.1	3.9	5.1	1.7	2.8	0.0	13.7	20.8	25.2	1.9	2.6	100
2003	8.7	3.8	0.2	16.0	7.0	3.4	10.0	0.1	6.3	15.7	1.5	0.5	26.9	100
2004	17.2	21.7	0.4	4.6	3.9	3.5	4.5	0.0	6.5	18.2	0.4	1.0	18.0	100
2005	32.0	6.7	0.5	3.6	1.1	7.1	4.3	0.1	13.5	23.4	0.9	3.4	3.4	100
2006	21.1	26.2	0.1	3.4	4.2	4.1	2.6	0.1	10.9	10.1	5.5	10.0	1.7	100
2007	18.5	26.9	0.2	6.8	4.6	2.6	3.2	0.0	7.0	15.6	8.5	4.7	1.5	100
2008	23.5	5.0	0.2	6.5	1.9	1.8	5.0	0.3	15.0	16.6	1.4	1.4	21.5	100
2009	16.2	5.7	0.5	3.2	2.9	2.0	2.8	0.0	6.4	18.8	1.4	16.2	23.9	100

Source: Economic Planning Unit (EPU), Prime Minister's Department,



**Table 5.7: Foreign direct investment, 1990-2009 (2005=100)**

STATE	JOHOR	KEDAH	KELANTAN	MELAKA	NEGRI SEMBILAN	PAHANG	PERAK	PERLIS	PENANG	SELANGOR	TRENGGANU	SABAH	SARAWAK
1990	9.3	18.4	0.1	2.1	6.5	1.7	3.7	0.0	8.5	17.8	30.6	0.3	1.2
1991	15.3	2.5	0.4	25.4	6.1	0.4	9.3	0.5	5.9	15.3	15.4	1.5	2.0
1992	5.4	0.4	0.0	0.3	7.5	4.0	23.4	0.0	3.5	17.9	13.9	1.5	22.1
1993	9.5	4.2	0.0	4.2	9.3	21.7	2.8	0.2	4.1	29.3	8.8	2.5	3.4
1994	10.9	27.7	0.0	12.5	6.8	3.1	1.7	3.3	5.9	12.8	10.0	2.7	2.7
1995	26.1	14.4	0.0	3.9	15.3	2.9	4.3	0.1	7.0	18.8	1.6	2.9	2.6
1996	27.7	28.1	0.2	3.1	4.4	3.8	0.7	2.6	12.3	5.0	0.3	1.4	10.5
1997	25.4	22.5	0.2	0.8	6.3	14.4	1.9	0.4	3.7	10.3	11.0	2.6	0.5
1998	31.4	3.8	0.1	2.2	4.9	6.5	1.3	0.1	9.8	12.8	19.6	2.0	5.4
1999	16.2	3.2	0.1	20.1	1.9	2.4	2.4	0.0	37.8	8.1	7.1	0.0	0.7
2000	9.4	4.3	0.0	4.5	10.1	9.9	6.8	0.0	18.0	26.5	0.2	0.3	9.9
2001	9.6	2.6	1.0	19.3	12.7	1.4	3.5	0.0	22.6	24.9	0.0	0.3	2.3
2002	13.1	1.5	0.0	4.5	4.7	0.8	0.7	0.0	17.2	15.3	41.1	0.3	0.8
2003	7.1	2.2	0.0	25.3	5.4	1.8	4.0	0.2	9.3	15.2	2.7	0.2	26.7
2004	18.1	37.2	0.1	2.5	3.1	4.1	3.2	0.0	7.9	10.6	0.2	0.2	12.8
2005	32.0	8.5	0.0	3.6	0.6	1.8	4.9	0.0	21.9	21.4	0.0	1.6	3.8
2006	27.7	9.2	0.1	5.3	3.8	4.5	2.4	0.3	19.7	11.1	10.7	4.5	0.8
2007	20.2	18.4	0.1	6.6	6.5	3.5	4.1	0.0	9.4	12.6	10.2	6.5	1.9
2008	11.6	2.8	0.1	4.2	0.4	0.1	3.0	0.1	6.3	11.1	43.7	0.4	16.2
2009	11.6	4.7	0.5	2.2	2.7	0.9	1.8	0.0	6.6	18.1	1.4	23.7	25.8

Source: Economic Planning Unit (EPU), Prime Minister's Department.

### **5.2.3 Regional Disparities and Middle Income Trap Issues**

Regional disparity is one of the most significant challenges to good governance that hamper economic growth and healthy competition among states. Data from Tables 5.3, 5.4 and 5.5 indicate the extent of regional disparities in Malaysia. Developed states like Selangor, Penang, Johor, Perak, Melaka and Negri Sembilan dominated the economic sphere with their manufacturing sector, which has been the engine of growth for the country. This fact is supported by the data from the Tables 5.6 and 5.7 reflecting the importance of manufacturing as the main area of investment in states including FDI.

In conjunction with the objective of the New Economic Model launched in 2010, Malaysia needs to grow more rapidly than in the past to break away from the middle income trap by emphasising a broader structural transformation moving to high productivity in both goods and services. Globally, modern service trade has witnessed higher growth, but in Malaysia modern service exports have been stagnant. Malaysia must take the advantage of the globalisation of service opportunities for growth in the service sector as there remains tremendous scope to invest as an enabling mechanism to become a high income economy (Flaaen, Ghani, and Mishra 2013). Thus, emphasising the services may provide a way out of middle income trap and serves as a source of growth for Malaysia in the future.

As a centralised federation, the federal government has the authority and power to divert the scope of investment to stimulate a shift towards service industries taking the advantage of the globalisation of service. This will enable Malaysia to modernise its economy and transform it into a high-income economy. In other words, all the investments efforts are played out by the federal government with no direct involvement of any particular state governments. Since states have limited role and functions, their scope of investment activities are limited to competition between themselves, particularly in providing incentive schemes like attractive land taxes, property taxes and any other taxes that are subjected to their given functions. Any diversion in Malaysia's focus to the issue of high innovative manufacturing and service sectors have insignificant implications on the state government revenues including transfers, as developed and less developed states continue to rely on the revenues that largely come from the centre. In fact, as state governments derive most of their revenues from mandated fiscal transfers from the federal government, they tend to focus more on expenditure reduction rather than income generation.

Further, as part of the federal government's commitment in helping the regional governments to maximise their economic potential and close the development and income gap between different regions in Malaysia, the new economic development corridor projects

were launched by the federal government in 2007.<sup>50</sup> These initiatives would accelerate economic growth as well as elevate the national income level and the emphasis that has recently given to the service sectors provides a way out of middle income trap and serves as a source of growth for Malaysia. From the perspective of intergovernmental relations, the establishment of these corridor initiatives meets the objective function of the federal government in dominating the revenue but not for the purpose of increasing revenues for the states. Further, economic growth is largely confined to urban centres (developed state), where both manufacturing and services are concentrated, which means that states that are not highly urbanised (less developed states) will remain outside this growth-loop.

Given this situation, the Constitution should be carefully reviewed to make provisions allowing state governments to generate their own revenue so that they can become more competitive and broaden their economic activities. This would be the only way to bring the states into a collective framework of action that can contribute to national economic growth. More importantly, a greater reliance on locally-collected taxes would provide the incentive to govern well and provide higher quality services that guarantee the growth of tax bases in the long run so that facilitating the country towards a way out of middle income trap.

In sum, regional disparities in Malaysia affect fiscal imbalances in the states, including considerable differences in the fiscal performance of the states and social development levels among them. These differences were largely due to the different aggregate tax capacities and mainly originated from differences in the industrialisation level as well as exploitable natural resources particularly revenue derived from forest and mining (including petroleum and gas). The more industrialised states have a broader revenue base compared to less industrialised states which continuously rely on land based-taxes as their main own revenue. Horizontal imbalance gives rise to the complex question of equity requiring interstate fiscal adjustments by the federal government, such as fiscal equalisation program. Regional disparities in the federation should not be allowed to persist as they can have deleterious effects on socio-economic development and negative political implications for the unity of the federation. More importantly, this kind of inequality contradicts the concept of efficiency that can be achieved through competition as suggested in theories like MPF. Hence, the horizontal fiscal imbalance problem can be better revealed by further discussion on disparities in state government finances, and we turn to that discussion in the next section.

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<sup>50</sup> East Coast Corridor Economic Region (ECER),<sup>50</sup> Iskandar Malaysia (formerly known as Iskandar development Region and South Johor Economic Region and the Northern Corridor Economic Region (NCER).

### **5.3 Disparities in State Government Finances**

Inequalities in the economies of states can also be described by disparities in the finances of the state governments.

#### **5.3.1 State Own Revenues**

Table 5.8 shows the marked interstate differences in own source revenue over 1990-2009. Overall, during the period, Sarawak was on the top of the list, having the largest revenue share constituting 37% of the overall total revenue; followed by Sabah 22%; Selangor 10%; Terengganu 7%, Johor 6% and Perak 4%; Perlis had the least share at 0.5% while the remaining states contributed around 2%-3%. In 1990, Sabah and Sarawak shares were 26.9% and 25.2% respectively, which was more than 42-45 times the revenue of the poorest state of Perlis, about three times that of Selangor and Terengganu and about 1.7 times of Johor.

In the early 1990s, Sabah and Sarawak were the leading states alternatively taking the top place on the list. However, after the Asian financial crisis, the own state revenue had decreasing trend in all states and followed by the economic recovery in 2001. In the 2000s, Sarawak managed to become the richest state, its contribution to total state revenue rising from 25% in 1990 to 42.5% in 2009. Sabah, Johor and Terengganu had a significant fall in their relative positions and their contributions to the overall total own revenue. For example, the revenue for Terengganu had shrunk by 4.3% of the overall total compared with 8.9% in 1990. Melaka and Penang, show the most significant increase about two to three times rise in revenue growing from 1% to 5% in its relative contribution. The rest of the states retain their ranking, but experienced very noticeable declines in their contributions to the overall total own revenue.

Table 5.9 reports on state own revenue as a percentage of SGDP showing the large differences in the own revenue/SGDP ratios across states for the period of 1990- 2009. These differences reflected the disparities in their revenue bases (in particular exploitable natural resources) relative to SGDP. The ratios for Sabah, Sarawak and Terengganu were higher than the all-state average, while the remaining states were relatively low.

**Table 5.8: State government own revenues, 1990- 2009, percentage distribution.**

YEAR	JOHOR	KEDAH	KELANTAN	MELAKA	NEGRI SEMBILAN	PAHANG	PERAK	PERLIS	PENANG	SELANGOR	TERENGGANU	SABAH	SARAWAK	TOTAL
1990	16.7	1.7	1.6	1.0	1.9	2.2	3.7	0.6	2.0	7.7	8.9	26.9	25.2	100
1991	7.7	1.6	1.2	1.6	2.0	2.9	3.4	0.4	2.1	6.6	10.2	26.8	33.5	100
1992	3.9	1.4	1.7	2.2	2.5	3.0	3.3	0.4	1.8	6.6	9.2	33.6	30.6	100
1993	4.0	2.3	2.0	5.1	7.7	3.7	3.2	0.7	2.0	7.7	9.9	21.7	30.0	100
1994	4.0	2.4	2.2	2.0	3.1	3.0	3.5	0.4	2.2	9.6	8.2	33.3	26.2	100
1995	4.4	2.2	2.4	1.0	2.9	2.8	4.6	0.5	2.3	10.4	8.6	23.3	34.6	100
1996	4.7	2.6	1.5	2.0	3.4	2.8	4.7	0.4	2.6	15.3	8.4	20.4	31.3	100
1997	6.0	1.9	1.4	1.5	3.5	2.9	5.8	0.5	2.4	14.3	8.7	18.0	33.1	100
1998	5.8	0.0	1.6	1.7	3.6	2.5	2.2	0.5	2.8	11.2	10.7	18.1	37.5	100
1999	5.1	1.9	1.4	1.8	2.3	2.4	5.3	0.4	2.6	11.5	9.7	18.9	36.8	100
2000	4.7	2.9	2.1	1.8	2.5	2.4	5.0	0.4	2.5	11.6	8.3	18.8	37.0	100
2001	6.2	2.1	1.5	3.2	2.1	2.6	4.5	0.5	2.3	9.7	6.0	19.1	40.4	100
2002	6.3	2.4	1.6	1.6	1.9	3.1	4.7	0.5	4.6	10.7	6.7	17.4	38.4	100
2003	5.2	1.9	1.4	1.7	2.2	2.4	4.3	0.4	4.1	9.2	5.7	19.9	41.7	100
2004	6.5	2.5	1.8	1.9	1.9	1.9	4.2	0.5	4.7	10.1	5.3	20.7	38.2	100
2005	5.5	2.8	1.9	2.0	1.8	2.3	4.3	0.5	4.9	10.6	5.3	9.8	48.1	100
2006	5.0	2.9	1.7	1.8	3.1	2.2	4.1	0.4	4.0	10.0	4.7	18.1	42.0	100
2007	5.7	3.9	2.7	1.9	1.8	2.1	3.9	0.4	3.4	9.3	4.6	22.5	37.6	100
2008	4.2	2.5	1.5	1.5	1.3	1.4	3.6	0.3	3.0	8.5	3.6	20.1	48.5	100
2009	4.2	2.4	1.4	1.6	1.5	2.0	3.9	0.4	3.3	7.7	4.6	24.6	42.5	100
TOTAL	5.8	2.2	1.7	1.9	2.7	2.5	4.1	0.5	3.0	9.9	7.4	21.6	36.7	100.0

Source: National Audit Department, General Audit Report (various issues).

Table 5.9: State government own revenue as a percentage of SGDP, 1990- 2009 (2005= 100)														
YEAR	JOHOR	KEDAH	KELANTAN	MELAKA	NEGRI SEMBILAN	PAHANG	PERAK	PERLIS	PENANG	SELANGOR	TERENGGANU	SABAH	SARAWAK	TOTAL
1990	5.72	1.60	2.57	1.15	1.65	1.48	2.06	3.05	0.72	1.18	9.33	12.99	6.93	3.85
1991	2.43	1.42	1.73	1.80	1.22	1.84	1.83	2.10	0.72	0.93	10.15	12.58	8.88	3.61
1992	1.23	1.22	2.61	2.41	1.56	1.88	1.82	1.87	0.63	0.92	9.32	16.49	8.34	3.64
1993	1.17	1.87	2.98	5.35	4.63	2.26	1.68	3.19	0.62	0.99	9.56	10.38	7.86	3.42
1994	1.05	1.78	3.02	1.88	1.71	1.65	1.66	1.64	0.62	1.12	7.34	15.05	6.34	3.12
1995	1.01	1.46	2.98	0.81	1.44	1.37	1.94	1.83	0.58	1.05	6.94	9.69	7.08	2.74
1996	1.13	1.77	2.04	1.69	1.75	1.48	2.10	1.72	0.70	1.61	7.22	9.32	7.33	2.92
1997	1.33	1.19	1.82	1.19	1.72	1.43	2.44	1.75	0.62	1.42	6.90	8.10	7.05	2.73
1998	1.10	1.00	1.76	1.19	1.48	1.04	0.78	1.58	0.61	0.96	7.04	6.52	6.91	2.33
1999	0.93	0.99	1.46	1.19	0.88	0.93	1.79	1.08	0.54	0.96	6.07	6.22	6.53	2.22
2000	0.83	1.46	2.09	1.14	0.94	0.90	1.66	1.30	0.54	0.97	5.21	5.86	6.58	2.20
2001	1.11	1.07	1.48	2.08	0.80	0.97	1.51	1.43	0.49	0.81	3.73	5.97	7.19	2.22
2002	1.11	1.18	1.63	1.02	0.73	1.16	1.53	1.46	0.97	0.88	4.15	5.37	6.73	2.18
2003	1.04	1.06	1.54	1.22	0.93	1.04	1.58	1.33	0.96	0.85	4.06	6.93	8.30	2.46
2004	1.24	1.34	1.94	1.33	0.76	0.79	1.47	1.62	1.05	0.89	3.61	6.92	7.28	2.36
2005	0.90	1.32	1.83	1.23	0.64	0.81	1.30	1.54	0.95	0.80	3.09	2.81	7.95	2.02
2006	0.89	1.44	1.78	1.16	1.18	0.83	1.34	1.36	0.80	0.83	2.97	5.71	7.68	2.20
2007	1.09	2.03	2.94	1.29	0.77	0.88	1.34	1.31	0.72	0.81	3.02	7.60	7.19	2.32
2008	0.95	1.54	1.79	1.16	0.61	0.67	1.45	1.21	0.74	0.82	2.82	7.69	11.15	2.68
2009	0.87	1.34	1.48	1.13	0.63	0.84	1.38	1.49	0.79	0.67	3.23	8.04	8.77	2.42
INDEX	0.51	0.52	0.77	0.59	0.49	0.45	0.61	0.63	0.27	0.36	2.16	3.17	2.84	1.00

The index value for a state is the average of the annual values for that state over the 1990- 2009 period expressed as a percentage of the equivalent value for all states.

Source: National Audit Department, General Audit Report (various issues).

Most of the states show a decreasing trend except for Penang. Terengganu's own revenue as a percentage of SGDP gradually decreased from 9% in 1990 to 3% in 2009, Johor was 5.7% in 1990 and decreased to less than 1% in 2009. In total, state revenues as a percentage of the SGDP only doubled—ranging from one time in Perlis to 2.6 times in Penang. A source breakup of the revenues of the states explains the superior performance of some states vis-à-vis the others. The spread of tax collections among states is uneven in Peninsular Malaysia. Terengganu dominated the scene with a decreasing pattern, collecting around 42% in 1990 and 20.8% in 2009, while Selangor showed an increasing pattern from 11.7% (1990) to 22.8% (2009) (see Table 5a Appendix 3).

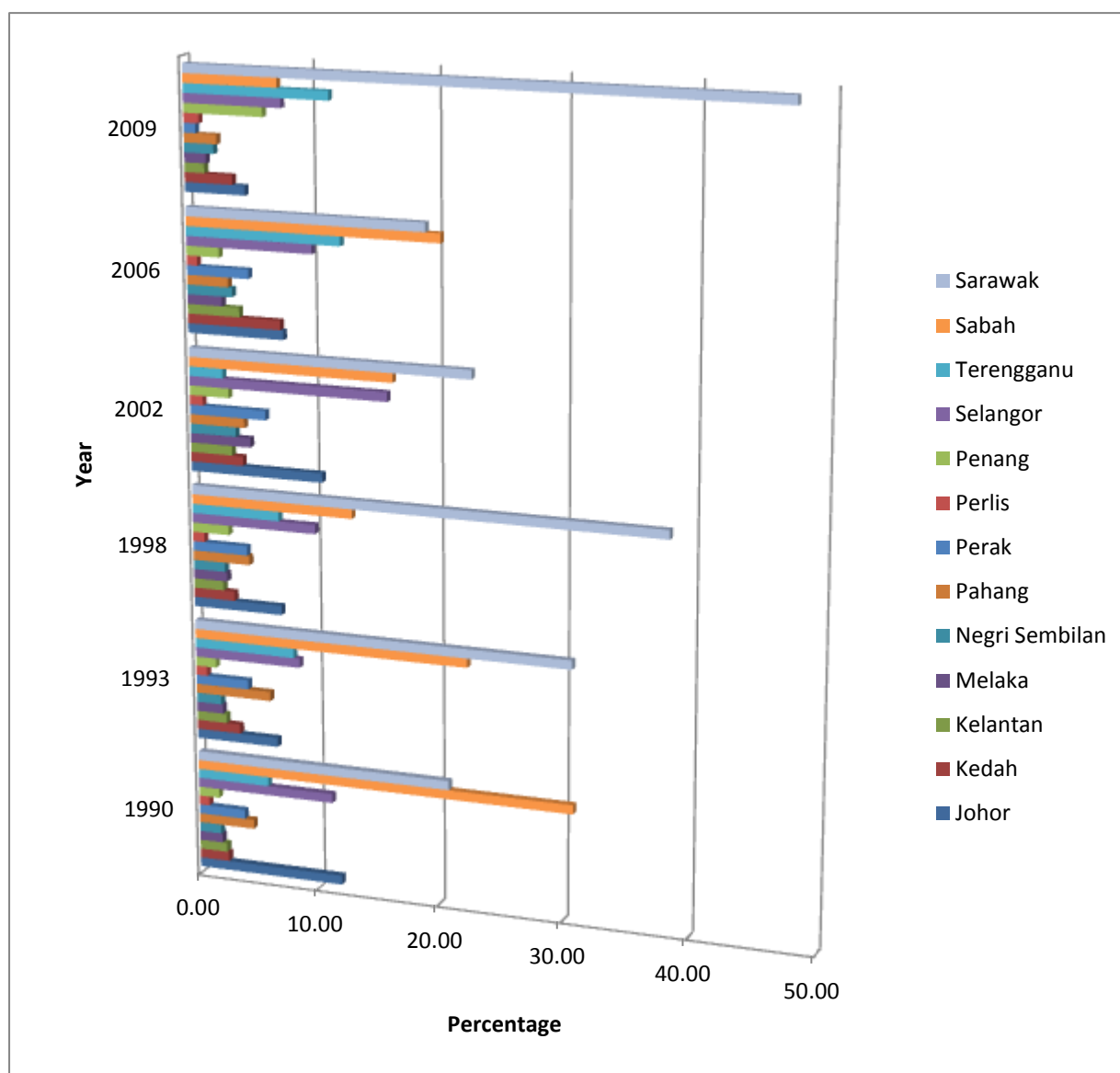
The distribution of non-tax revenue is more even where the spread in categories, such as licences, service fees and other states commercial activities as well as interest receipts. Table 5b (Appendix 4) shows that Selangor raised 25% of total non-tax revenue, Johor 16%, Perak 9.3%, Penang 8.3%, Negri Sembilan 6.5%, Melaka and Terengganu 5%, while the remaining states raised between 4.6% and 1.42%. However, only Terengganu had the exclusive advantage of receiving petroleum royalty of 5% in Peninsular Malaysia, like the other two east Malaysian states of Sabah and Sarawak.

### **5.3.2 State Expenditures**

Figure 5.1 reveals the distribution of expenditure in the states during the 1990-2009 period. Sarawak had the highest share of about 28% of the total, ranging from 18% in 2007 to 47% in 2009. Among the peninsular states, Selangor had the highest share ranging from 11% in 1994 to 16% in 2002. Perlis retained the least share, averaging at 1% for the entire period of analysis. The remaining states accounted for between 2.6% (Penang and Negri Sembilan) and 8.2% (Johor). Meanwhile, Terengganu had scored the top for the average per capita revenue, but fell from first to third place among the peninsular states with 8.1% per annum. The expenditure of individual states can be disaggregated into operating and development categories.

Most of the states except Sarawak and Kedah spent far more on operating than development expenditures. The average ratio for the 1990-2009 period was 64% ranging from 77% in Johor and 47% in Sarawak. Over the 1990-2009 period, all states expenditures increased in real terms, the fastest in terms of annual average growth rates is observed in Terengganu, Kedah, Melaka and Penang. Just like operating expenditure (see Table 5c, Appendix 5), the growths for development expenditures (see Table 5d, Appendix 6) among states varied significantly in the 1990s and 2000s, from 2% per annum (Johor) to 12.8% per annum (Terengganu) compared with a range of development expenditure from -0.1% (Pahang) to 30% per annum (Terengganu).

**Figure 5.1 State government expenditure, 1990-2009 (percentage distribution)**



Source: National Audit Department, General Audit Report (various issues).

The percentage of each state's expenditure to SGDP in Table 5.10 shows marked differences among the states. Sabah state expenditure accounted for 12% of the total state output, followed by Sarawak 9.3%, Terengganu 8.9% and Kelantan and Perlis 5.6-5.7%. The expenditure/SGDP ratios for the rest of the states ranged between 1% (Penang) and 4.3% (Kedah). However, the fluctuated trend was noticeable for all states during this period under review.



**Table 5.10: Expenditure/SGDP ratios of states (in percentage)**

YEAR	JOHOR	KEDAH	KELANTAN	MELAKA	NEGRI SEMBILAN	PAHANG	PERAK	PERLIS	PENANG	S'NGOR	T'RG	SABAH	S'RAWK
1990	5.8	3.3	5.0	3.2	2.2	4.3	3.1	5.9	0.9	2.4	8.7	21.1	8.1
1991	4.9	4.0	4.7	2.8	2.4	4.4	3.2	6.4	0.7	2.3	11.0	18.7	9.6
1992	3.2	3.8	5.1	3.0	2.4	4.8	3.2	7.0	0.7	1.8	11.2	17.5	13.1
1993	2.6	4.0	4.9	3.0	2.1	5.0	3.0	5.5	0.7	1.5	10.7	14.4	10.8
1994	2.5	5.1	6.1	3.1	2.1	5.0	2.8	6.6	0.8	1.4	9.3	16.1	12.6
1995	2.5	4.9	5.3	3.0	2.7	5.2	3.6	6.4	1.0	1.4	9.5	12.7	11.3
1996	2.9	4.7	5.3	3.6	2.6	5.2	3.3	7.8	1.2	1.5	10.2	13.7	12.1
1997	2.3	4.7	4.9	4.0	2.5	4.9	3.8	5.4	1.1	1.8	9.2	12.0	12.0
1998	2.8	3.6	5.3	3.8	2.7	3.8	3.2	5.8	1.3	1.7	9.4	9.5	14.1
1999	3.1	3.4	6.6	2.3	2.8	4.0	3.3	5.9	1.2	2.4	8.6	9.1	11.4
2000	3.6	3.8	4.9	2.5	2.7	3.2	3.0	5.2	1.4	2.4	7.0	9.5	14.2
2001	3.2	3.8	5.2	3.7	2.8	2.9	3.2	5.3	1.3	2.3	3.2	8.0	9.1
2002	3.2	3.6	5.7	5.4	3.0	2.8	3.4	5.2	1.1	2.2	2.9	8.7	6.8
2003	2.8	4.0	7.1	5.7	3.0	2.7	3.4	6.2	1.0	1.9	3.4	9.6	7.1
2004	2.7	3.9	8.6	5.1	2.3	2.5	2.9	4.8	1.0	1.8	5.1	8.7	5.8
2005	2.6	5.0	7.3	4.0	2.3	2.7	2.9	5.6	0.8	1.6	10.3	9.3	6.0
2006	2.5	6.8	7.9	3.2	3.1	2.3	3.0	4.9	1.0	1.5	14.1	11.6	6.3
2007	3.0	7.1	7.9	4.2	2.4	3.0	3.4	5.6	1.0	1.9	17.9	15.0	7.0
2008	2.8	7.4	6.7	4.2	2.3	2.9	3.2	5.6	1.0	2.3	17.0	14.2	8.1
2009	3.1	6.7	5.2	3.7	3.7	3.4	1.0	13.5	4.7	2.1	25.3	7.6	30.0
AVERAGE	3.0	4.3	5.7	3.5	2.4	3.6	3.0	5.6	1.0	1.8	8.9	12.0	9.3

Source: State Financial Statement (various issues).

## **5.4 Intergovernmental Transfers**

The foregoing section has shown the existence of wide regional disparities in own-source revenues and expenditures among the states throughout the entire twenty year period from 1990 to 2009. This section reviews the extent to which federal loans and federal grants might have reduced these fiscal gaps and disparities.

### **5.4.1 Federal Loans**

Historically, the financial arrangements for the Federation of Malaya 1948 stipulate that borrowing power was granted only to the federal government. As a further step towards fiscal autonomy, provision was made for states to contract loans. Further, the Constitutional Commission Report 1957 also acknowledged such requirements for the states with the condition that the states would not compete against each other and borrowing would be the last option for the states. The recommendations were also included in the Federal Constitution of Malaysia in which specified the absolute power of the federal government in controlling the states' borrowing. Specifically, under Article 111(12) of the Federal Constitution the authority of state law to allow state government to make borrowings is made subject to the approval of the federal government. Apart from stating that up to 95% of loan must be contracted from the federal government, the article also makes allowance for other sources of financing not exceeding five years from a bank or other local financial sources for the rest of 5% financing. This rule is applied with the same rigour to all states with no exception made for any particular state (Bakar 2004).

Loans from the federal government constituted an important source of finance to every state government. Table 5.11 reveals the distribution of gross federal loans among the states from 2000-2009. There were no clear patterns in the distribution of federal loans as they fluctuated unevenly over these ten years. On average, Kedah received the largest proportion of federal loans at about 14%, while Perlis and Melaka received the least at about 2%. Pahang, Sarawak and Sabah obtained approximately an equal share of the loan proceeds at about 13% followed by Penang 11%, Selangor 8%, Perak 7%, Kelantan 6% and Terengganu 4%.

<b>Table 5.11: Federal loans to individual states, 2000-2009 (percentage distribution)</b>										
<b>STATE</b>	<b>2000</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>	<b>2004</b>	<b>2005</b>	<b>2006</b>	<b>2007</b>	<b>2008</b>	<b>2009</b>
Johor	1.0	0.6	3.8	0.0	NIL	0.1	NIL	4.9	7.5	23.1
Kedah	4.8	1.3	16.5	24.6	21.7	14.7	23.2	11.3	11.9	12.3
Kelantan	0.0	1.7	6.0	15.4	19.8	6.9	8.2	2.4	1.8	1.3
Melaka	0.1	0.3	NIL	NIL	4.1	10.0	NIL	4.5	NIL	NIL
Negri Sembilan	12.9	7.7	NIL	NIL	2.0	12.5	NIL	NIL	10.6	NIL
Pahang	21.9	0.6	20.1	17.5	5.3	4.9	24.5	14.4	10.6	11.4
Perak	0.5	3.7	8.5	15.2	3.2	0.1	29.5	NIL	NIL	7.7
Perlis	1.6	0.2	NIL	NIL	NIL	4.7	NIL	8.3	NIL	0.9
Penang	13.2	57.6	4.8	5.7	0.6	4.9	NIL	4.5	8.6	5.3
Selangor	2.0	7.2	11.7	NIL	40.9	11.0	NIL	3.4	NIL	NIL
Terengganu	0.5	3.4	7.7	7.3	NIL	8.3	0.9	3.7	NIL	3.7
Sabah	7.7	8.8	5.9	2.0	1.4	8.1	8.9	32.7	33.9	16.8
Sarawak	33.9	7.0	15.1	12.3	1.0	13.8	4.7	10.0	15.2	17.5
<b>TOTAL</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>

Source: Budget Division Department, Ministry of Finance (unpublished data).

The importance of loan to the state governments can be best demonstrated on a per capita basis as set out in the Table 5.12.

<b>Table 5.12: Federal loans per capita, 2000-2009 (2005=100)</b>											
<b>YEAR</b>	<b>2000</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>	<b>2004</b>	<b>2005</b>	<b>2006</b>	<b>2007</b>	<b>2008</b>	<b>2009</b>	<b>AVERAGE</b>
<b>Johor</b>	2.53	3.15	11.71	0.1	NIL	3.55	NIL	19.25	31.74	76.78	14.88
<b>Kedah</b>	20.22	11.12	86.21	82.6	431.42	1038.66	80.36	74	84.87	66.66	197.61
<b>Kelantan</b>	0.02	17.76	38.08	63.36	481.52	597.44	34.95	19.12	16.23	8.44	127.69
<b>Melaka</b>	1.28	5.78	NIL	NIL	208.41	1796.82	NIL	77.05	NIL	NIL	208.93
<b>Negri Sembilan</b>	105.78	130.15	NIL	NIL	75.93	1702.89	NIL	NIL	148.29	NIL	216.30
<b>Pahang</b>	119.84	6.47	134.3	75.26	135.69	440.56	109.26	121.92	97.57	82.09	132.30
<b>Perak</b>	1.67	26.01	35.26	40.96	51.1	3.6	82.57	NIL	NIL	34.57	27.57
<b>Perlis</b>	53.79	12.3	NIL	NIL	NIL	2691.69	NIL	449.73	NIL	41.91	324.94
<b>Penang</b>	69.96	626	30.84	23.85	14.6	424.62	NIL	37	77.54	36.49	134.09
<b>Selangor</b>	3.33	25.04	24.06	NIL	317.78	301.62	NIL	8.57	NIL	NIL	68.04
<b>Trengganu</b>	3.68	54.65	74.59	44.98	NIL	1070.72	5.84	43.54	NIL	36.3	133.43
<b>Sabah</b>	21.02	49.39	19.5	4.31	17.35	361.15	19.32	134.3	151.26	57.09	83.47
<b>Sarawak</b>	116	49.65	63.35	33.18	14.28	780.64	12.95	52.28	86.85	75.94	128.51
<b>ALL STATES</b>	39.93	78.27	39.84	28.35	134.47	862.61	26.56	79.75	53.41	39.71	
<b>CV (%)</b>	1.19	2.15	0.95	1.03	1.32	0.92	1.54	1.56	1.00	0.60	

Source: Budget Division Department, Ministry of Finance.

The range of divergences in loan is indicated by the values of the coefficient of variation (CV) was much greater, fluctuating erratically from 2.15 in 2001 and 0.6 in 2009. Perlis received the most loans on average, about MYR 325 from MYR 12 in 2000 to as high as MYR 2,692 in 2005. However two developed states, Melaka and Negri Sembilan, averaging of MYR 208 and MYR 216 respectively, received higher per capita loans than poorer states. The less developed states like Terengganu, Kedah, Sarawak, Sabah and Kelantan received on average between MYR 130 to MYR 200 during this period. More urbanised states, like Johor, Selangor and Perak, which have more revenue sources received the least amount of loans. The dependence on loans, however, varied from state to state, which can be shown by observing the percentage of federal loan per capita in fiscal gap per capita for each state.

As evident in the Table 5.13, the ratio of federal loans to fiscal gap fluctuated dramatically for all states between 2000 and 2009. For example, Pahang's share of federal loans fluctuated dramatically, falling from 36% in 2000 to 2.4% in 2001 then climbing back up to 149% in 2005 before settling at 23% in 2009. On average, federal loans per capita paid for 77% of Negri Sembilan's per capita fiscal gap, ranging from 33% to as high as 609%. Perlis and Kedah also benefited from federal loans with its average per capita of 66% and 64% respectively ranging from 5.1% to 306% for Kedah and 3% to 646% for Perlis. The remaining states constituted a relatively lower proportion of fiscal gap averaging from approximately -6.1% to 47%. The federal loans not only financed the fiscal gaps, but also provided extra funds to the states, leading to surpluses in states like Penang and Terengganu with negative ratios which raise the question of equality in loan allocation in Malaysia.

Therefore, given the current fiscal arrangement and trends of loan distribution, the risk of fiscal profligacy does exist in the country even with the enactment in 1976 of the Article 111 (2) of the Malaysian Constitution.<sup>51</sup> Indeed, a study by Jalil (2008) shows that the borrowing restrictions imposed on the state governments have not been effective in curbing their spending behaviours. Given the limited scope of responsibility, state governments will stay within 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. The state governments expect that the federal government would not be able to ignore

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<sup>51</sup> This provision stipulates that state law has authority for state borrowing, for a period not exceeding five years from a bank or other financial source subject to the approval of the federal government.

their fiscal woes. This makes them insensitive to the risks of over-spending or borrowing and reduces their incentives to be fiscally responsible.

<b>Table 5.13: Federal loans per capita as a percentage of per capita fiscal gaps, 2000- 2009</b>											
<b>YEAR</b>	<b>2000</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>	<b>2004</b>	<b>2005</b>	<b>2006</b>	<b>2007</b>	<b>2008</b>	<b>2009</b>	<b>AVERAGE</b>
<b>Johor</b>	0.6	1.1	4.0	0.0	NIL	1.3	NIL	7.2	9.7	21.2	4.5
<b>Kedah</b>	10.6	5.1	42.6	33.1	185.4	305.9	15.5	14.2	14.5	11.3	63.8
<b>Kelantan</b>	0.0	9.8	18.4	22.0	134.1	199.7	9.9	5.3	5.0	2.8	40.7
<b>Melaka</b>	0.6	2.2	NIL	NIL	31.2	356.2	NIL	21.2	NIL	NIL	41.1
<b>Negeri Sembilan</b>	41.8	45.0	NIL	NIL	33.4	608.6	NIL	NIL	42.3	NIL	77.1
<b>Pahang</b>	36.4	2.4	56.9	31.4	52.2	148.7	45.7	44.9	26.5	22.6	46.8
<b>Perak</b>	1.2	16.0	18.4	21.7	31.9	1.9	42.6	NIL	NIL	14.6	14.8
<b>Perlis</b>	12.2	2.9	NIL	NIL	NIL	546.2	NIL	90.3	NIL	7.0	65.9
<b>Penang</b>	32.3	321.5	76.9	662.5	-61.1	-1238.0	NIL	67.3	102.8	33.6	-0.2
<b>Selangor</b>	1.2	8.5	8.9	NIL	172.1	177.6	NIL	4.4	NIL	NIL	37.3
<b>Trengganu</b>	1.7	-77.6	-47.5	-54.1	NIL	111.7	0.4	2.3	NIL	1.9	-6.1
<b>Sabah</b>	6.6	29.8	7.0	1.9	11.1	59.1	3.4	24.6	24.5	11.3	17.9
<b>Sarawak</b>	8.0	14.2	532.4	-14.3	-5.7	-190.1	-4.5	-58.3	-12.3	-121.3	14.8

Source: Budget Division Department, Ministry of Finance.

In sum, Malaysian state governments are normally unable to cover consolidated state expenditures with the consolidated revenue as well as federal grants and reimbursements (see Table 4.10, Chapter 4). Although, most states show a surplus in their current accounts in most years, their development expenditure is greater than this surplus, which means that they remain in overall deficit. In some cases, state governments have less to worry about impending fiscal deficits since the federal government consistently provides loans to finance shortfalls. Often, the states borrow under very favourable loan conditions, sometimes even interest free for certain types of development expenditure (Ariff 2001,1991). However, given the current financial situation of the state governments, in particular the lack of a strong revenue base, it would be impossible for most states except the oil-rich states to repay their loans. Indeed, in cases where states have no capacity to pay off their loans, their financial independence is seen as being compromised for the foreseeable future (Rosly 2006).

### 5.4.2 Federal Grants

The system of intergovernmental transfers has been established in the Federal Constitution<sup>52</sup> to reduce vertical fiscal imbalance, redressing interstate disparities and compensating the states for their involvement in federal functions especially in matters of joint responsibilities. The shares of total grant and distribution to each state are prescribed in the Federal Constitution or determined by the federal government and the National Finance Council (NFC) either on a set formula or on ad hoc basis<sup>53</sup>. There are essentially three forms of grants from the federal government to the state governments: tax-sharing grants, general purpose grants, and specific purpose grants (see Table 5.14). The objectives of these grants are varied and include equalisation of performance, compensation for state involvement in federal functions, and helping the state governments to meet state expenditures in joint responsibility matters.

Tax-sharing grants are related to the issue of vertical imbalance, and no equalisation model is incorporated in them. General purpose grants provide funds to the state governments with very little or no restrictions on spending, and no requirements for revenue-raising. Lastly, Specific purpose grants are reserved for some economically backward states for specific expenditures without revenue conditions. All of these grants have been designed primarily for vertical adjustment purposes and distributed on the basis of state population and SGDP per capita.

Table 5.14: Types of federal grants	
Category	Basis
<b>1. Tax-Sharing Grants</b> a) 10% of Export Duties on Tin b) 10% of Export Duties on Iron c) 10% of Export Duties on Other	- Derivation - Derivation - Derivation
<b>2. General Purpose Grants</b> a) Capitation Grants b) Revenue Growth Grants c) Special Grants to: - Sabah and Sarawak	- Population Equally Divided (17%) - SGDP Per capita (66%)

<sup>52</sup> The system is based primarily on straight tax sharing, population, actual cost of projects, the growth of State Gross Domestic Product (SGDP) as well as other socio- economic indicators.

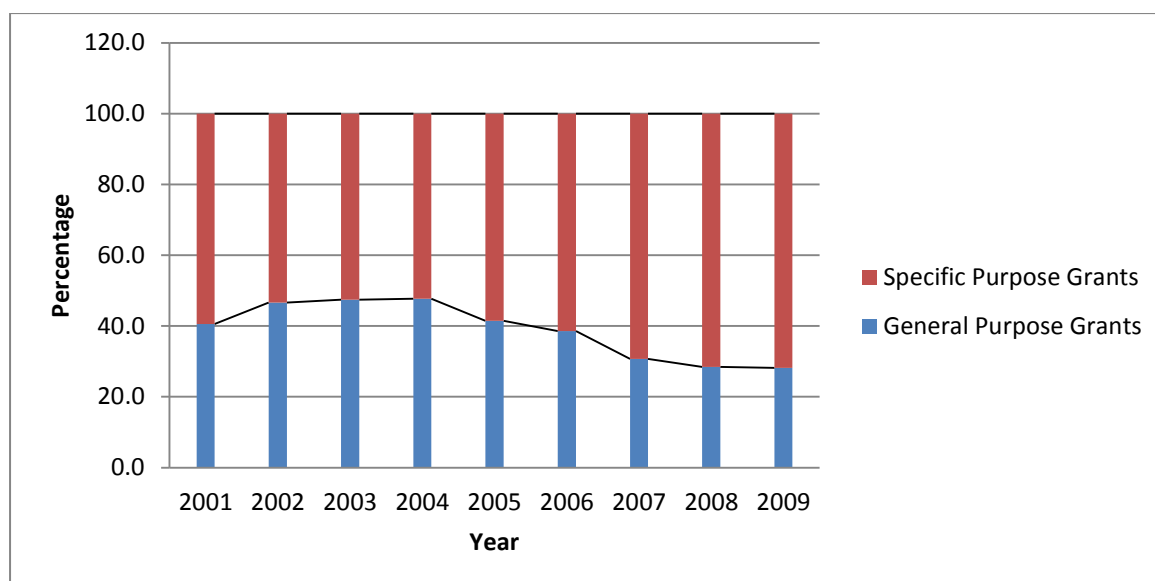
<sup>53</sup> Especially for certain grants which are intended to assist states having temporary differences in their meeting expenditure.

Table 5.14: Types of federal grants	
Category	Basis
<b>(CONTINUED)</b> - Selangor - Kedah d) State Reserve Fund Grant Minerals  <b>3. Specific Purpose Grants</b> a) Road Grant b) Economic Development Grant c) Service Charge Grant  d) Cost Reimbursement Grants - Development Grant of Project  - Operating Grant of Operating Expenditure e) Grants to Religious School/ Institutions (No more available)	- State Average Maintenance Cost Per mile - State of Socio- Economic - 2.5% or 5% of Project Cost Depending on the Degree of State  - Cost For Drainage, Veterinary, Works and Agriculture - 50% For Drainage and Veterinary - Type of School and Number of Students

Source: Government of Malaysia, Constitution of Malaysia, Tenth Schedule.

The breakdown of federal grants shown in Figure 5.2 illustrates a number of important features. It shows that specific purpose grants are the most important category and revenue/tax-sharing grants are no longer in existence as the export duties for two commodities were abolished in the late 1980s and revenue growth grant was reclassified to be under the general purpose grants during the 2001- 2009 period. Specific purpose grants dominated the scene during 2001-2009 and managed to edge over general purpose grants, falling from 60% (2001) to 52% (2004) but rising from 59% in 2005 to a high of 72% in 2009. The proportion of general purpose grants in this period averaged at about 45% between 2001 and 2005, and fell to 39% in 2006 and 28% in 2009.

**Figure 5.2 General purpose grants and specific purpose grants 2001-2009 (percentage)**



Source: Budget Division Department, Ministry of Finance.

### 1. Tax Sharing Grant

Tax-sharing grants were established under Article 110 (3) of the Federal Constitution, the Assignment of Revenue (Export Duty on Iron Ore) Act 1962 and the Assignment of Export Duty (mineral Ores) Act 1964, at the time when state royalty rights to minerals were prohibited unless provided for by federal law. According to this article, 10% of the revenues collected by the federal government from export duties on tin, iron and minerals ores must be allocated to the producing states, but state governments have no control over the structure and the rate of these revenues. However, the payment from the export duty of tin ore has not been made since 1986 due to cessation of tin mining operations following depletion of deposits and no duties on iron ore have been made to states since 1987. Since those years, no new arrangement has been made to replace the revenue losses to the states from these sources (Bakar 2004). Since tax-sharing grants are no longer in existence, federal grants are divided between general purpose and specific purpose grants. Table 5.15 gives an overview of the amount allocated under all sub-categories of these two grants in the last decade.



**Table 5.15: Federal grants to the states, percentage distribution, 2001-2009**

<b>Federal Grants</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>	<b>2004</b>	<b>2005</b>	<b>2006</b>	<b>2007</b>	<b>2008</b>	<b>2009</b>
<b>1. General Purpose Grant</b>									
a. Capitation Grant	36.1	42.8	47.2	46.9	40.0	36.2	29.7	27.8	26.9
b. Revenue Growth Grant	13.1	17.5	15.5	15.7	14.2	13.3	9.6	9.0	8.5
c. Special Grant	0.9	0.8	7.0	6.9	6.2	5.6	6.7	6.1	5.7
d. State Reserve Grant	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
e. Concurrent List Grant	12.1	12.5	11.3	11.5	10.5	10.1	7.5	7.4	7.4
f. Service Charge Grant	6.1	8.4	10.2	9.5	6.3	4.6	4.0	3.5	3.7
<b>Total</b>	<b>36.1</b>	<b>42.8</b>	<b>47.2</b>	<b>46.9</b>	<b>40.0</b>	<b>36.2</b>	<b>29.7</b>	<b>27.8</b>	<b>26.9</b>
<b>2. Specific Purpose Grants</b>									
a. Road Grant	46.2	44.9	41.3	41.9	43.1	40.9	47.2	52.3	52.1
b. Economic Development Grant	9.8	8.8	7.7	7.5	7.0	10.5	7.6	6.7	6.4
c. Cost Reimbursement	2.7	0.0	0.0	0.0	5.8	3.2	1.7	0.2	2.2
d. Religious School	0.0	0.0	0.00	0.0	0.0	0.0	0.0	0.0	0.0
e. Lamp Post to Local Authority	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.3	1.6
f. Waive on Import & Excise Duties for Sabah & Sarawak	0.0	0.0	0.0	0.0	0.0	0.0	6.4	5.9	5.5
<b>Total</b>	<b>63.9</b>	<b>57.2</b>	<b>52.8</b>	<b>53.1</b>	<b>60.0</b>	<b>63.8</b>	<b>70.3</b>	<b>72.2</b>	<b>73.1</b>
<b>Total Federal Grants</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>

Source: Budget Division Department, Ministry of Finance.

## 2. General Purpose Grant

The distinct trend shown in the above table is that there has been a substantial change in the composition and nature of general purpose grants. The trends in the general purpose grants were primarily a result of changes in their absolute size as well as the relative magnitude of capitation grants, revenue growth grants and special grants.

a) Capitation Grant - Under Article 109(1)(a), the federal government makes annual payment to each state to meet their financial requirements based on the population of the state. This is the only unconditional lump-sum grant for fiscal adjustment and is mostly spent for operating expenditure in the current financial year. It is not subject to any spending restrictions or tax effort requirements except following current financial procedure and auditing. The formula for deriving this grant is equitable in the sense that the amount of grant is equated with the number of people residing in a particular state on a sliding scale. If the number of people residing in rich state is high, then a larger

amount is allocated and vice versa. Currently, it is given at the rate of MYR 60 for the first 50,000 persons, MYR 8.50 for the rest 500,000 persons, MYR 9 for the next 500,000 persons and MYR 9.50 after that. The federal government may review and vary the rates from time to time with the approval of Parliament (1991).<sup>54</sup> Although capitation grants increased in nominal value from MYR 244.8 million in 2001 to MYR 333.10 million in 2009, their contribution to total federal grants declined from 12% in 2001 to 8.3% in 2009. This change occurred due to the addition of revenue growth grants in 2003 and the fixed payment of MYR 25.80 million as compensation to the state of Selangor for the federal acquisition of the Federal Territory of Kuala Lumpur. Generally, this grant favours the less populous states as they are assumed to have fewer taxpayers to support their current expenditure commitments. Even though, it is partly designed to fulfil the objective of public services in low revenue and less populous states, the disbursement of this grant to the opposition states of Kelantan and Terengganu<sup>55</sup> in 2003 was delayed (Bakar 2004). It seems insufficient to merely link transfers with the population especially in determining the financial needs of the states. Instead, the grant should be delegated on a more rigorous broad-based framework considering the revenue needs of the states and other socio-economic indicators.

b) Revenue Growth Grant – This grant is a combination of conditional and unconditional grants which are given to the state governments on the principle of revenue sharing between the federal and state governments. Established under the Revenue Growth Grant Act 1977 and the Revenue Growth Grant Act (amended) 1980, revenue growth grants are payable to the state governments if the total revenue of the federal government after deducting tin duties and taxes collected increases by more than 10% in a particular year over the previous year. Subject to a maximum of MYR 150 million, the first MYR 25 million is apportioned equally among the thirteen states, the next MYR 25 million is divided according to the population of each state and the remaining MYR 100 million is shared among states with SGDP per capita below the national average. The flow of funds shows an increasing degree of federal intervention in state functions due to revenue growth grants. Revenue growth grants increased almost ten times in size, from MYR 15.86 million in 2002 to MYR 156.75 million in 2003, before further increasing to MYR 223.02 in 2009 (Budget Division Department, Ministry of Finance). Revenue contributions to the total federal grant ranged from as high as 74% in 2001 to as low as 69% in 2009. Unlike the capitation grant, the formula for calculating eligibility

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<sup>54</sup> The rate was introduced in 1992 to replace the old one used since 1973 to achieve fairer distribution for poorer states on the assumption that the less populous states are relatively poor states (Noh 1991).

<sup>55</sup> Terengganu was under the rule of a party in opposition to the Barisan Nasional led-federal government from 1999-2004.

of each state is considered by including both population and SGDP per capita. Hence, revenue growth grants are more equitable as the poorer states receive more money than rich states. However, the issue of state planning is more difficult as states receive the grant depending on the increase in federal government revenue.

c) Special Grants – Established under Article 112C (1)(a) of the Federal Constitution, special grants go to the states of Sabah and Sarawak to equalise the standards of services of these two states with the other states in the Peninsular of Malaysia. Reviewed at least every five years, these grants have ceased to exist and Sabah now receives another unconditional grant which is determined every fiscal year but is not required to consult the NFC (Jalil 2008). Currently, the state of Selangor is given a special grant in perpetuity of MYR 25.8 million annually in lieu of revenue loss due to acquisition of the Federal Territory of Kuala Lumpur by the federal government. An annual grant of MYR 10,000 is paid in perpetuity to the Kedah Government as compensation for the territories (Penang) handed over to Melaka in 1869. As a percentage of the total federal grants, special grants contributed the most, averaging 2.6% with a range of 1.5% to 3.9%.

d) State Advance Fund Grant – State advance fund grant was created in 1981 to provide cash advance to state governments facing cash flow problems. As there were complex administrative procedures involved in contingencies fund grant, this grant has been developed to replace it and render immediate assistance to state governments, particularly those with limited financial resources in the form of cash advances.

<b>Table 5.16: State reserve fund grants</b>			
<b>State</b>	<b>Eligible Amount</b>		<b>Per capita Amount* (MYR)</b>
	<b>(MYR)</b>	<b>% Shares</b>	
Johor	10610000	6.2	3.2
Kedah	22020000	13.0	11.0
Kelantan	25980000	15.3	15.9
Melaka	9820000	5.8	12.9
Negri Sembilan	7030000	4.1	7.0
Pahang	9560000	5.6	6.3
Perak	13810000	8.1	5.7
Perlis	16270000	9.6	68.6
Penang	8720000	5.1	5.5
Selangor	6110000	3.6	1.2
Terengganu	9270000	5.5	8.3
Sabah	13220000	7.8	4.1
Sarawak	17580000	10.3	7.0
<b>TOTAL</b>	<b>170,000000</b>	<b>100.0</b>	<b>156.8</b>

Note: \*Based on population in 2009.

e) State Reserve Fund Grants – This grant was established under the Article 109(6) and it is provided on ad hoc basis to supplement the general revenues of state governments facing current account deficits. Since 1983, the fund has also provided grants based on the level of economic development, infrastructure and well-being of the respective states. The balance of the state reserves fund as of at 31<sup>st</sup> December 2002 was MYR 113.305 million. The NFC has set the maximum amount of disbursement to MYR 170 million and the maximum amount of entitlement for each state government is given in Table 5.16. The table shows that most less-developed states like Kelantan, Kedah, Perlis and Sarawak enjoyed higher shares of the grant distribution compared to developed states. Thus, the grant would assist these states to implement development projects for enabling them to achieve a faster rate of growth. On the other hand, the per capita basis demonstrates the absence of equalisation effect as developed state like Melaka entitled a quite high grant per capita (MYR 12.90), which is higher than less developed states like Pahang, Sabah and Sarawak in 2009. While this type of grant gives advantage to the less populous states in the long run, Perlis a less developed states received an extremely high per capita grant (MYR 68.60) compared to other states. This is due to long process involved before the claimant states could receive the payment, causing them having difficulties to carry out budgetary planning. Clearly, this grant is made on ad-hoc basis, was merely an attempt to overcome temporary states fiscal imbalances and was not intended to provide a permanent source of income to the state governments (Bakar 2004).

d) Other forms of transfers/payments – These include federal government sponsored projects in states through various government agencies. There is a fund known as the contingencies fund grant which was established under Article 103 of the Federal Constitution. The contingencies fund grant allows financial advances to be made to the states to meet urgent and unforeseen supply expenditure for which no other allocation was provided for in accordance with Financial Procedure Act 1957. In 1992, the fund was increased to MYR 1,000 million from MYR 850 million, but the states are required to pay back these borrowings to the federal government.

### 3. Specific Purpose Grants

Table 5.15 also reveals that this category of grant increased gradually from MYR 1,193.9 million or 64% of all grants to the states in 2001 to as high as MYR 2,868.5 million or 73% in 2009. The rate of growth was negative from 2001-2003 from -11% to -7% per annum, with the highest growth being 11.5% in 2005 decreasing to -1.36% in 2009. Large increases in specific purpose grants mainly occurred between 2004 and 2007 as a result of growth in road grants. These grants increased gradually from MYR

863.9 million in 2001 to MYR 2,042.62 million in 2009 (Budget Division Department, Ministry of Finance).

a) State Road Grant – Article 109(1)(b) of the Constitution guarantees an annual payment for the purpose of assisting the state government in maintaining state roads, municipal roads, roads to low cost housing areas, and back lanes. These rates have been revised a number of times over the years, taking into account the increased costs of transport, labour, materials, and administration. State road grants, were always the largest grants in this category during the period 2001- 2009, they remained relatively stable, contributing between 41% and 55% to revenue. Current rates for 2009 are given in Table 5.17. In terms of distribution pattern, all the states have almost equal shares in this grant, ranging at 7-10% for the total cost of standard roads and 7-11% for total substandard roads respectively. The amount of road grant is obtained by multiplying average cost of maintenance of state roads (state average) per mile by the total length of state roads registered in the last financial year. Developed states with good network of lengthy roads require more maintenance job and less developed states, particularly those states that are prone to flooding (Kelantan, Pahang and Terengganu) are also taken into the consideration. However, difficulties in obtaining correct data on the mileage of roads has meant that some states receive more than their actual entitlement while others receive less.

<b>Table 5.17: Road grants</b>						
<b>State</b>	<b>Standard Roads</b>		<b>Per capita Amount*</b>	<b>Substandard Roads</b>		<b>Per capita Amount*</b>
	<b>MYR Per mile</b>	<b>% Shares</b>	<b>MYR Per mile</b>	<b>MYR Per mile</b>	<b>% Shares</b>	<b>MYR Per mile</b>
Johor	10845	7.6	0.003	7527	8.2	0.002
Kedah	10564	7.4	0.005	7450	8.2	0.004
Kelantan	10353	7.2	0.006	7379	8.1	0.005
Melaka	10549	7.4	0.014	7380	8.1	0.010
Negri Sembilan	9850	6.9	0.010	7390	8.1	0.007
Pahang	9969	7.0	0.007	7498	8.2	0.005
Perak	12146	8.5	0.008	6730	7.4	0.003
Perlis	11378	8.0	0.005	7409	8.1	0.031
Penang	11144	7.8	0.047	0	0.0	0.000
Selangor	9470	6.6	0.006	6837	7.5	0.001
Terengganu	11853	8.3	0.002	8530	9.3	0.008
Sabah	13768	9.6	0.012	9670	10.6	0.003
Sarawak	10995	7.7	0.003	7471	8.2	0.002
<b>TOTAL</b>	<b>142884</b>	<b>100.0</b>	<b>0.057</b>	<b>91271</b>	<b>100.0</b>	<b>0.036</b>

Note: \*Based on population in 2009.

For example, the federal government made an adjustment through deductions of grants received in 1997-1999 due to changes in the basic state road average causing all states were overpaid by a total MYR 106 million. This adjustment payment takes a long process even after a complaint from the National Audit Department.

b) Economic Development Grants – These grants are intended for less developed states to balance economic and social disparities between states and promote state development as spelled out in the New Economic Policy (NEP). An annual grant of MYR 100 million is distributed to the state governments for the purposes of economic development, development of infrastructure, and improvement of quality living. Federal government and State Economic Planning Units are responsible to review the socio-economic indicators determining the share of each state. Spending conditions with regard to project specification, organisation and control of programmes are defined by the federal government, thus imposing significant constraints on state flexibility in decision-making on expenditures. Economic development grants, on average, represented about 7.8% of total federal grants, although their amount varied over these nine years. Their contribution decreased from MYR 182 million in 2001 to MYR 167.09 million, before increasing to MYR 268.4 million in 2006 and MYR 271.13 in 2007, but decreased to MYR 245 and 250 million in 2008 and 2009, respectively.

c) Service Charge Grant – This grant was made in accordance with Article 80(5) of the Federal Constitution and the NFC's decision in 1978. Here, a grant of 5% of the project cost is payable to the state when 50% or more staff involved in the implementation of a federal project is supplied by the state. However, if the state staff involvement is less than 50%, the state is allowed to claim an amount equivalent to 2.5% of the total cost of the project from the federal government.

d) Cost Reimbursement Grants – These grants are provided by the federal government to the states in support of specific programs holding joint responsibility. Development expenditures approved by the federal government, including agriculture, veterinary, drainage projects, and works, are fully reimbursed on an annual basis by the federal government. The federal government also pays 50% of operating expenditures of the Welfare Department, State Drainage Department and Veterinary Department. Cost reimbursement grants were MYR 50.78 million in 2001, with no grants for 2002, 2003 and 2004. The grant reappeared in 2005 at MYR 142 million, but decreased sharply from MYR 81.91 million in 2006 to MYR 6.49 million in 2008 before a steep increase to MYR 87.91 million in 2009.

e) Grant to Religious Schools and Institutions – Since 1956 a special grant to religious schools and institutions had been created under the purview of the Ministry of Education to assist any registered religious school (with students equal or more than 35) not maintained by the Ministry of Education under the Education Act of 1961 or by the state government. Table 5.18 shows that the trends in federal grants are determined by the levels of federal grants to the states in relation to GDP, federal expenditures and revenues, and state receipts and expenditures.

<b>Table 5.18: Federal grants as percentages of federal expenditure, federal revenue and GDP; and state expenditure and state receipt: 1990-2009 (2005=100)</b>					
<b>FEDERAL</b>				<b>STATE</b>	
<b>Year</b>	<b>Grant/ Expenditure</b>	<b>Grant/ Revenue</b>	<b>Grant/GDP</b>	<b>Grant/ Expenditure</b>	<b>Grant/ Receipt</b>
1990	4.17	3.73	1.60	15.70	22.54
1991	4.13	3.83	1.54	17.80	26.39
1992	3.29	3.19	1.21	17.63	22.57
1993	3.42	3.44	1.13	18.96	22.26
1994	3.06	3.36	1.02	19.4	22.33
1995	2.87	2.98	0.83	17.77	20.72
1996	2.61	2.69	0.74	17.07	18.20
1997	2.40	2.67	0.67	16.90	18.37
1998	3.09	2.84	0.70	19.46	25.08
1999	3.51	3.03	0.76	24.04	29.08
2000	4.14	3.13	0.78	24.07	32.09
2001	2.35	1.90	0.57	18.61	30.76
2002	2.40	1.93	0.55	22.08	38.50
2003	2.34	1.91	0.54	22.95	33.91
2004	2.21	1.85	0.48	23.77	32.28
2005	2.35	2.00	0.48	25.53	27.08
2006	2.24	1.94	0.46	22.54	28.16
2007	2.72	2.37	0.56	27.35	41.67
2008	2.57	2.10	0.50	26.72	33.88
2009	2.82	2.17	0.59	29.98	58.61

Note: Grant includes federal reimbursement.

Source: Ministry of Finance, Economic Report (various issues).

This table demonstrates similar patterns of breaking point for the share of grant as a percentage of expenditure as well as revenue at the federal and state level during the 1997-2001 period for Malaysia due to the Asian financial crisis. Federal grants clearly represent a very small share of GDP, accounting for 1-1.6% from 1990 to 1994 and less than 1% in the rest of the entire period. In the 1990s, prior to the crisis, high GDP positively affected the revenue and led to the constant decline in the federal grants from 3.7% of total federal revenue in 1990 to 2.8% in 1998. However, since 2001, the economic recovery has improved this ratio to an average of 2%. This situation reflects that total federal grants are too small compared to total federal government revenue and perhaps inadequate to balance out state governments' accounts. The declining trend of grant as a percentage of total federal expenditure in the 1990s continued from 4.17% in 1990 to 2.40% in 1997 before increasing to 3.09% in 1998 to 4.14% in 2000. Indeed, in 2001, several fiscal stimulus packages had further attributed to this fall, followed by the fluctuating patterns around 2%- 3% for the rest of the period, reflecting an insignificant contribution overall. At the state level, the contribution of federal grants both to total receipt and expenditure for this period were equivalent to about 18-59% and 16-30% respectively, and fluctuated in an upward trend indicating either the increased reliance of the state governments on federal grants or an increase in the dominating power of federal government over state governments in Malaysia. Clearly, as a percentage of the state government expenditure, grants have a smaller value and slower increase than as a percentage of state government receipt, leading to increasing fiscal deficit due to difficulties in raising revenue. Thus, in most years, federal transfers are still far from enough to fill the fiscal gap, in other words, the state governments still need additional resources to fill this gap.

The percentage distribution of federal grants received by each state during 2001-2009 is shown in Table 5.19. Despite the limited data, it is clear from the pattern of distribution that there is a significant difference in total payments allocated, with Sabah receiving the highest and Perlis the lowest. Sabah received 17% of total federal grants, which is almost 6.5 times that of Perlis and about one to six times the amounts allocated to other states. Table 5.20 reveals the variations in real federal grants per capita among the states. Federal grants per capita for states varied substantially from their earlier total values. Sabah received the most with an average of MYR 698 between 2001 and 2009, which was about four times all-state average, between one to three times the amounts allocated to Sarawak, Selangor and Penang, and three times that of Perlis which received the least among all states. The dispersion of federal grants per capita among the states widened to its largest in 2005, 84% and gradually fell to 68.5% in 2009 (Table



5.20). The trend in disparities of per capita federal grant receipts is shown by the values of the coefficients of variation (CV), increasing from 77% in 2001 to 84% in 2002 and 2005 then decreasing to 74% in 2006 and declining to 68% in 2009.

<b>Table 5.19: Federal grants to individual states, 2001-2009 (percentage distribution)</b>													
YEAR	JOHOR	KEDAH	KELANTAN	MELAKA	N'SEMBILAN	PAHANG	PERAK	PERLIS	PENANG	SELANGOR	T'GANU	SABAH	SARAWAK
2001	8.6	8.6	8.8	2.9	3.9	6.2	9.4	3.2	4.0	12.5	5.9	15.7	10.3
2002	8.1	8.3	6.6	3.2	4.3	7.3	8.5	2.8	4.8	14.6	5.7	15.4	10.5
2003	7.9	8.7	6.9	3.4	4.2	6.9	8.9	3.0	4.4	13.6	5.5	16.8	9.9
2004	7.8	8.3	6.5	3.5	4.0	7.1	8.9	3.1	4.4	14.0	5.0	16.8	10.6
2005	7.3	7.5	9.3	2.9	3.5	6.5	7.6	3.0	3.6	11.7	6.1	20.4	10.4
2006	8.8	7.3	7.9	3.1	4.3	6.4	8.3	3.0	3.8	13.6	5.8	15.9	11.7
2007	9.0	6.7	6.2	2.7	3.4	6.3	7.8	2.1	3.4	13.9	5.5	16.9	16.1
2008	9.7	6.6	5.0	2.5	5.1	5.7	7.6	2.1	2.9	13.5	5.3	17.8	16.2
2009	10.5	6.3	6.6	2.6	4.8	6.0	7.3	2.2	3.0	12.8	5.5	15.9	16.4
TOTAL	77.8	68.4	63.9	26.8	37.6	58.4	74.4	24.4	34.4	120.3	50.1	151.7	112.0
AVERAGE	8.6	7.6	7.1	3.0	4.2	6.5	8.3	2.7	3.8	13.4	5.6	16.9	12.4

Source: Budget Division Department, Ministry of Finance.

<b>Table 5.20: Federal grants per capita, 2001-2009 (MYR, 2005 =100)</b>															
YEAR	JOHOR	KEDAH	KELANTAN	MELAKA	N'SEMBILAN	PAHANG	PERAK	PERLIS	PENANG	S'GOR	T'GANU	SABAH	S'WAK	ALLSTATE	CV
2001	116.6	173.3	205.9	139.9	154.7	167.4	254.4	40.5	605.4	312.0	84.1	594.6	163.4	168.8	76.5
2002	109.9	169.0	154.1	156.5	170.4	196.9	231.0	36.0	741.7	369.6	82.2	584.9	165.2	170.1	84.0
2003	109.5	179.7	161.7	168.9	169.5	188.2	242.1	39.1	677.0	350.7	80.3	636.8	156.9	171.8	81.6
2004	102.3	173.0	150.5	185.1	158.4	185.1	232.4	44.3	658.4	359.2	58.1	580.3	158.2	164.5	80.5
2005	101.8	165.9	227.9	164.5	147.0	181.7	211.3	46.7	579.5	319.8	75.1	747.7	163.1	174.6	84.1
2006	125.9	166.7	199.1	185.0	187.8	184.6	237.6	47.4	629.8	385.7	73.7	602.1	188.9	180.3	73.8
2007	172.1	204.2	210.2	215.5	196.9	240.3	299.5	45.4	743.1	525.5	93.4	857.9	343.5	240.8	76.7
2008	192.0	210.3	168.6	207.3	307.1	224.2	300.9	49.4	652.2	539.6	85.3	888.0	358.7	247.0	74.2
2009	201.9	202.8	221.2	225.4	293.3	239.3	290.0	51.3	683.8	519.6	88.4	795.0	363.0	247.3	68.5
AVERAGE	136.9	182.8	188.8	183.1	198.3	200.8	255.5	44.5	663.4	409.1	80.1	698.6	229.0	196.1	77.8

Source: Budget Division Department, Ministry of Finance.

Thus, it is clear that there has been no incentive for states to exploit their own source of revenue as they tend to concentrate their efforts on attempting to obtain a larger share of federal grants rather than improving their tax collections to strengthen their own revenue performance. This is evident from the fact that ever increasing amount of tax arrears, up to 30% of total income for some states, is the most pressing financial problem for most states (Jalil 2011). To make matters worse, although the federal system in Malaysia has institutionalised arrangements to assist the states through federal grants, the design of the grant system does not prescribe the formulae by which grants are to be determined and distributed. There are no needs or performance-based measures to determine the allocation of grants on a more just and efficient basis. We turn to the implications of the intergovernmental fiscal transfers in the form of grants on the problem of equalising fiscal gaps and state government efficiency.

#### **5.4.3 Implications of Intergovernmental Fiscal Transfer in Malaysia**

Intergovernmental fiscal transfers/grants are justified in the literature on rationales of equity (Jalil 2008; Bakar 2004), but the current system of intergovernmental transfer in Malaysia has given less direct attention to address the problem of revenue per capita equity across states. Jalil (2008) has argued that in Malaysia only the capitation grant is aimed at reducing horizontal gap between the states, but this grant by itself is unable to resolve current problems. Most transfers/grants in Malaysia are established under various provisions of the Law and Constitution, resulting in greater predictability, particularly from the perspectives of state governments. Predictability is important as it enables recipients to better plan their budgets for the following fiscal year and minimise the possibility of large swings in resource availability that compromise service delivery. However, most of the time the rules have not been particularly explicit with regard to both the amount of grant and the conditions under which these grants are disbursed (Jalil 2008). The formula for grants has frequently been changed under discretion of the federal government, particularly, for the capitation and state road grants. Revenue growth grants are not paid on a regular basis, even though they are based on a simple formula.

Although the National Finance Council (NFC) has been established as a consultative forum for state representatives to claim grant allocations, recommendations made by NFC are non-binding and purely advisory which may be ignored by the federal government. As a result of the 'political supremacy' of the federal government in the council, the federal government has ability to manipulate the state governments into agreeing on certain financial matters as most chief ministers (from the state legislative assemblies) are from the ruling party at the centre, whose place and candidature in the government is made by the central executive

committee of the ruling party, so they tend to toe the line of the federal government rather than go against it for their state's interests (Bakar 2004).

Furthermore, most grants in Malaysia are made on a conditional basis, and the federal government continues to exercise control over the extent and the quality of state services as well as state development expenditures. As conditional grants are desirable in the interest of nation-wide uniformity and equality, they could be used by the centre to put political pressure on states that are ruled by a different political party from the centre. Moreover, conditional grants limit the financial freedom of the state governments to spend resources according to local preferences. It can be argued that this practice of intergovernmental transfers tends to make state governments supplicants for financial assistance from the federal government and unwitting hostage to the conditions and expectations of the federal government.

Even if the rules governing grants are clearly defined and adequately enforced, such rules might undermine the hard budget constraint and pose a danger on the stability of the economy. This soft budget constraint has sent the wrong message to the smallest and poorest states as fiscal indiscipline is not punished but even rewarded with increased transfer, thus, reducing their incentives for fiscal efforts. An example that is worth emphasising here is the state reserve fund grants which was purposely created to help state governments with deficit problems in their current account. The state reserve fund grant has a role similar to 'rainy day funds' in the US, but even though both serve the same purpose, the one in the US is akin to voluntary saving constituted by contributions from and managed by the state governments without intervention from the federal government (Jalil 2008). On the other hand, in Malaysia, there are no conditions associated with the causes of the deficit that are attached to the disbursement of the grant. Indeed, the creation of state advance fund in 1981 to replace the contingency fund grants further deteriorated the move of establishing hard budget constraints for state governments. The grant allocation needs to be stricter, and especially not reward those states which face a deficit due to their undisciplined behaviour. Grants should be disbursed to the state governments only in the case of deficits that are due to uncontrollable external or internal factors such as fluctuations in inflation rate.

Table 5.21 reveals the extent to which intergovernmental transfers in Malaysia (which are included in total revenue in Column 2 but not in own revenue in Column 3) manage to equalise fiscal gaps across states. Column 7 clearly shows that the own source revenue per capita of the state governments differs widely across states. In the period from 1990 to 1999, own revenues for states ranged from 13% of the average for Negri Sembilan to 309% for Sarawak. Even with the exclusion of Sabah and Sarawak, there is still a huge gap between Negri Sembilan and Terengganu which has own-source revenues per capita of 195% of the national average. When federal transfers are taken into account, as shown by Column 8 (the

reason is, total revenue includes transfer components), the range has narrowed slightly. Total revenue per capita varies from 31% of the national average to 248%. However, the remaining huge gap suggests that federal transfers are far from fully equalising.

<b>Table 5.21: Regional inequalities in fiscal revenue (1990-1999 and 2000-2009)</b>								
	1	2	3	4	5	6	7	8
1990-1999	Population (million)	Total Revenue (million)	Own- Source Revenue (million)	% Own Source Revenue (3/2*100)	Own- Source Revenue Per Capita	Total Revenue Per Capita	(5) to Total of Own- Source Revenue Per capita	(6) to Total of Total Revenue Per capita
Johor	2.35174	696.62	213.27	30.62	90.69	296.21	0.22	0.55
Kedah	1.48628	252.23	152.55	60.48	102.64	169.70	0.25	0.31
Kelantan	1.35151	259.41	76.23	29.39	56.40	191.94	0.14	0.35
Melaka	0.58259	492.88	146.57	29.74	251.57	846.01	0.61	1.56
N' Sembilan	0.77777	427.75	409.95	95.84	527.09	549.97	0.13	1.02
Pahang	1.17054	513.51	238.58	46.46	203.82	438.69	0.50	0.81
Perak	2.15424	449.80	487.93	108.48	226.50	208.80	0.55	0.38
Perlis	0.20536	84.91	91.83	108.16	447.17	413.45	1.09	0.76
Penang	1.19291	236.79	249.07	105.19	208.80	198.49	0.51	0.37
Selangor	2.58085	1261.49	785.69	62.28	304.43	488.79	0.74	0.90
Terengganu	0.88589	767.08	708.90	92.42	800.21	865.89	1.95	1.60
Sabah	2.05993	2160.75	1749.80	80.98	849.45	1048.94	2.07	1.94
Sarawak	1.85830	2495.42	2358.46	94.51	1269.15	1342.86	3.09	2.48
Total & All-State Average	18. 65792	10098.63	7668.83	75.94	411.02	541.25	1.00	1.00
2000-2009								
Johor	3.06236	648.12	417.44	64.41	136.31	211.64	0.39	0.49
Kedah	1.83209	296.86	235.00	79.16	128.27	162.03	0.37	0.38
Kelantan	1.49393	261.18	80.09	30.67	53.61	174.83	0.15	0.41
Melaka	0.71101	250.39	151.84	60.64	213.56	352.17	0.62	0.82
N' Sembilan	0.94185	216.61	351.40	162.23	373.09	229.98	1.08	0.54
Pahang	1.42208	468.58	201.87	43.08	141.96	329.50	0.41	0.77
Perak	2.26772	484.52	449.62	92.80	198.27	213.66	0.57	0.50
Perlis	0.22383	72.45	118.99	164.23	531.60	323.70	1.54	0.75
Penang	1.47086	399.86	186.46	46.63	126.77	271.86	0.37	0.63
Selangor	4.68025	1157.99	851.76	73.56	181.99	247.42	0.53	0.58
Terengganu	1.00664	852.52	470.42	55.18	467.32	846.89	1.35	1.97
Sabah	2.90158	1901.81	1632.20	85.82	562.52	655.44	1.63	1.53
Sarawak	2.32304	3427.02	3276.29	95.60	1410.35	1475.23	4.07	3.44
Total & All-State Average	24.33724	10437.92	8423.39	80.70	346.11	428.89	1.00	1.00

Source: Based on calculation by Jalil (2008).

Hence, the gap continues to exist because some of the richer states actually receive more grants than the poorer ones. This is notable in the case of Sabah and Sarawak which are entitled to special grants from the federal government under the Constitution despite their relative prosperity. Over time, the gap between the richest and the poorest states appears to decrease slightly after the disbursement of transfers. This can be explained by the fact that even though there is general increase in revenues across states, the revenues of some of the poorer states seem to grow at a higher rate than those of the richer states. For example, Kedah in the period of 1990-1999 has an own source revenue of 25% of the national average which grew to 37% of the national average for the period 2000-2009. However, the gap between the rich and poor states still persists and federal transfers have managed to equalise only a small part of the difference. For example, omitting Sabah and Sarawak, Terengganu has total revenues per capita standing at about five times the amount available for Kedah and Kelantan.

## **5.5 Conclusion**

There have been considerable interstate disparities in per capita incomes, SGDPs and living standards across states, and while some indicators have improved, in many other aspects disparities still persist. The contributing factors to these disparities include the differences in area, population density, natural resources, and the structure and pattern of economic activity. Despite the many shortcomings of the intergovernmental fiscal transfers system, grants and loans from the federal government have made only a small difference in closing the fiscal gap between states' own revenues and development expenditure requirements, even providing positive balances to states in some instances. The proportion of federal grants to state receipts has remained constant over the years, but its contribution to expenditures is somewhat larger and has increased over the years.

The data show that state dependency on federal government is growing, and state governments were unable to finance their expenditure without transfers from the federal government, which shows that the fiscal federalism system in Malaysia is currently falling drastically short of the hard budget constraint suggested by MPF theorists. If the state governments are unable to generate the revenue necessary for their expenditures and run excessive deficits under present conditions, the federal government would have to bear the consequences. In other words, if debt grows at a rate faster than the economy, it will eventually exceed the nation's ability to repay it.

The soft budget constraint currently practised in Malaysia poses risks that can undermine the public finance management as well as economic well-being of the whole country at large. This situation is further worsened when the state governments mistakenly assume that ready

help is available to them from the federal government, but the federal government actually has inadequate financial capacity to help the state governments. The detailed data elaborated in these two chapters show the extent of vertical fiscal imbalance, fiscal deficit, shortage in states' own revenues and state dependency on federal governments. They highlight the pernicious problem of fiscal imbalance in the relatively centralised federal structure in Malaysia and necessitate the analysis of decentralisation with greater fiscal autonomy for states and hard budget constraints as proposed by MPF theorists.

## **CHAPTER 6**

### **RESEARCH APPROACH AND METHODOLOGY**

#### **6.1 Chapter Aims and Description**

This chapter provides details of the approaches adopted in this study for analysing the fiscal consequences of the Malaysian federal system from the perspective of market preserving federalism (MPF) theory. Following the analysis of the MPF theory, the system of fiscal decentralisation in Malaysia is analysed by focusing on three main aspects: a) the relation of fiscal decentralisation and regional growth, b) the existence of fiscal incentives, and c) regional competitiveness and state efficiency in the federal system. The chapter consists of three main sections dedicated to each model, where the theoretical framework, variables and econometric techniques of estimating each model are explained in detail.

The first part, the theoretical framework for fiscal decentralisation and regional growth develops an empirical model for measuring the impact of fiscal decentralisation on revenue and expenditure in promoting regional economic growth. The study uses a panel time series analysis consisting of unit root tests, cointegration estimation and panel Dynamic-OLS (DOLS). The second theoretical framework of fiscal incentive develops empirical models for measuring the effects of fiscal incentives for improving the revenue-expenditure link at the state level and for promotion of business investment by Malaysian states. Traditional panel data regression models (pooled-OLS, fixed effect and random effect models) are used for this purpose. The third model examines regional competitiveness with different aspects of state government efficiency from the MPF perspective. In this part of the study, Data Envelopment Analysis (DEA) is used to construct a measure of technical efficiency of the thirteen Malaysian state governments, and finally a Tobit panel data regression is applied to investigate factors that influence technical efficiency. After the elaboration of these theoretical models, the chapter ends with a note on the wide range of secondary data used in the analyses and some reflection on the econometric issues in analysing the data.

#### **6.2 Theoretical Framework of Fiscal Decentralisation and Regional Growth Model**

The theory of market preserving federalism (MPF) emphasises the critical importance of fiscal decentralisation and the reduction of politically motivated distortions in markets, and advocates this approach as being particularly useful for developing economies (Qian and Roland 1998; McKinnon 1997; Qian and Weingast 1997; Wildasin 1997; Weingast 1995).



MPF proponents claim that through appropriate decentralisation, particularly in regard to information and state power, federalism can establish conditions for incentives to reduce soft budget constraint problems, promote interjurisdictional competition for greater economic efficiency and for limiting the scope for state predation on private businesses (Qian and Weingast 1997). Due to the pre-eminence of fiscal decentralisation in the MPF theory, this study examines the effects of implementing fiscal decentralisation on the economic performance of Malaysian states.

Following Ismail and Hamzah (2006) and McNab (2001), the adopted theoretical model is based on production function-based estimation framework developed by Lucas (1988), Barro (1990) and Mankiw, Romer and Weil (1992), which was developed from the original augmented Solow (1956) model of economic growth. The Cobb-Douglas production function of an economy at time  $t$  can be described as:

$$Y(t) = K(t)A(t)^\alpha \psi^{1-\alpha} \quad (6.1)$$

Where  $Y$  denotes the output per capita,  $K$  is the capital per capita (stock of private and public capital),  $A_t$  is the level of technology and other institutional factors,  $\psi$  is the fraction (assumed to be constant) of the population or labour force ( $L$ ) where  $0 < \alpha < 1$ .

While using equation (6.1), we can express the growth rate of output per capita (income) by taking the first order differentiation with respect to time and assuming the logarithm of the function such that :

$$g_t = y(t) = \hat{K}(t) + \alpha \hat{A}(t) \quad (6.2)$$

In equation (6.2), the growth rate of output per capita relies on two factors, the growth rate of capital per capita  $K(t)$ , and the level of technology and other institutional factors. Specifically, the term  $K(t)$  represents capital per capita and differences in resource endowments and institutions across states and over time, as well as other observable state-specific characteristics (Ismail and Hamzah 2006). While  $A(t)$  is the product of the level of technology and other institutional factors at time  $t$  McNab (2001), such that :

$$A_t = T_t FD_t MS_t \quad (6.3)$$

Where  $T$  is technology,  $FD$  is fiscal decentralisation ( $FD_t$ ) and  $MS$  is the level of macroeconomic stability (McNab 2001), represented by budget balance ( $BUD$ ).

Unlike McNab (2001) and Martinez-Vazquez and McNab (2003)<sup>56</sup>, this study will only examine the direct effect of fiscal decentralisation on growth, where it is first determined by the steady state level of the physical inputs in the production function. By assuming that  $K(t)$  depends on a set of variables;  $K(t)$  equals to investment (INV) consisting of domestic private investment (DPI) and public fixed investment (FIXIE). Both variables are financed by savings from the private sector ( $S_p$ ) and the government ( $S_g$ ). Hence, the saving- investment identity can be written as:

$$S_p + S_g = DPI + FIXIE \quad (6.4)$$

From equation (6.4), if savings minus domestic private investment (DPI) and public fixed investment (FIXIE) are negative, foreign investment (FDI) can be used to finance the deficits or:

$$(S_p + S_g) - DPI + FIXIE = FDI \quad (6.5)$$

Even though, FDI is not the only source of financing either fiscal deficit or current account deficit, but this stable long term capital inflow in the form of FDI is preferable to short term flow or debt financing in avoiding an increase in macroeconomics' instability (Krkoska 2001). Therefore, equation (6.2) can be re-expressed as:

$$Y_t = \beta_1 A_t + \beta_2 DPI_t + \beta_3 FDI_t + \beta_4 FIXIE_t + \varepsilon_t \quad (6.6)$$

Where  $t$  denotes time,  $Y_t$  is the growth rate of state's GDP per capita (SGDP per capita) and  $\varepsilon_t$  is the unobservable individual effect (it refers to heterogeneity or differences across the units being studied).

From equation (6.1), (6.2) and (6.6), it can be deduced that the output of an economy depends on fiscal decentralisation and the accumulation of reproducible capital (private and public capital) as well as other determinants (control variables) that can influence economic growth. As Mankiw, Romer and Weil (1992) state, labour can be expected to grow exogenously at specific rates, and all other types of reproducible capital are assumed to depreciate at a uniform rate (Lee 2003).

Since the objective of this study is to investigate the relationship between fiscal decentralisation and regional growth, fiscal decentralisation (FD) is measured as a single indicator by mutual reinforcement among different dimensions of decentralisation, expenditure and revenue dimensions. The description of these two variables will be explained in subsection (6.2.2).

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<sup>56</sup> In this paper, Martinez-Vazquez and McNab (2003) also investigate the direct and indirect effects of fiscal decentralisation on economic growth.

As  $A_t$  represents institutional factors, fiscal decentralisation ( $FD_t$ ) and budget balance ( $BUD_t$ ) for macroeconomic stability are only adopted in equation (6.6) and it can be rewritten as follows:

$$Y_t = \beta_1 FD_t + \beta_2 DPI_t + \beta_3 FDI_t + \beta_4 FIXIE_t + \beta_5 BUD_t + \beta_6 LF_t + \varepsilon_t \quad (6.7)$$

Based on equation (6.7), the following hypothesis is formulated for testing this first model.

**Hypothesis 1:** Fiscal decentralisation has a positive relationship with regional growth

This hypothesis assumes that fiscal decentralisation will improve the efficiency of the states in terms of fiscal spending and revenue allocation and lead to higher economic growth.

### 6.2.1 Empirical Model of Fiscal Decentralisation and Regional Growth

Panel time series data estimation techniques comprising panel unit roots test, panel cointegration estimation and panel DOLS are used to investigate the impact of fiscal decentralisation on regional growth. It is believed that the use of panel data is more appropriate in investigating the influence of fiscal decentralisation because decentralisation is a diffused process that occurs over time.<sup>57</sup> Based on the Hypothesis 1, the following is the estimated model for this study.

$$Y_t = \alpha_0 + \beta_1 FD_t + \beta_2 DPI_t + \beta_3 FDI_t + \beta_4 FIXIE_t + \beta_5 BUD_t + \beta_6 LF_t + \varepsilon_t \quad (6.8)$$

All variables are expressed in natural logarithmic form. The dependent variable,  $Y_t$  is the real growth rate of state income per capita (state's GDP per capita growth or  $\Delta$ SGDPPC). The independent variables are;  $FD_t$  which represents the fiscal decentralisation,  $DPI$  is the amount of domestic private investment,  $FDI$  is the foreign direct investment (FDI),  $FIXIE$  is fixed public investment,  $BUD$  is the budget balance and  $LF$  is the labour force. In estimating equation (6.8) fiscal decentralisation is used as the key variable, while other variables are designed as control variables. The growth model is fitted to these state-level data as given by the equation (6.8) and this can be expressed in the panel version and logarithm form as:

$$\ln Y_{it} = \beta_{i0} + \beta_{1t} \ln FD_t + \beta_{2t} \ln DPI_{it} + \beta_{3t} \ln FDI_{it} + \beta_{4t} \ln FIXIE_{it} + \beta_{5t} \ln BUD_{it} + \beta_{6t} \ln LF_{it} + \varepsilon_{it} \quad (6.9)$$

Where,  $i$  and  $t$  indicate cross section units and time period respectively. This also applies to other sets of specification described in other subsections. The theoretical model suggests that growth in economy's output is a function of physical capital, the growth of labour force,

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<sup>57</sup> While cross-sectional analysis may result in incorrect inferences as to the nature of fiscal decentralisation (McNab 2001).

fiscal decentralisation and macroeconomic stability, hence equation (6.9) is consistent with the theoretical model.

## **6.2.2 Description of Variables for Fiscal Decentralisation and Regional Growth Model**

### **Fiscal Decentralisation (FD)**

The key explanatory variable in this model is fiscal decentralisation. Scholars have noted the critical importance as well as difficulty in selecting an appropriate measure of fiscal decentralisation in empirical analyses of fiscal federalism (Bodman et al. 2009). Many previous researchers have advanced and used different measures to estimate fiscal decentralisation (Gu 2012; Martinez-Vazquez and Timofeev 2009; Canfei 2006; Ismail and Hamzah 2006; Desai, Freinkman, and Goldberg 2005; Martinez-Vazquez and McNab 2003; Zhang and Zou 1998). For example, many authors measured fiscal decentralisation using a formula based on the local share of expenditure to total government expenditure in the case of cross-country data (Iimi 2005; Davoodi and Zou 1998; Martinez-Vazquez and McNab 2003). Following this formula, Zhang and Zou (1998) measured fiscal decentralisation by the ratio of provincial spending to total central spending. In fact, Canfei (2006) claimed that the standard measurement for fiscal decentralisation most commonly used in the literature is the ratio of provincial fiscal expenditure per capita to central government expenditure per capita. In this study, expenditure decentralisation (ED) is measured by the ratio of subnational government spending to central government spending with federal transfers counted as federal expenditure. This assumption is based on the fact that the size and utilisation of federal fiscal transfers are directly or indirectly determined by the federal government in Malaysia. This indicator corresponds to the best approximate measure of the allocation of authority when subnational government has the authority associated with its expenditure.

The revenue dimension (revenue decentralisation or RD) is also used in the literature and has the advantage of incorporating the aspect of tax collection in fiscal decentralisation. Davoodi and Zou (1998) and (Fisman and Gatti 2000) used this indicator to study fiscal decentralisation and economic growth in several countries. Ebel and Yilmaz (2003) looked at fiscal autonomy by considering the principal aspects of revenue dimension, including tax administration, attribution of tax receipts, and legislative competencies to determine tax rate and tax base. Fiscal autonomy is measured as the subnational share of own revenue in total local government revenue (Yamoah 2007). This indicator focuses on the most approximate measure of revenue raising authority (Ismail and Hamzah 2006). Autonomy is the key growth-enhancing characteristic of fiscal decentralisation since some local revenues/ expenditures are typically controlled or mandated by the central government (Gemmell,

Kneller, and Sanz 2009). However, it must also be recognised that high subnational spending and revenue shares do not necessarily reflect higher activity in the local economy.

There is no consensus in the literature on any one ‘true’ measure of fiscal decentralisation. Some of the common measures used are expenditure decentralisation (ED), revenue decentralisation (RD), or fiscal autonomy. Conventional fiscal decentralisation theory holds that matching revenue and expenditure responsibilities is conducive for better fiscal management for decentralisation to promote economic growth. The common approach used in the measures of fiscal decentralisation used by the World Bank and IMF:

- i) Subnational expenditures (% of total expenditure) which can be represented as ED.

$$\frac{\text{Total Expenditure of SGs} - \text{Transfers from other levels of government}}{\text{Total Expenditure of SGs} - \text{Transfers from other levels of government} + (\text{Total Expenditure of FG})} \times 100$$

- ii) Subnational revenue (% of total revenue) which can be represented as RD.

$$\frac{\text{Total Revenue of SGs} \times 100}{\text{Total Revenue of SGs} + \text{Total Revenue of FG}}$$

Note: SG denotes state government and FG denotes federal government

Since the use of such measures present relevant shortcomings as argued above and could affect the soundness of the studies that made use of it, this study will use a new measure of fiscal decentralisation advanced by Martinez-Vazquez and Timofeev (2009) and Gu (2012), which is called the composite ratio. This indicator essentially combines the information captured by expenditure and revenue ratio. It is positively related with both expenditure ratio and the revenue ratio, with the latter relationship being the strongest (Martinez-Vazquez and Timofeev 2009).<sup>58</sup> Indeed, the revenue and expenditure are symmetric and at the same time they are weighted for/ against fiscal gaps and imbalances (Gu 2012). This means that revenue and expenditure decentralisation reinforce each other (Iqbal, ud Din and Ghani 2013).

Therefore, the above indicators for expenditure decentralisation and revenue decentralisation variables are used for the purpose of constructing the composite variable of fiscal decentralisation as follows:

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<sup>58</sup> Feld Schaltegger and Schnellenbach (2008) show that the expenditure share of subnational governments or closely related measures is used as the fiscal decentralisation variable in about 35% of models, the revenue share is used in about 10% of models, and the weighted average of expenditure and revenue decentralisation on the effects of fiscal decentralisation on economic growth. Others are the divergence between central and subnational government spending or revenue (about 12%), and the tax autonomy of subnational governments (about 25%) (Gu 2012).

$$\text{iii) Composite Decentralisation} = \frac{\text{Revenue Decentralisation}}{1 - \text{Expenditure Decentralisation}}$$

### **State Gross Domestic Product Per Capita (SGDPPC)**

As a measure of state economic growth, the growth rate of real gross state domestic product per capita ( $\Delta\text{SGDPPC}$ ) is used as a dependent variable for this model and referred to as  $Y$ . The growth rate of output per capita is also widely used as the economic growth variable in the literature and often preferred to the output growth in aggregate terms, particularly in cross-country studies, because it can control population density. The real state gross domestic product (SGDP) data are measured at 2005 prices with data obtained from Economic Planning Unit (EPU), Prime Minister's Department. SGDP accounts for the total value of all final goods and services produced in a given economy and represents the measure of economic performance of public and private economic activities at the state level. The growth rate of real SGDP per capita is computed by taking the first difference of the logarithms of real SGDP per capita.<sup>59</sup>

### **Control Variables**

The main purpose of this analysis is to investigate the relationship between fiscal decentralisation and regional economic growth, but it has been acknowledged that economic growth is subject to many other influences beyond the immediate dimensions of revenue and expenditure decentralisation. In order to incorporate the effect of other influences on regional growth, a set of control variables has been introduced in the panel data model. These variables represent physical and human capital investments measured by domestic private investment (DPI) and foreign direct investment (FDI), budget balance (BUD), public fixed investment (FIXIE), with all as a share of GDP at state level as well as the growth rate of state labour force (LF). A brief explanation of the reasons for selecting these control variables is provided below.

A number of empirical analyses have validated the positive role of domestic private investment on economic growth. Zhang and Zou (1998), Lin and Liu (2000) and Huang and Cheng (2005) regard investment as an important variable. The level of domestic private investment (as a share of SGDP) is also affected by the state policies with regard to investment in capital projects related to public service deliveries including the availability of infrastructure, such as transportation networks, telecommunication and electricity. The positive effect of this private investment has also been proven more significant than that of public fixed investment in developing countries (Khan and Reinhart 1990). As a measure of

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<sup>59</sup> In a simple form, this relationship can be expressed as  $Y_t = \ln(\text{SGDPPC})_t - \ln(\text{SGDPPC})_{t-1}$

state private capital, the gross state investment in manufacturing industries is used because sufficient information on state private investment is not available for the entire study period.

Both domestic private investment and foreign direct investments (both are measured as a share of SGDP) are argued to have significant effects on economic growth, supporting the origin of the growth theory from a perspective. The role of foreign direct investment (FDI) has been widely recognised as a growth-enhancing factor in the developing countries. Indeed, domestic investment ( $I_d$ ) plus investments undertaken by multi national enterprises or MNEs ( $I_f$ ) ought to add up to total gross investment ( $I$ ).

$$I = I_d + I_f$$

Given the scarcity of domestic entrepreneurship and the need to nurture existing entrepreneurial talent, MNEs have displaced domestic firms for domestic investment and investment by MNEs contributes directly to overall investment. However, the effects of FDI on investment may well vary from country to country depending on the orientation of the domestic policy, the type of FDI received and the strength of domestic enterprises. It is expected that, in general, FDI has a positive relationship with growth.

As a measure for state public fixed investment (FIXIE), we use the state government investment expenditure as the proxy of state development expenditure which is measured as a share of SGDP. One of the most important contributions of the 'new' growth theory (endogenous growth theory) is the insight into the role of fiscal policy in long run growth. Barro (1990) argued that when the private rate of return of capital is lower than its social rate, optimal allocation calls for further capital allocation to public fixed investment as a source of long run growth. The argument for incorporating this variable as a determinant of growth states that, more investment leads to more employment opportunities, for example an increase of economic overhead capital will lead more growth (Bivens 2012; Faridi 2011). However, the effect of state public fixed investment is uncertain (Lee 2003). While a higher level of public investment would make the economy more productive by constructing new roads, bridges and transit systems, an increase in public investment may harm economic development if the opportunity cost of public investment is high relative to current expenditure.

The variable for budget balance (BUD) is used to measure macroeconomic stability of economic growth. According to the World Bank, macroeconomic environment can be described as stable when inflation is low and predictable, real interest rates are appropriate, fiscal policy is stable and sustainable, real exchange rate is competitive and predictable and balance of payments is viable (Lee 2003). Given that, the basic indicators of macroeconomic stability described above exist, the budget balance is used in the regression. In the case of

Malaysia, inflation data at state level are available only for two states, Sabah and Sarawak, thus using national inflation rates in the panel data study set up will not be feasible (realistic). Due to this limitation, budget balance (BUD) is a more appropriate indicator for macroeconomic stability in this study. Lastly, apart from all reproducible capitals, labour force growth (LF) generally corresponds to population growth is a factor of production which can be the driver of economic growth in states *ceteris paribus* (Tirtosuharto 2009). The increase in the magnitude of output depends on the marginal product of labour in any economy; therefore, labour force should have positive influence on the growth of aggregate income but not (necessarily) on the growth of income per capita.

In addition to these variables, the quantity of money supply, saving rate, openness to international trade, average tax rate and strength of the financial sector proxied as bank deposits or loans appear to be important determinants of inflation in the literature (Fornasari, Webb, and Zou 2000; Treisman 2000; Xie, Zou, and Davoodi 1999). However, these are not included in the estimation equation because the money supply and openness to international trade are the same for all states (region-invariant), and detailed information for tax is only available for eleven states excluding Sabah and Sarawak.

### **6.2.3 Estimation of Fiscal Decentralisation and Regional Growth: Panel Time Series Analysis**

This sub-section turns to a discussion of the econometric techniques used to estimate the fiscal decentralisation and regional growth model for the equations stated in section (6.2.1). Traditional economic panels have large number of cross-section units and relatively few time periods. But recently, panels with observations for a large numbers of time periods have become available for examining cross-section units like firms, industries, regions or countries. Such data allow more explicit treatment of heterogeneity across units, dynamics including the treatment of unit roots and cointegration and cross-section dependence arising from spatial interactions or unobserved common factors (Smith and Fuertes 2010). Since time series of the data used here dates around twenty years, it cannot be accommodated by cross-sectional data, and the sample property of thirteen states is quite small. Therefore, panel time series method is found to be more suitable for estimating the fiscal decentralisation and regional growth model. It has also been argued that panel data is more appropriate for examining the influence of fiscal decentralisation because decentralisation is a diffused process that occurs over time, whereas cross-sectional analysis may result in incorrect inferences about the nature of fiscal decentralisation (McNab 2001).

Three steps of estimation of the panel time series are employed; i) Panel unit root tests to determine the order of integration of the series; ii) Panel cointegration, as suggested by



Pedroni (2004, 1999), to verify the existence of a long-run cointegration among the dependent and independent variables and to investigate the problem of spurious regression from non-stationary variables (Noor and M.W.Siddiqi 2010); and iii) Panel DOLS method to examine the long run relationship among the variables under the heterogeneous panels framework. The estimation procedures for the panel time series model are described in the following sections.

#### i) Panel Unit Root Tests

Basic panel unit root tests are performed in this analysis to determine the order of integration of the series. It is a standard procedure that has to be conducted before proceeding to the next step; cointegration and causality tests. The cointegration is valid only if the unit root test finds that the order of integration of the variables of interest is similar (the order of integration is shown to be greater than zero) (Pedroni 1999). Generally, most economic variables (macroeconomic variables) are non-stationary and this economic time series follows a random walk process called 'non stationary' over time. By differencing  $d$  times, the series can be made stationary. The panel unit root tests, namely Levin and Lin (LLC) (1993), Im, Pesaran and Shin (IPS) (1997) and Maddala and Wu (1999) are known to have more power than conventional univariate time series tests. The Fisher-Phillips-Perron tests and Maddala and Wu (1999) proposed Fisher (1932) test, which was based on combining the p-values of the unit root test statistics in each cross-sectional unit. One of the advantages of this test is that it can use different lags in the individual ADF (or PP) regressions. Also, unlike the Im, Pesaran and Shin (1997) test, the Fisher test does not require a balanced panel (Badarudin 2009). In this study LLC test, ADF- Fisher test and PP-Fisher test are carried out on the variables at levels and in first differences, with the optimal lag lengths for each test chosen automatically by the E-views 7 software.

#### ii) Panel Cointegration Tests

After examining the unit root, the next step is to examine whether there is a cointegration in the models. The cointegration test is primarily used to investigate the problem of spurious regression, which exists only in the presence of non-stationary variables. In order to avoid estimating spurious regression that can occur due to the presence of unit roots, cointegration test must be performed as the next step to obtain the more reliable result of the cointegration estimation (Dahmardeh, Pahlavani, and Mahmoodi 2011). The general concept of cointegration between variables suggests that there is equilibrium or a long run relationship between a set of time series variables, provided that the series are integrated of the same order. In this panel data analysis, only the Pedroni (1999) tests are performed on four within-

group tests and three between-group tests to check whether the panel data are cointegrated or otherwise these are further confirmed by using the Phillips-Perron test.

These panel cointegration tests also consider the heterogeneity issue by using specific parameters which are allowed to vary across individual members of the sample. In conventional time series, cointegration tests are based on an examination of the residuals of a regression which is usually performed using  $I(1)$  variables (Engle and Granger 1987). If the residuals are  $I(0)$ , the variables are said to be cointegrated and the same unit root tests can be applied for both raw data and residuals, with proper adjustments to the critical values when applied to the latter. If the panel variables are integrated of order one, i.e.  $I(1)$ , then testing for the presence of cointegration can be undertaken.

Unlike time series cointegration, estimations from a cointegrated panel are robust enough to face a variety of problems that often plague empirical works, including endogeneity, omitted variables and measurement error (Baltagi and Kao 2000; Phillips and Moon 2000; Kao 1999; Phillips and Ouliaris 1990). Moreover, panel cointegration techniques can be implemented with shorter data spans than the time series cointegration and statistical inference is simplified because limiting distributions are standard normal.

Pedroni (2004) showed that testing for cointegration in panel data is not as simple as the conventional Engle-Granger way unless the regressors are strictly exogenous and the pooled-OLS slope is constrained to be homogenous. He argued that proper adjustment is important for the statistical tests in cases where the alternative hypothesis of cointegrating relationship is not constrained to be homogenous across members, and the parameters' estimates are allowed to vary across individual members. Otherwise, the null hypothesis of no cointegration will certainly be rejected, regardless of the true relationship, as the sample size grows large. This also happens in the case of imposing homogeneity falsely across members when the true relationship is heterogeneous.

In such cases, an integrated component in the residuals will be generated making them non-stationary, and such variables will prove to be not cointegrated even if they are considered as cointegrated (Badarudin 2009). There are two types of panel cointegration test; i) an extension of the Engle-Granger test to panel data and; ii) an application of the Fisher's (1932) idea to the marginal probabilities derived from Johansen tests of cointegration applied to the time series for each of the cross-section units. Pedroni (2004) proposed several tests for the null hypothesis of no cointegration versus cointegration in a panel data that allows for considerable heterogeneity. The Pedroni tests for  $m$  variables are based on the following equation:

$$Y_{it} = \beta_{i0} + \beta_{it} + \sum_{j=2}^m \beta_{ij} Y_{ijt} + \varepsilon_{it} \quad i = 1, 2, \dots, N, \quad t = 1, 2, \dots, T. \quad (6.10)$$

If the  $Y_{it}$ s are cointegrated, the error terms,  $\varepsilon_{it}$  will be stationary so that the test proceeds.

Pedroni (1999) also compared the performance of the seven statistics in term of size, distortion and power in a Monte Carlo experiment and concluded that the group ADF generally performs the best, followed by the panel ADF and the panel rho. In general, his tests can be categorised into two; the within dimensions and the between dimensions. The within dimensions test is based on estimators that effectively pool the autoregressive coefficient across different members for the unit root tests on the estimated residuals. A consequence of these differences arises in terms of the autoregressive coefficients,  $\gamma_i$ , of the estimated residuals under the alternative hypothesis of cointegration. These two different testing procedures depending on whether the first order auto-correlation coefficient in the second stage regression is constrained to be the same for all cross-section units ( the group test) or whether these coefficients are allowed to vary across cross-section units (the panel tests).

The Pedroni (1997) test is basically a one-sided test with a critical value of -1.64 where  $Z < -1.64$  indicates rejection of the null hypothesis of no cointegration. However, if the panel  $v$ -statistic has a critical value of 1.64, so that  $Z_v^w > 1.64$  recommends rejection of the null of no cointegration. Each of the statistics has an asymptotic distribution in the form:

$$\frac{X_{N,T} - \mu(N)^{1/2}}{(\nu)^{1/2}} \rightarrow N(0,1) \quad (6.11)$$

Where  $X_{N,T}$  is the corresponding form of the test statistic, while  $\mu$  is the mean and  $\nu$  is the variance of each test.

### iii) Panel Cointegration Estimation –Using Dynamic-OLS (DOLS)

Finally, after the acceptance of cointegration tests, this study estimates the long run relationship using the panel DOLS estimator proposed by (Kao and Chiang 2000). Although Pedroni's methodology allows testing the presence of cointegration, it has no ability to provide the estimation for the long run relationship. Due to the presence of cointegration for panel framework, the panel DOLS is proposed for further analysis, as this estimation is more promising in cointegrated panel regression. This methodology is proposed by Kao and Chiang (2000) to estimate the long run cointegration vectors for non- stationary panels. This estimator corrects the standard pooled-OLS serial correlation and endogeneity of regressions that are normally present in the long run relationship.

Based on Monte Carlo simulations, DOLS presents evidence that estimators in small samples are more robust when compared to other alternative estimators (Irffi et al. 2006). Monte Carlo results of Kao and Chiang illustrate the OLS estimator has a non-negligible bias in finite samples and DOLS outperforms both the OLS and Fully Modified OLS (FMOLS) (Kao and Chiang 2000). DOLS is found as the best estimator compared to OLS and FMOLS estimators as the DOLS estimator and its t-statistic generally exhibit the least bias (Kao and Chiang 1999). Thus, DOLS can be justified as one of the important estimators in this study.

The DOLS is an extension of Stock and Watson's (1993) estimator which obtains efficient estimators for the cointegrating vectors involving deterministic components and accommodates varying orders of integration and the possible simultaneity among variables (Stock and Watson 1993). In order to obtain an unbiased estimator of the long run parameters, DOLS estimator uses parametric adjustment on the errors by including the past and the future values of the differenced  $I(1)$  regressors. Thus, the DOLS estimator is obtained from the following equation:

$$y_{it} = \alpha_i + x'_{it}\beta + \sum_{j=q_2}^{j=q_1} \vartheta_{ij}\Delta x_{i,t+j} + v_{it} \quad (6.12)$$

Where  $\vartheta_{ij}$  is the coefficient of a lead or lag of first differenced explanatory variables, the estimated coefficient of DOLS is given by:

$$\beta_{DOLS} = \sum_{i=1}^N \left[ \sum_{t=1}^T z_{it} z'_{it} \right]^{-1} \left[ \sum_{t=1}^T z_{it} Y_{it} \right] \quad (6.13)$$

Where  $z_{it} = [x_{it} - x_{i,t-q} \dots \Delta x_{i,t=q}]$  is  $2(q+1) \times 1$  vectors of regressors.

### 6.3 Theoretical Framework of Fiscal Incentives Model

A cornerstone of SGFF, and consequently MPF, is its premise that local and state governments are not benevolent social planners but self-interested actors who act in pursuit of political incentives. As a result, issues of fiscal incentives facing state governments are a critical aspect of fiscal decentralisation as proposed in the MPF theory. The benefits of decentralisation of authority would not materialise if the federal government exploits all the revenues generated in the states. Thus, MPF proposes that the larger the marginal fraction of revenues a state government is allowed to keep, the higher the motivation of state officials to increase the revenue base, which depends on local economic prosperity. This indicates that strong links between local expenditure and local revenue to help align the interests of local governments to local market development. Hence, fiscal incentives in this study are analysed from two dimensions. First, fiscal incentives are modelled with fiscal responsibility

in linking local expenditure and local revenue. The second model evaluates fiscal incentives in terms of its success in promoting private business investment. This study has adopted the fiscal incentives models of Jin, Qian, and Weingast (2005, 1999) and Zhuravskaya (2000, 1999) to analyse how the availability of fiscal incentives to local governments contributes to fiscal responsibility and market development.

### **6.3.1 Fiscal Incentives Model I: Local Expenditure and Local Revenue**

The implication of a fiscal incentives model based on MPF differs from the traditional perspective on revenue sharing between central and subnational governments. In terms of the benefits of decentralisation on expenditure, traditionalists do not consider a strong linkage between subnational government's own revenue and expenditure (Jin, Qian, and Weingast 2005, 1999). Their views incline to focus on allocative distortions under a decentralised revenue collection by recommending a centralised revenue collection and a decentralised expenditure system. This then allows sizeable transfers from central to subnational governments to fill the local revenue-expenditure gap. In short, the traditionalists conclude that there is no necessary relationship between local expenditure and local revenue being generated. On the other hand, the MPF theory and the above model emphasise the importance of local governments' incentives in pursuing fiscal responsibility related policies through the maintenance of equilibrium between expenditure and revenue in the state (prosperity in the local economy). This condition stipulates that states ought to allocate fiscal resources efficiently through productive spending and investment in their respective jurisdictions. Indeed, such a linkage not only ties together revenue and expenditure cohesively but also requires limits on intergovernmental fiscal transfers. The fiscal incentives and economic development model by Jin, Qian, and Weingast (2005, 1999) is applied where revenue is linked to expenditure at state level. Their model was developed to assess the fiscal contracting system (1980-1993) in China.

$Y(e)$  is the value created by the local business development and it is a function of local government 'effort'  $e$ . In this model,  $e$  is not the efforts made by the local government in revenue collection or public service provision. Rather it is the local government's policy effort in supporting productive business in its locality. This includes local government's policies concerning local non-state productive enterprises by reducing excessive regulation and controls over business entry, speeding up the approval of projects and permits, and eliminating onerous fees imposed on firms.

A higher subnational government effort would mean a more favourable local business environment leading to higher growth in the local economy as indicated by higher value of the local economy  $Y(e)$  which would generate a larger local government revenue base. This

favourable local business environment would then attract the factor of productions to move to these regions and create inter-jurisdictional competition. This relationship can be linked to the framework of regional competitiveness where the role of states in supporting the private sector and the market economy is important.

Next, assuming the revenue generated  $y$  is positively related to the growth of the local economy, the relationship of  $y$  ( $Y$ ) implies that total revenue generated  $y$  is also an increasing function of  $e$  or  $y$  ( $e$ ). However, effort  $e$  has a cost to subnational government  $C$  ( $e$ ), which is also increasing in tandem with  $e$ . The cost involved refers to the spending necessary to facilitate local business development or could be the forgone bribes received by the local officials.

The next step is to clearly define the values of 'federal' and 'state revenue', where if the total revenue generated is  $y$ ,  $vy$  is designated as 'state revenue', and  $(1-v)y$  as 'federal revenue'. The second step is to determine the marginal state revenue retention rate or the fiscal incentive denoted as  $z$ . Here, the federal government has limited revenue retention rate  $z$ , to provide incentives for state governments by aligning the interest of state government with local prosperity. In the third step, the state's revenue retention is then given by  $zvy$  ( $e$ ). Finally, the federal government makes transfers of  $T$  to state governments. The higher values of  $T$  are accompanied by higher risk of fiscal dependency and moral hazard created by the soft budget constraints. Therefore, the final state government's expenditure is determined by:

$$zvy(Y(e)) + T \quad (6.14)$$

If the state government maximises its expenditure net of cost of effort by choosing effort level  $e$  then:

$$\text{Max}\{zvy(e) - c(e) + T\} \quad (6.15)$$

Under the usual assumptions of concavity of  $y$  ( $e$ ) and convexity of  $c$  ( $e$ ), the optimal effort level  $e^*$ , as well as the subnational economy  $Y$  ( $e^*$ ), is an increasing function of revenue retention rate  $z$ :

$$\frac{de^*}{dz} > 0 \quad \text{And} \quad \frac{dY(e)^*}{dz} > 0 \quad (6.16)$$

If  $v$  is assumed as constant, then, the larger the marginal fraction of revenue a state government is allowed to keep, the stronger the state government's incentives to increase

their revenue base. This means there will be a better government policy to pursue local economic prosperity. Consequently, this shows that a strong link between state expenditure and federal revenue which will help to align the interests of state governments to their development. Therefore based on the above theoretical model, the Hypothesis 2 below is formulated:

**Hypothesis 2:** Malaysian state governments are not subject to hard budget constraints.

The hypothesis assumes that Malaysian state governments are weak in self-financing at the margin and rely heavily on the transfers from the federal government.

This relationship can be expressed by the empirical model:

$$EXP_t = \beta_0 + \beta_1 REV_t + \mu_t \quad (6.17)$$

Given equation (6.17), the panel version and logarithmic form becomes:

$$\ln EXP_{it} = \beta_0 + \beta_1 \ln REV_{it} + \beta_2 (StateEffects) + \gamma (YearDummy)_i + \mu_{it} \quad (6.18)$$

Where  $EXP_{it}$  is state  $i$ 's state expenditure in year  $t$ ,  $REV_{it}$  is state  $i$ 's state revenue (total potential state revenue) in year  $t$ , the  $\alpha_i$ 's are state fixed effects,  $\gamma_t$ 's are the year dummies, and  $\mu_{it}$ 's are the disturbance terms. These tests are designed to examine the link between state expenditure and state revenue, after controlling inherent characteristics and nationwide changes over time (Jin, Qian, and Weingast 2005).

### 6.3.2 Fiscal Incentives Model II: Private Business Development

This model also justifies the benefits of fiscal decentralisation where the central government assigns the task of supporting local business development to subnational governments. This aspect of fiscal incentives in MPF theory is crucial for the developing and transition countries where economic development depends on whether their governments provide a helping hand or a grabbing hand for business development (Shleifer and Vishny 1998). According to Johnson (1997), inefficient regulation reduces business profitability, leading to a slower entrepreneurial activities. Here, MPF posits that aligning the fiscal incentives of local governments with local prosperity would have stronger effects on the local economy and that fiscal institutions can create the right incentives for subnational officials (Weingast 2009). Reflecting on Hayek's (1948) argument that subnational governments have better knowledge about local conditions, this model also incorporates the assumption of the importance of local information. The central government may announce the broad outlines of a national policy, but must leave room for subnational governments to incorporate local priorities and constraints into the detailed policy measures.

The fiscal incentives model developed by Zhuravskaya (2000) illustrates the strength of the fiscal incentives in influencing local support for business investment growth. Following that model, this study specifically examines whether revenue sharing between central and subnational governments provides right incentives for the state governments in Malaysia to expand local tax base through increased private economic activity. Therefore, the success of fiscal incentives for private business formation is dependent on the extent to which local officials can solve the following maximisation problem:

$$\text{Max } cP + B + S \quad \text{subject to} \quad P + S \leq \text{SHAREDREVENUE} + \text{OWNREVENUE} \quad (6.19)$$

Where  $P$  is the level of public goods provision,  $B$  represents the level of regulation of private business,  $S$  is the amount of budget revenues to be diverted for state official's private use, and  $cP$  is the private benefit from the provision of public goods received by the state official. The constraint faced by the local official represents the sum of public spending and amount of diverted funds  $P + S$  which do not exceed the budget revenues at local officials' disposal.

Here, the provision of public goods (e.g. law and order) by the government officials would reduce the costs of business and boost entrepreneurial activities in their jurisdiction. The variable of budget revenue comprises the sum of the shared and own revenues. Own revenue is an increasing function of the local's tax base which positively depends on  $P$  and negatively on  $B$ . The own revenue is assumed as consisting of both a fixed part ( $W$ ) and a variable part  $W(P, B)$ :

$$\text{OWNREVENUE} = W + W(P, B) \quad (6.20)$$

By assuming that:

$$W(P, B) = g(P)y(B), \quad (6.21)$$

Where

$$g' > 0 \quad \text{and} \quad y' < 0.$$

On the other hand, shared revenues depend on the amount of own local revenues which comprise a fixed part  $T$  and a variable part  $T(W)$  that equals  $\alpha W$  :

$$\text{SHAREDREVENUE} = T + T(W) \quad (6.22)$$

$$T(W) = \alpha W \quad (6.23)$$

The exogenous parameter  $-1 \leq \alpha \leq 0$  represents the weakness of fiscal incentives. It implies the ability of local officials to raise revenues at the margin. Since budget revenue is independent of the local leader's action  $P$ ,  $B$  and  $S$ , therefore  $\alpha = -1$ , implying that fiscal incentives are at their weakest because changes in own revenues are fully crowded out by



changes in shared revenues. In contrast, fiscal incentives are strong when  $\alpha = 0$ , and a change in the local collection causes an equivalent change in local budget revenues.<sup>60</sup> Therefore, from equation (6.19), the local official's optimisation problem can be rewritten as:

$$\text{Max } cP + B + S \quad \text{subject to} \quad P + S \leq T + W(1 + \alpha)g(P)y(B) \dots \quad (6.24)$$

Equation (6.19) can provide the optimal solution to the state official's maximisation problem as  $S^*$ ,  $B^*$  and  $P^*$ . The propositions below describe how the fiscal incentives affect the decisions by the local official:

Proposition 1

$\frac{dB^*}{d\alpha} < 0$ , for all  $\alpha$  to show the reduction in private business investment due to reduced strength of fiscal incentives.

Proposition 2

$\frac{dP^*}{d\alpha} > 0$ , for all  $\alpha$  to indicate the increase in public goods provision due to increased strength of fiscal incentives.

Proposition 3

$$\frac{dS^*}{d\alpha} \mid d(T + W) = -d[(1 + \alpha)g^*y] < 0$$

Propositions 1 and 2 illustrate that the strength of fiscal incentives rises as the level of inefficient regulation diminishes and the level of public goods provision increases. These propositions will help to measure if fiscal incentives can stimulate entrepreneurial activities and achieve better economic performance. The implication of propositions 1 and 2 is that the local tax base increases with fiscal incentives. From proposition 3, we can make comparisons between two jurisdictions with equal budget revenues and different fiscal incentives. When fiscal incentives are stronger, local official gets less chance to steal from the local budget. This will help to measure if the efficiency of public goods provision is higher in the jurisdiction where stronger fiscal incentives are offered. This theoretical framework can be postulated in the following hypothesis:

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<sup>60</sup>  $(1 + \alpha)$  appears to be significantly greater than zero in China and close to zero in Russia (Zhuravskaya 2000) indicating that fiscal incentives are stronger in China than Russia.

**Hypothesis 3:** Malaysian state governments support improving market development through private business investment.

Our key interest here is to examine the influence of fiscal incentives on business environment using the fiscal incentives framework stated under equation 6.19. In investigating the effects of fiscal incentives (as measured by revenue retention rate) on the business investment formation and market development, four variables have been adopted; private business investment (BI) as a dependent variable, fiscal incentives (FI) as a key variable, the growth of labour force (LF) and expenditure per capita (EXPPC) as controlled variables. So the following empirical model can be used to investigate the correlation between the private business investments (BI) in state with fiscal incentives:

$$BI = \beta_0 + \beta_1 FI + \beta_2 LF + \beta_3 EXPPC + \varepsilon_{it} \quad (6.25)$$

Taking equation (6.25) further for analytical purposes, the panel version and logarithmic form becomes:

$$\ln BI_{it} = \beta_0 \ln FI_{it} + \ln \beta_1 \ln LF_{it} + \beta_2 \ln EXPPC_{it} + \beta_3 (StateEffects) + \Upsilon (YearDummy)_t + \varepsilon_{it} \quad (6.26)$$

### 6.3.3 Fiscal Incentives Model

#### Fiscal Incentives (FI)

In this study, the fiscal incentives variable is represented by the retention rate of state revenues or the share of locally generated revenues kept within the regional budget. This measure is based on the one adopted by Desai, Freinkman, and Goldberg (2005) in their study of decentralisation and regional growth in Canada. This measure of fiscal incentives is similar to the one used by Jin, Qian, and Weingast (2005, 1999) who used the *ex-ante* marginal local retention rate in the fiscal contract in China. In Russia, Zhuravskaya (2000) used an *ex post* measure of fiscal incentives of city governments by regressing the change in the shared revenue between the regional and city governments on the change of the city's own revenue. Specifically, this study will employ the share of states' own revenue including both tax revenue and non-tax revenue as a share of all revenues generated in the states (total potential state revenue) to represent fiscal incentives variable, unlike Desai, Freinkman, and Goldberg (2005) who used just tax revenue. All the revenue generated in the states include taxes that are collected by the federal government as well as state's own revenue. This data on tax collection by the federal government in Malaysian states include all direct income taxes (individual, corporate and petroleum taxes) under the authority of Inland Revenue Board of Malaysia (IRB) and indirect taxes (sales, excise taxes) under the

authority of the Royal Malaysian Customs Department, both under the jurisdiction of the Ministry of Finance.

### **Expenditure (EXP)**

The state expenditure is a dependent variable and it comprises the development and operating expenditures. The higher the expenditure, the higher the need for additional own revenues *ceteris paribus* by assuming these revenues will not be taxed away by the federal authorities. The data are obtained from various issues of the Annual General Audit Report published by the National Audit Department.

### **Local Revenue (REV)**

The Constitution of Malaysia provides a clear distinction between federal and state governments' taxation powers and the sharing of revenue. The own revenue consists of state tax revenue and non-tax revenue, but it excludes non-revenue (capital) receipts. State tax revenue includes direct and indirect taxes such as land tax, forestry tax (as determined in the Constitution), while non-tax revenue includes fees, rentals and charges. Specifically, local revenue (REV) or total potential state revenue in equation (6.18) is considered as the state generated fiscal revenue which includes all activities that can generate fiscal revenues collected by the federal government as well as the state governments. The direct and indirect taxes collected by the federal government are income tax, corporate tax, sales tax and excise tax, but for state governments, it includes tax revenue and non-tax revenue except for transfers from the federal government. Due to data limitation, figures on local revenue (REV) is only available from 2001 to 2009. Since the data for those taxes are collected by federal government agencies (Inland Revenue Board and Royal Malaysians Custom Department), the data are only available in aggregate form and do not show the contribution of individual states.

### **Private Business Investments (BI)**

In this study, the variable for private business investment is proxied by the value of new private business investment in the states. This variable captures the variation in business formation within the state and any significant impact to the level of development in the states. The data are collected by the Malaysian Investment and Development Authority (MIDA), an agency under the Ministry of International Trade and Industry (MITI). Business establishment considers several factors, including location characteristics, business incentives, public services, local business climate (the cost of doing business in the area or the transaction costs) and availability of skilled labourers before making a choice. Businesses normally avoid locations with high costs, less skilled labourers and fewer incentives. Comparatively, less developed states tend to have fewer businesses due to lack

of skilled labourers and inadequate public services and infrastructures. Transaction costs are also likely to be higher in remote rural states because of their limited resources and infrastructures. In addition, attempts by states to retain or attract businesses and how they attract businesses into their locality are also important. States which provide little or no business incentives and have poor facilities tend to lose the bid for new businesses to developed states.

### **Control Variables**

As explained in the fiscal decentralisation and regional growth model, any estimation model must consider other control variables in the environment. The control variables used in this model are: real SGDP per capita (SGDPPC), budgetary expenditures per capita (EXPPC), labour force (LF) and year dummy variables as well as state dummy variables. The state labour force (LF) is included in the regression to control for the state attractiveness as fewer private business investments can be found in states which have less skilled labour force. The SGDP per capita represents the purchasing power of the people in states and expenditure per capita for the level of state development. All these variables are expected to have positive relationship with economic growth. Finally, year and state dummy variables are included in the model to control for systematic changes in the independent variables of all states in a particular year.

#### **6.3.4 Estimation of Fiscal Incentives: Panel Data Regression**

Panel regression estimation methods of pooled OLS, a fixed effect and random effect models are found to be appropriate for analysing fiscal incentives model in Malaysian states for the period of nine years. The use of panel approach is seen as important due to weaknesses in the cross sectional approach which observed only at one point in time (Gujarati 2003). For example, the economic changes are unobservable in different areas across different time periods.

The fiscal incentive models are analysed for nine years (2001- 2009) instead of twenty years as used in the earlier model for fiscal decentralisation and economic growth due to lack of sufficient information on the relevant variables at the Ministry of Finance.

There is a possibility of biased results in Ordinary Least Squares (OLS) analysis due to serial correlation and heteroscedasticity which can occur when samples drawn from different years are interdependent and this will violate the assumptions behind OLS that there is no correlation between states and the samples are independent of time (Qian 2009). There are two reasons to justify the use of panel data over OLS analysis; i) the degrees of freedom are increased since panel data usually provides more time periods and cross sectional data

points; ii) collinearity can be eliminated and the impact of missing variables which are related to independent variables can be reduced (Qian 2009).

Considering these aspects, the use of panel data approach is appropriate, which uses information from a combination of both econometric approaches. In summary, the panel data methodology allows for time and state heterogeneity. If unobservable effects such as federal government policy are not controlled, the coefficients may be biased and inconsistent due to omitted variable bias. Both fixed effects and random effects can capture heterogeneity along with both time and state dimensions.

Panel data models can be divided into three categories based on different assumptions about  $z_i$  and  $x_{it}$  fixed-effects regression and random effects regression.

Specifically, three models are used:

$$\text{Pooled regression: } y_{it} = X'_{it}\beta + \alpha + \varepsilon_{it} \quad (6.27)$$

$$\text{Fixed effects: } y_{it} = X'_{it}\beta + \alpha_i + \varepsilon_{it} \quad (6.28)$$

$$\text{Random effects: } y_{it} = X'_{it}\beta + \alpha + \mu_i + \varepsilon_{it} \quad (6.29)$$

For  $i=1, n$  cross-section units and  $t=1, \dots, n$  time periods, where  $y_{it}$  = dependent variable for cross-section unit  $i$  in time  $t$ ,

$X_{it}$  = time-variant independent variable for cross-section unit  $i$  in time  $t$ , excluding constant term.

$z_i = z'_i \alpha$  = a constant term and a set of time-invariant variables;

$\varepsilon_{it}$  = model error term of the cross-section unit  $i$  in time  $t$ .

In equation (6.27) (6.28) and (6.29),  $i$  is the index for individual states and  $t$  denotes time or year. In panel data, the dependent variable, the independent variables and the error terms vary across states, which are denoted by the ' $it$ '. While,  $Z_i$  represents the individual effect matrix, or heterogeneity, where  $z'_i \alpha$  contains a constant term and a set of time-invariant variables including observed and unobserved variables. The unobserved (latent) variables could be state-specific characteristics, state heterogeneity in cultural tradition, etc.

#### i) Pooled-OLS

If there are no unobserved effects, the pooled-OLS equation (6.27) will give unbiased, consistent and efficient estimates. This model assumes  $z_i$  only contains a constant term, therefore the intercept term for the cross-sectionals are the same. On the other hand, the

estimation of the pooled-OLS model is biased if unobserved factors have an effect on the variables.

## ii) Fixed Effect Model

The fixed effect panel has constant slopes but different intercept points according to the cross-sectional group. It is assumed that there are no significant temporal effects, but major differences among states are allowed in this type of model. The intercept is based on cross-sectional specific data that are different between states, and may not differ over time. This unobserved effect is assumed to be stable (fixed) over time and it is called the fixed effect model. In equation (6.28),  $\alpha_i$  captures the fixed individual effects. The fixed effects model applies in situations where  $z_i$  is unobserved and correlated with  $x_{it}$ , denoted as  $\alpha_i = z_i' \alpha$ . This is because the intercept terms vary across states but not over time. The slopes for all independent variables are constant over states and time. The variables that are constant over time or across states (standard deviation is equal to zero) will be dropped from the fixed effects model.

For the time variable, a fixed effect model is more suitable and clearer especially in examining federal fiscal policy. While for the state effects, two tests are conducted to help choose a desirable model among pooled regression techniques and panel data techniques. The first test is the Breusch and Pagan Lagrangian Multiplier test (LM test) for random effects against pooled OLS. If the LM test statistic is significant, it implies that the null hypothesis is rejected at 5% level suggesting that random effect model is better than pooled OLS. In order to ensure that the model is efficient and able to produce consistent results, a comparison has to be made between an efficient model and a consistent model. Normally, fixed effect model always produces consistent results, but it is not necessarily the most efficient model to produce estimates (Tirtosuharto 2009).

## iii) Random Effect Model

The random effect panel model has a random constant term in which the intercept is a random outcome variable. This model is generally used if unobserved effects is not correlated with independent variables are expected (Tirtosuharto 2009). In equation (6.29), instead of treating  $\alpha_i$  as fixed as in Equation (6.28), it is assumed there is a random variable with a mean  $\alpha$ , denoted as  $\alpha_i = \alpha + u_i$  ( $i = 1, 2, \dots, N$ ). Therefore, this model has a compound disturbance term  $w_{it} = u_i + \varepsilon_{it}$  where  $u_i$  is a latent variable and is not directly observable. The state specific component in the error terms,  $u_i$  is a group specific random element, which allows these unobservable effects to be randomly distributed across cross-sectional units (Qian 2009). As unobserved heterogeneity is assumed to be uncorrelated

with the independent variables, the compound error term  $w_{it}$  has another characteristic that the error terms at different time periods are correlated with each other, denoted as;

$$corr(w_{it}, w_{is}) = \frac{\sigma_u^2}{\sigma_u^2 + \sigma_\varepsilon^2} \neq 0 (t \neq s) \quad (6.30)$$

If it is believed that the thirteen states in this study share a common mean for the intercept term, plus a random error term of the individual differences, so a random effect model should be employed. In addition, GLS approach is employed in the random effect model in order to obtain BLUE estimations, because the composite error terms in each period are serially correlated (Gujarati 2003).

In choosing between a fixed effects model and a random effects model, it is necessary to make the assumption behind the relationship between the latent variables and the independent variables. If the unobserved effect is correlated with the independent variables, then a fixed effect model should be employed. In contrast, if the unobserved effect is not correlated with any of the independent variables, then a random effect model should be employed (Wooldridge 2006). To test the appropriateness of random effect approach versus fixed effect approach, the Hausman specification test is conducted.

In the Hausman test, the null hypothesis,  $H_0$ , is the extra orthogonality condition  $corr(u_i, x_i) = 0$ . First, if the error term  $u_i$  is not correlated with the independent variables, which is called the orthogonality assumption, both the fixed effect model and random effect model can generate consistent estimates of the slope parameters. In this situation, the random effect model is preferred, because the fixed effect is consistent but inefficient, while random effect estimation is consistent and efficient. Second, if the error term  $u_i$  is correlated with the independent variables, the orthogonality assumption is violated, and the fixed effect estimation is consistent but not for the random effect estimation (Qian 2009).

#### **6.4 Theoretical Model of the Regional Competitiveness and Technical Efficiency**

Technical efficiency is an analysis of spending or expenditure efficiency which measures the ability of state governments to allocate fiscal resources efficiently. In particular, technical efficiency represents the state government performance as a whole and is often tied to the quality of state institutions. Thus, efficiency of state governments in utilising fiscal resources to support private sector development and accelerate economic growth is consistent with the concept of regional competitiveness in which the states play an important role to support the private sector and the market economy. States ought to allocate fiscal resources efficiently through productive spending or investment in order to support firms in their respective states (Tirtosuharto 2009).

The concept of efficiency is viewed as an important mechanism for explaining the actual ramifications of decentralisation as suggested in the MPF theory on states in Malaysia. While the first model was oriented towards the theoretical aspect of fiscal decentralisation, this third model evaluates the efficiency displayed by states in their overall degree of fiscal decentralisation performance. In the context of Malaysia, the efficiency analysis helps to answer questions about the efficiency levels of the state governments under the centralised fiscal federalism system and how it affects the regional growth. The efficiency measurement model comprises of two different tests: the first test measures the level of efficiency in states with a DEA procedure and the second seeks to identify determinants of efficiency from the observed values for different states through a Tobit panel regression. As there are two dimensions of this efficiency analysis, each test is explained in a separate section, with the theoretical framework underpinning the test and econometric technique for estimation. Except for the variable of technical efficiency, capital expenditure and operating expenditure, other variables used in this analysis were derived from previous analyses and have already been explained in those sections.

#### **6.4.1 Estimation of State Efficiency Level Using Data Envelopment Analysis (DEA)**

There are several methods available to measure state efficiency levels. The efficiency of state governments can be measured by the magnitude of transaction costs associated with the delivery of public goods. This cost benefit approach focuses on the quality of services against costs, which to some extent indicates the choices of state governments in allocating public goods. It is possible to enhance cost efficiently through decentralisation, particularly when there is a smaller and productive government that is able to reduce waste of expenditure and raise the investment rate (Brennan and Buchanan 1980).

Another way to measure state efficiency is by analysing the efficiency of states in allocating fiscal resources. This is reflected in the policies, strategies and decisions made to allocate public expenditure. The ability of states to efficiently allocate spending or expenditure demonstrates their performance levels and to some extent indicates the quality of state institutions in general (Borner 2004). Thus, it contributes to the growth of the private sector and the market economy at the regional level. Tirtosuharto (2009) also supports this measure on the premise that the performance of state governments is evaluated through the effectiveness of laws and regulations that support them, although it may not fully measure the state efficiency. Based on this approach, the following hypothesis was advanced to measure the efficiency level across states in Malaysia:

**Hypothesis 4:** The level of state efficiency will be determined by the level of a state's fiscal capacity.



Parametric and the non- parametric models are the two basic analytical methods generally used to measure comparative performance or efficiency. For the parametric model with a statistical regression is used in single input-multiple outputs or single output-multiple inputs analysis, Ordinary Least Squares (OLS) is typically used to estimate performance levels. The main constraint of the parametric model is the risk of it being inaccurately specified since it is necessary to hypothesise the type of model before running OLS regression (Thanassoulis 2001). In addition, it gives unsatisfactory results when confidence intervals take statistical noise into account. The parametric method does not allow the measurement of inefficiency and due to such constraints of the standard OLS regression in measuring efficiency, the Stochastic Frontier (SF) model has been introduced. The SF model is oriented towards the efficiency frontier rather than central tendency and it measures the average efficiency instead of measuring the efficient level of input for a given output. In this model, the standard error is composed of two parts: the normally distributed random error and inefficiency parameter. However, the SF model has an issue with the unknown size of the random error within the observed output, resulting in inaccuracy in the efficiency ratio (Tirtosuharto 2009).

Unlike the parametric method, the non-parametric method of comparative performance measurement has the ability to run multiple inputs and outputs and also has the ability to estimate the efficiency model on the basis of the relationship between inputs and outputs. An efficient production frontier is built from the observed inputs and outputs. By assuming that every input and output correspondence is observable from their interpolation, an efficient production of the non-parametric method can be constructed with all the observed inputs and outputs essentially operating on the same production function. An efficient production frontier represents the optimum capacity of the efficiency model rather than the average profile of the parameters in the regression analysis. From this, all units on the frontier or 'envelope' are assumed to be fully efficient.

Data Envelopment Analysis is an important non-parametric method that measures the relative performance of certain decision making units (DMU) through a multifactor productivity analysis module for measuring the relative efficiency on DMUs. In other words, it is an analytical tool which assists the identification of best practices in the use of resources among a group of organisations. Charnes, Cooper, and Rhodes (1978) pioneered the method of DEA which is based on a mathematical programming production frontier approach. In this model called the CCR model, the frontier is constructed using a piecewise linear combination that has connection with the set of 'best practices observations' in the sample, yielding a convex efficient frontier, and existent values of DMUs are compared to the constructed frontier. The major advantage of the DEA approach is that it does not require

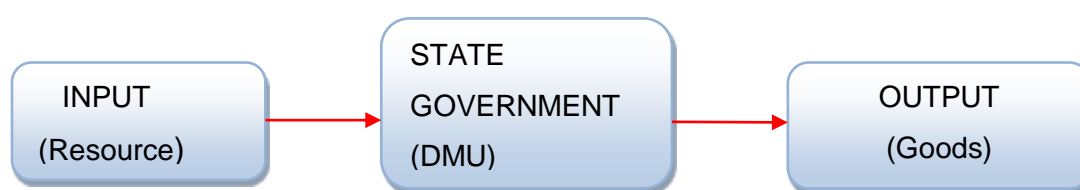
any assumption about the function form, making it particularly suitable for analysing multiple inputs and multiple outputs production systems (Rayeni 2012).

According to (Farrel 1957), technical efficiency refers to a condition when given a set of outputs, a minimum quantity of inputs are required and vice versa. The technical efficiency of a DMU is computed as the ratio of output produced to input consumed as shown below.

$$\text{Technical Efficiency} = \frac{\sum \text{weighted outputs}}{\sum \text{weighted inputs}} \quad (6.31)$$

In general, the basic concept of efficiency measurement is based on the ratio of total outputs to total inputs with the objective to select a set of input and outputs that are relevant to the evaluation of performance and show a moderate statistical relationship (Al Eraqi, Mustafa, and Khader 2010). Technical efficiency as measured by DEA can be identified by using an input or output orientation. The efficiency of performance can be measured when a set of units are being compared to each other. The process is explained below:

**Figure 6.1 The DEA framework**



Source: Tirtosuharto 2009

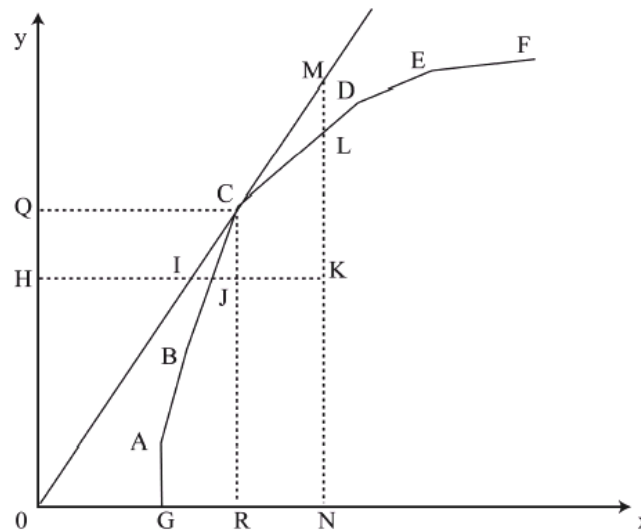
Using DEA method, the technical efficiency score is measured with state revenue and private investments as the outputs of the model, while state spending, including capital expenditure and current expenditure, are considered as the input variables. Based on a number of previous studies, the input to measure efficiency of states is the public expenditure (Herrera and Pang 2005; Afonso, Schuknecht, and Tanzi 2003), and thus technical efficiency is an analysis of spending or expenditure efficiency. In state spending, the variable of capital expenditure includes spending on various public investments, such as infrastructure, health and education, and current expenditure includes other non-investment expenditures on operations and public goods provision. Because of the nature of typical public fixed investments where there is a time lag for a project or program to be fully operated, the data used has a one year lag. The two output variables in the DEA model are state revenue and private domestic investment. State revenue includes taxes, fees and charges, but it excludes transfers from the federal government. Some of the state revenue also comes from profits generated by state owned enterprises (SOEs), such as state local banks and public utilities organisations.

Spending on capital investment projects or services generates revenue for states either directly through fees or charges, or indirectly through tax collections driven by private sector development. The level of private investment is also affected by state decisions to invest in capital projects, particularly in connection with public service delivery. The availability of infrastructure, such as transportation networks, telecommunication, and electricity would be part of the consideration when making a decision to invest in a region. The expansion of state expenditure will also boost government consumption, expand market demand, and potentially induce private investment in the region. This is similar to the concept of the multiplier effect which posits that government spending can lead to higher economic growth.

Although DEA measures relative efficiency, each DMU is assumed to have a sufficient number of units with absolute technical efficiency and the DEA analysis is seen capable of continuously improving their performance (Thanassoulis 2001). In the first step, Granger causality test is performed to identify a stronger causal relationship between the input and output variables. Homogeneity is the main criterion of DMU as it uses the same input resources to produce output and yet, each unit of assessment has a 'decision' control mechanism to convert inputs into outputs.

In measuring technical efficiency, DEA allows discretion under certain conditions for the model to control inputs or outputs in the analysis. The concept of Pareto efficiency has three orientations based on whether inputs or outputs are controllable (Farrel 1957). In the input-oriented model, inputs are controllable and DMUs are deemed to generate a given amount of outputs with the smallest possible amount of inputs. Alternatively, an output-oriented model measures efficiency on the basis of a given amount of inputs to generate maximum outputs. The third orientation is the base-oriented model where DMUs produce the optimal combination of inputs and outputs (Tirtosuharto 2009; Farrell 1957), thus controlling both inputs and outputs. The DEA model in this study is based on input orientation as it pertains to the capability of state governments in maximising output generated from a limited amount of public spending as input.

**Figure 6.2 Measurement of technical efficiency**



Source: Based on Tirtosuharto (2009)

The DEA model allows each DMU to maximise the weight multipliers. The weights of inputs and outputs for each DMU vary until the model achieves the best possible combination. The resulting efficiency score is relative to the DMU's sample observed and the set of weights have to account for other units of assessment in which none of them have an efficiency score greater than one (Tirtosuharto 2009). Figure 6.2 illustrates the graphical representation of the efficiency measurement of the DEA model with a single input ( $x$ ) and single output ( $y$ ). The model produces two frontier efficiency lines: first is a linear line (OICM) that correlates with constant return to scale (CRS) and the other is a convex line (GABCDE) with variable returns to scale (VRS). K represents an inefficient DMU, which is located outside of the envelope frontier. The technical efficiency of K is  $HI/HK$  in the CRS and  $HJ/HK$  in the VRS. The scale efficiency of K, refers to the ratio of  $HI/HJ$ .

This traditional CCR model, explained so far was developed by Charnes, Cooper, and Rhodes (1978) on the assumption of constant return to scale (CRS), where it is assumed that an increase in inputs consumed would proportionally increase the output produced (Cooper, Seiford, and Zhu 2007). The CRS structure is more restrictive than the variable return to scale (VRS), which lowers the number of efficient units and efficiency. With the CRS assumption, it is required for all DMUs to operate under an optimal scale, however, limited resources, such as imperfect competition and institutional issues, can limit DMUs from operating optimally.

However, this model cannot support imperfectly competitive markets. To overcome this limitation, Banker, Charnes, and Cooper (1984) advanced the BCC model, which estimates

productivity level at the given scale of operation and identifies return to scale DEA can be applied by assuming either constant return to scale (CRS) or variable return to scale (VRS). In DEA-CCR model, all observed predicted combination can be scaled up or down proportionally, but in DEA-BCC model, the variables are allowed to return to scale and is graphically represented by a piecewise linear convex frontier (Cullinane, Ji, and Wang 2006). The mathematical expression of the DEA models is given below:

i) CCR Model

$$Max \phi_k$$

$$Subject\ to \quad \sum \lambda_j x_{ij} \geq x_{ik} \quad i= 1, 2, \dots, m; \quad (6.32)$$

$$\sum \lambda_j y_{rj} \geq \phi y_{rk} \quad r= 1, 2, \dots, s. \quad (6.33)$$

$$\lambda_j \geq 0 \quad j$$

And

ii) BCC Model is defined by adding equation (6.32) to expression (6.33) above.

$$\sum \lambda_j = 1$$

Where  $n$  is the number of DMU,  $\phi_k$  is the efficiency of the  $k$ -th DMU,  $x_{ij}$  are  $i$ -th inputs of the  $j$ -th DMU,  $y_{rj}$  are the outputs of  $j$ -th DMU and  $\lambda_j$  is weight of  $j$ -th DMU. The DEA- technique requires a large number of medium-sized linear programming problems to be solved.

In the VRS structure of the BCC model, the outputs produced can increase more or less proportionally to the increase in inputs. W (from the model) relaxes the constant return to scale by allowing the frontier set to go through the origin (Banker, Charnes, and Cooper 1984). The BCC input-oriented model is considered more appropriate for this study.

The linear programming of BCC model is expressed as follows:

$$(1) \quad Max \theta_0 = \sum_i \mu_i \sum_0 y_{i0} + w$$

Subject to:

$$(2) \quad \sum_j v_j x_{j0} = 1$$

$$(3) \quad \sum \mu y_{ik} - \sum_j v_j x_{jk} + w \leq 1 \text{ for all } k=1,2,\dots,n$$

$$(4) \quad \mu_{j0} \geq \varepsilon$$

$$(5) \ v_j \geq \varepsilon$$

$$(6) \ w \text{ is free.}$$

In this analysis, DEA is under a dynamic (time dependent setting) rather than a static condition. However, it has the risk of excessive use of resources that are intended to produce future outputs. Therefore, a time dependent method of DEA or window analysis is employed. The technique of window analysis was first introduced by Charnes, Cooper, and Gorlarry (1985). Basically, a DEA window analysis calculates the average efficiency of CCR and BCC models, and is useful for detecting efficiency trends of DMU over time (Asmild et al. 2004; Charnes et al. 1994). It treats each DMU as a different unit so that data on states in different time periods are incorporated into the model by treating them as if they were different states (Webb 2003).

With thirteen DMUs ( $n$ ) and twenty years of observation ( $k$ ), this study needs to choose the window length ( $p$ ) to examine the consistency of the scores. But as there is no theory to underpin the justification for the choice of window size, this must be done purely on the basis of the analytical needs of the data and study context. The application of windows analysis can be numerically illustrated as:

$$\text{Length of window} : p = (k+1)/2 \text{ (Number of columns in window)}$$

$$\text{Number of windows} : w = k - p + 1 \text{ (Number of rows for each firm)}$$

$$\text{Number of DMUs in each window} : np/2$$

$$\text{Number of different DMUs} : n(k - p + 1)p$$

The identification of performance trends in row window and the stability is defined in column.

#### 6.4.2 Determinants of State Technical Efficiency in a Tobit Panel Data Model

This section is an extension of the technical efficiency analysis and examines factors that influence technical efficiency levels of state governments in Malaysia using Tobit panel data regression. The following factors/variables are analysed to establish the likelihood that they influence state technical efficiency levels. These factors are identified as the possible determinants of state government efficiency and are treated as explanatory variables in the Tobit panel data model (Tirtosuharto 2009). In contrast to Tirtosuharto (2009), who used share of state spending over total government spending to represent fiscal decentralisation, this study considers both dimensions of fiscal decentralisation (ED and RD) which is known as Composite fiscal decentralisation. The second variable is the operating costs which represents the share of state operating costs (OPEREX) over total state spending. It is

associated with the operation and management of a state government. The third variable is the productive spending comprising of a share of state capital expenditure over total state spending. Capital expenditure (CAPEX) is either existing capital improvements or new capital investment projects are considered productive spending. The fourth and fifth variables are real SGDP per capita and expenditure per capita (EXPPC). All the four variables OPEREX, CAPEX, SGDPPC and EXPPC are expressed in logarithmic form. Lastly, following Tirtosuharto (2009), dummy variables of less developed states (LESSDUM) are included to indicate whether there are differences in terms of technical efficiency levels between developed states and less developed states in Malaysia.

In order to reveal the determinants of state efficiency, the Tobit panel data model is constructed after deriving the technical efficiency scores from the DEA analysis. Unlike a normal panel data regression, the estimates of the parameter are unbiased and consistent with scores, causing the estimates to lean towards the lower bound. On the other hand, in a normal panel data regression model, the estimates of the parameter tend to be biased and consistent with scores resulting in the estimates lean towards the higher bound. The Tobit panel data model is a maximum-likelihood random effect model that has the ability to censor the dependent variable. The Tobit model is employed because the technical efficiency scores are constrained within the range of 0 and 1. A right-censored Tobit model is constructed in this study to check whether the observed efficiency scores lean towards 1.

The technical efficiency scores are considered as latent variables because the efficiency of states is not directly observed but inferred through other variables in the DEA model. The mathematical expression of a Tobit censored panel data regression can be explained as the level of  $y_{it}$  (efficiency scores as the dependent variable) in terms of an underlying latent variable  $y_{it}^*$  is:

$$y_{it}^* = \beta_0 + \beta_1 x_{it} + \varepsilon_{it} \quad (6.34)$$

$$y_{it}^* = \beta_0 + \beta_1 x_{it} + \varepsilon_{it} \quad \text{if } y_{it}^* > 0, \text{ and} \quad (6.35)$$

$$y_{it} = 0 \quad \text{if } y_{it}^* < 1 \quad (6.36)$$

The error term ( $\varepsilon_{it}$ ) in the efficiency distribution of the Tobit panel data model where  $y_{it}^*$  is a latent variable is assumed to be normally distributed as a function of  $N(0, \sigma^2)$ .  $\varepsilon_{it}$ ,  $x_{it}$  and  $\beta$  are vectors of explanatory variables and unknown parameters respectively. Both  $\beta$  and  $\sigma$  are estimated using maximum likelihood estimation (MLE).

The standard estimation using a maximisation of likelihood function (L), where F is the standard normal cumulative distribution function is as follows:

$$\log L = \sum_{y_{it} > 0} -\frac{1}{2} [\log(2\pi) + \log \sigma^2 \left( \frac{y_{it} - (\beta_0 + \beta_1 x_{it})}{\sigma} \right)^2] + \sum_{y_{it} = 0} \left[ 1 - F \left( \frac{\beta_0 + \beta_1 x_{it}}{\sigma} \right) \right] \quad (6.37)$$

$$y_{it} > 0$$

$$y_{it} = 0$$

The estimated coefficients in the Tobit panel data model are represented by the marginal effect of  $x_{it}$  on  $y_{it}$ . In order to achieve the expected marginal effect rather than desired marginal effects of  $x_{it}$  on  $y_{it}$ , the following equation is employed in the Tobit panel data model:

$$E[y_{it} | y_{it} > 0] = \beta_0 + \beta_1 x_{it} + \sigma \left[ \frac{\phi(\beta_0 + \beta_1 x_{it})}{\Phi(\beta_0 + \beta_1 x_{it})} \right] \frac{\sigma}{\sigma} \quad (6.38)$$

The relationship between fiscal decentralisation, state efficiency and economic growth is centred on the belief that decentralisation provides an incentive for state governments to be efficient, which eventually leads to economic growth. Therefore, state efficiency implies that states will allocate expenditure and resources to productive investments, which will contribute to the growth of the private sector and the market economy at the state level. Decisions and strategies made by states on allocation of public expenditure can affect the efficiency of production and market economy, even though state governments are not typically involved in real production. States are supposed to be more efficient if they assign their fiscal resources to productive spending and be able to generate sources of revenue independently. The choices or preferences made by state governments in allocating public expenditure portray a measurable role of states in supporting development and public welfare goals. This method is also viable since all states follow the same standardised structure and assessment. Based on state efficiency theoretical model, the hypotheses that can be drawn are:

**Hypothesis 5:** The level of fiscal decentralisation provides incentives for states to become more efficient in allocating fiscal resources.

**Hypothesis 6:** Higher productive spending indicates a higher level of state efficiency.

Basically, spending on capital investment projects or services will generate revenue for states directly through fees or charges, or indirectly through tax collections from the private sector investment. The inflows of private investment depend on state decisions to invest in capital projects which are related to public service deliveries. The availability of good infrastructures would be part of the factors considered by investors' decision to invest in states. Current expenditure includes state government's operating costs such as rent, wages and subsidies. Thus, the expansion of state expenditure will boost the government



consumption, expand market demand and attract private investment into states. The concept of multiplier effect from the government spending leads to higher economic growth (Tirtosuharto 2009).

When this analysis is applied to developing countries, it potentially explains a paradox where a higher degree of fiscal decentralisation does not necessarily increase government efficiency levels, but the country still experiences robust growth. A number of studies have supported the rationale of why developing countries experienced strong economic growth over several decades despite deterioration in the performance of their governments. One explanation is that growth is particularly influenced by factors that are independent of decentralisation policies, such as expansion of the global market economy, a growing capital market and private investment, and an increase in domestic demand due to population growth.

## **6.5 Econometric Issues**

The use of panel data set in empirical estimation typically presents a number of econometric problems, which makes it important to control the unbalanced nature of the panel data set. In particular, this section discusses the issues of multicollinearity, serial correlation and heteroscedasticity.

### **i) Multicollinearity**

Multicollinearity occurs when the variables are strongly correlated with each other to the extent that conceptual content of the variables overlap each other. Multicollinearity is reflected in the existence of a linear relationship among variables or independent variables (Gujarati 2003). This problem means that the coefficients parameters cannot be estimated with precision. There is high standard error, low t statistics, unexpected changes in coefficient magnitudes or signs, or non-significant coefficients despite a high R-square. The variance inflation factors (VIF) is an important measure to identify the existence of multicollinearity, so that the model can be improved. A large VIF indicates that a significant multicollinearity exists. A VIF of 10 or more indicates the presence of high multicollinearity and a VIF above 5 from the independent variables without considering the dummy variables also indicates multicollinearity. If the estimated model is able to meet these conditions, the coefficients are said to be accurately estimated, thus the coefficient signs can be reliable (Garcia 2006).

### **ii) Heteroscedasticity**

Another problem with panel data is related to heteroscedasticity where biased outliers affect the regression slope. In order to minimise this problem, it is important to decide the type of

panel model used. In statistical terms, the analysis should include a test to estimate unobserved heterogeneity as a parameter of the model (fixed effects) or as an outcome of a random variable (random effects) (Tirtosuharto 2009). As a result of the bias in the standard errors of the parameter estimates, it is impossible to make proper inferences. In this study, the Modified Wald test for groupwise heteroscedasticity is adopted to determine whether the null hypothesis of homoscedasticity can be rejected. The Modified Wald test posits that the null hypothesis of homoscedasticity for the pooled OLS and fixed effects models can be rejected if it shows up at the 5% significance level. In addition, the White (1980) heteroscedasticity consistent variance estimator has been employed to correct standard errors of the parameter estimates. The White test can be done in the presence of homoscedastic disturbances without adversely affecting the OLS or within estimator parameter estimates. This means that even though the null hypothesis of homoscedasticity has improperly been rejected, this rejection will not adversely affect the parameter estimates of the estimated standard errors (McNab 2001).

### iii) Serial Correlation

Panel data analysis is always associated with auto-correlation problem between variables observed in the model due to the nature of time series modelling. The presence of serial correlation renders the fixed effect within estimator inefficient and the random effects GLS estimator inconsistent. In either case, the parameter estimates are adversely affected by the presence of serial correlation. Prior to addressing any of the econometric issues, the existence of serial correlation must be determined. If the null hypothesis of serial correlation is rejected, then it must be corrected with robust estimation. If two different types of models with pooled-OLS and error component are given, then two tests for serial correlation have to be conducted. This approach is believed to be appropriate in the case that the individual and time-specific effects are jointly equal to zero and the pooled-OLS model is the best linear unbiased estimator for the investigation of the impact of fiscal decentralisation. On the contrary, if the individual or time-specific effects are singularly or jointly different from zero, then testing for serial correlation with the fixed effects error component estimator is more appropriate as the standard errors of the pooled-OLS estimator will be biased. The most common statistical test for the pooled-OLS estimator for the presence of serial correlation is the Durbin-Watson test. It is based on the principle that if the true disturbances are serially correlated, then the least squares residuals are also serially correlated. For the fixed effect models, the method advocated by Bhargava, Franzini, and Narendranathan (1982) was followed. This method uses the Durbin-Watson statistic based on the within residuals rather than the LS residuals to examine the hypothesis of no serial correlation (McNab 2001).

## 6.6 Summary and Conclusion

This chapter has elaborated on the methodology adopted in this study to examine the fiscal consequences of the federalist system in Malaysia. All the selected methodologies have their own strengths and weaknesses; i) the panel DOLS (Kao and Chiang 2000) for cointegrated panel regression has the advantage of correcting the standard pooled-OLS serial correlation and endogeneity of regression in the long run relationship. Its t-statistic exhibits the least bias, thus panel DOLS is found to be the best estimator; ii) Unlike the panel DOLS, the panel data methodology (the panel data regression) has a much larger number of observations, resulting in more reliable parameter estimates. It has several other advantages such as more variability among the variables, less collinearity, missing independent variables can be reduced, more degrees of freedom and more statistical efficiency is involved. More importantly, it allows us to construct and test more complicated models than just cross-section or time-series data; iii) For the efficiency analysis, the DEA method has the ability to identify the resources among a group of organisations and it is suitable for analysing multiple inputs and multiple outputs related to different resources, activities and environmental factors. The main advantage of DEA is that it can readily incorporate multiple inputs and outputs to calculate technical efficiency and a useful tool for examining the efficiency of government service provider. Specifically, in this analysis a time dependent method of DEA (dynamic condition) or window analysis is employed. While as an extension of DEA method, Tobit panel data is the maximum likelihood random effect model that has the capacity to censor the dependent variable and also has an advantage to estimate the parameter without bias and consistent with scores resulting in the estimates to lean towards the lower bound.

As the purpose of the analyses is to investigate the fiscal system from the perspective of MPF theory, the frameworks developed here focus on three main aspects: the relation of fiscal decentralisation and regional growth, the existence of fiscal incentives and state efficiency in the federal system. The relevant variables in each model were explained along with the statistical/econometric techniques for estimating the model. The results from the analysis of the three models will be reported in the next chapter.

## CHAPTER 7

### RESULTS AND DISCUSSION

#### 7.1 Chapter Aims and Description

Federal systems in different countries have different arrangements for allocating fiscal, political and administrative responsibilities between national and subnational governments. The effects of decentralisation, in terms of its efficiency, equity and macroeconomic stability, depend on how the policies and incentives (institution-specific) are designed (Litvack, Ahmad, and Bird 1998). This chapter presents the empirical findings from the econometric analyses conducted on the fiscal performance of the federal system in Malaysia to provide evidence for the need of fiscal decentralisation following market preserving federalism (MPF) guidelines. The chapter is divided into three parts with each part elaborating the results from the three analytical models of fiscal federalism explained in the last chapter. The first part examines how fiscal decentralisation is related to regional growth by utilising dynamic panel time series comprising panel unit root tests, panel cointegration of Pedroni (1999) test and Dynamic-OLS (DOLS). This is followed by an analysis of fiscal incentives available to Malaysian states using panel data regression. The third analysis presents results of the efficiency analysis, including, scores for efficiency in different states using Data Envelopment Analysis (DEA) and Tobit panel data model, identifying determinants of state efficiency. Each section is accompanied with a discussion evaluating the implications of the results for intergovernmental relations in Malaysia and the applicability of MPF theory to improve fiscal relations.

The findings for the first model show that fiscal decentralisation (FD) has positively impacted long term regional growth. The second model reveals the weak fiscal incentives of Malaysian state governments as they are not subject to hard budget constraints as there is a weak link between local expenditure and local revenue generation and fiscal incentives have also reduced the local private business investment. Finally, the third model measuring regional competitiveness through efficiency scores confirms the lack of efficiency within Malaysian state governments. Overall, as the chapter will elaborate, the findings provide evidence that the current model of fiscal decentralisation in Malaysia can be improved to support a market-based system of fiscal federalism in line with MPF theories. The Malaysian public sector can be made more efficient and responsive if more power is devolved to them whilst ensuring that they spend within their fiscal capacity rather than being driven by central bureaucracy. When the federal government loosens the constraints on states, states have the incentive to

become innovative and competitive, and fiscal independence and economic growth can be improved significantly. More importantly, the importance of grants will be diminished and fiscal responsibility and fiscal accountability will be increased.

## 7.2 Empirical Findings for Fiscal Decentralisation and Regional Growth Model

A measure of autonomy for state governments for expenditure and revenue is crucial to realise efficiency gains and support the macro-economic stability under a decentralised government (Dabla-Norris 2006). This section discusses the results from testing of the hypotheses on fiscal decentralisation and regional economic growth.

**Hypothesis 1:** Fiscal decentralisation has a positive relationship with regional growth.

The fiscal decentralisation and regional growth models were empirically tested to predict if a statistical significant relationship exists between the key independent variable FD (fiscal decentralisation) and the dependent variable; Y (the growth of SGDP per capita) in the long run. The relationship was mediated by the other independent variables DPI (domestic private investment), FDI (foreign direct investment), FIXIE (fixed public investment), LF (the growth of labour force) and BUD (budget balance). All the variables are transformed using natural logarithms. The model of fiscal decentralisation and regional growth was conducted with dynamic panel time series using three estimations: i) panel unit root for stationary test ii) panel cointegration test and iii) long run cointegration estimation using the panel DOLS test. Before the presentation of the formal regression results, Table 7.1 provides the descriptive statistics of the variables used in panel data estimations.

**Table 7.1: Descriptive Statistics: Panel Data Variables for Fiscal Decentralisation and Economic Growth Models (N\*T=260)**

Variable	Mean	Std. Deviation	Min	Max	Unit of Measurement
SGDPPC (Real SGDP per capita)	14183.32	6339.09	3727.81	33217.87	MYR
FD (Fiscal Decentralisation)	1.63	2.65	0.27	1.23	Percentage
FDI (Foreign Direct Investment)	8.31	17.79	0.06	198.68	MYR (million)
DPI (Domestic Private Investment)	6.05	12.35	0.01	122.90	MYR (million)
BUD (Budget Balance)	-264.94	754.57	-2865.34	8695.34	MYR (million)
FIXIE (Public Investment)	352.87	942.83	9.30	13431	MYR (million)
LF (Labour Force)	0.65	0.43	0.06	2.17	Million

Table 7.1 reveals some interesting patterns and trends in the data. The essence of these statistics is to indicate the level of disparity among the variables. On average, the SGDP per capita for Malaysian states is relatively high at MYR 14,183.32, with the value ranging from MYR 3,728 to MYR 33,218. This is supported by the high standard deviation of MYR 6,339

indicating that there are wide regional disparities across Malaysian states. However, as the variable of fiscal decentralisation (FD) has a mean value of around 1.63%, the degree of fiscal decentralisation is relatively small. Such a highly centralised fiscal federalism not only affects the performance of state governments but also the direction of other variables attributable to the wide disparities. All other variables show the wide gaps between maximum and minimum values with domestic private investment (DPI) ranges from 0.01% to 123%, foreign direct investment (FDI) ranges from 0.06% to 199%, budget balance (BUD) ranges from –MYR 2,865.34 million to MYR 8,695.802 million and public fixed investment (FIXIE) from MYR 9.3 million to MYR 13,431 million. Lastly, for the variable of labour force (LF), the value ranges from 0.059 million to 2.173 million with the smallest standard deviation recorded at 0.43 million.

### **7.2.1 Dynamic Panel Time Series**

From our evidence, most economic variables are non-stationary in level as they tend to drift over time. This means that they will not return to a specific value or behave in a deterministic trend, which makes it important to ascertain if the drift is a non-random process with a cointegrating relationship. The identification of cointegrating relationship and common trends is undertaken with the modelling of the 'long run' determination of the variables. In this study, the panel method developed by Kao and Chiang (2000) was applied for this purpose. The panel DOLS has been claimed to be the most acceptable model for estimating cointegrated panel regression, as it accounts for both endogeneity and serial correlation in the regressors that result from the existence of a cointegrating relationship and also corrects nuisance parameters including lead and lag terms (Kao and Chiang 1999). The estimated coefficients of the independent variables obtained from the panel DOLS models constitute the long-run estimation results. Before further estimation of the first two models, it is necessary to employ panel unit root tests to examine whether all the investigated variables of these estimated equations are stationary.

### **Panel Unit Root and Stationary Tests**

The objective of performing the panel unit root test (non-stationary of the multivariate series) on the data is to determine whether the estimated equations are spurious or otherwise. In order to explore the panel time series properties of the data, Levin, Lin and Chu (LLC), Augmented Dickey Fuller-Fisher (ADF-Fisher) and Phillips, Perron and Fisher (PP-Fisher) panel unit root tests have been employed. All these tests were performed on the variables at level and first difference, with the optimal lag lengths for each test determined automatically by the E-Views 7 software. A series is stationary if the null hypothesis is rejected in LLC test, ADF-Fisher tests and PP- Fisher test. For estimating long-run parameters, the DOLS is

employed to ensure that the condition of a cointegrating relation between a set of  $I(1)$  is fulfilled. Table 7.2 reports the empirical results of LLC, ADF-Fisher and PP-Fisher panel unit root results on equation (6.9) from the previous chapter which contained variables  $\ln Y$ ,  $\ln FD$ ,  $\ln DPI$ ,  $\ln FDI$ ,  $\ln BUD$ ,  $\ln FIXIE$  and  $\ln LF$ .

**TABLE 7.2: Panel Unit Root Tests (No deterministic intercept or trend)**

VARIABLES	LLC		ADF-Fisher		PP-Fisher	
	Level	Difference	Level	Difference	Level	Difference
$\ln Y$	8.12	10.80**	1.02	147.99**	1.07	146.59**
$\ln FD$	-3.62**	-6.76	26.89	51.89**	72.17**	288.59**
$\ln FDI$	-2.69**	-7.97**	28.38	58.64**	92.71**	286.58**
$\ln DPI$	-3.75**	-9.98**	28.17	70.02**	91.40**	260.56**
$\ln LF$	8.04	-15.09**	0.61	190.11**	0.47	248.72**
$\ln FIXIE$	-0.57	-16.14**	21.73	229.19**	26.05	229.19**
$\ln BUD$	-1.11	-38.34**	22.58	245.64**	31.43	252.54**

Note: \*\* denotes significance at 5% level.

Results suggest that most of the variables are non-stationary at level especially for ADF-Fisher test and PP-Fisher test. However, the test fails to strongly reject the  $I(0)$  null at 5% significance level of the PP-Fisher test for  $\ln FD$ ,  $\ln DPI$  and  $\ln FDI$  and LLC test for  $\ln FD$ ,  $\ln DPI$  and  $\ln FDI$ . Hence, the series of the first difference of the variables are further examined. All tests strongly reject the existence of unit roots at 5% significance level for all variables and the overall combined results from all the tests for all variables appear to be  $I(1)$  process. This means that the analysis can proceed to further estimate the long-run elasticity of the models including cointegration as well as the panel DOLS.

### Panel Cointegration Test

Next, the Pedroni (1999) technique was applied to analyse cointegration relationship among the variables in the estimation equations, fiscal decentralisation model considering the variables of  $\ln Y$ ,  $\ln FD$ ,  $\ln DPI$ ,  $\ln FDI$ ,  $\ln BUD$ ,  $\ln FIXIE$  and  $\ln LF$ . The tests include no deterministic intercept or trend (none) following from the panel unit root tests. As shown in Table 7.3, four test statistics of the seven Pedroni panel and group test statistics have significantly rejected the null hypothesis of no cointegration at 1% significance level. Evidences of no cointegration were found from the panel  $v$ -statistic, panel  $\rho$ -statistic, and

group *rho*-statistic tests. This evidence proves that most of the variables are cointegrated or have long-run equilibriums.

**Table 7.3: Pedroni Panel Cointegration Tests with No Deterministic Intercept or Trend (none) for Growth of SGDP per capita (Y) Equation**

Panel v-Statistic	-1.019
Panel rho-Statistic	1.835
Panel PP-Statistic	-10.122***
Panel ADF-Statistic	-5.676***
Group rho-Statistic	3.203
Group PP-Statistic	-12.965***
Group ADF-Statistic	-8.056***

Note: \*\*\* denotes significance at 1% level, \*\* for 5% level and \*for 10% level, N\*T=260.

## 7.2.2 Cointegration Estimation Using Dynamic OLS (DOLS)

Finally, in order to estimate the long run relationship of the model specified in the above section, DOLS estimation by Kao and Chiang (2000) was performed. The panel cointegration results indicate the existence of cointegration relation between a set of  $I(1)$  variable satisfying the DOLS estimation. For robustness, the estimation requires the inclusion of leads and lags in order to avoid the autocorrelation problem and to capture the endogeneity of the independent variables. This is supported by the correlation matrix that provides evidence that there is no multicollinearity problem. Table 7.4 reports the DOLS estimations of equation (6.9) based on three sets of leads and lags – one- year lag and one-year lead (DOLS (1,1)), one- year lag and two-year leads (DOLS (1,2)), and two-year lags and one-year lead (DOLS(2,1)) – separately on the three estimated models of fiscal decentralisation and regional growth. As shown in Table 7.4, the results are robust across specifications meaning that all results are also very similar to those obtained from ‘by default’ DOLS estimates in Model 3. Hence, the estimated impact of fiscal decentralisation on regional economic growth remains positive and significant. This positive association indicates that higher levels of fiscal decentralisation on both dimensions (composite decentralisation) will result in higher growth of regional GDP per capita (SGDP per capita).



**Table 7.4: Estimation and Inference Using panel Dynamic-OLS (DOLS) Method**

Dependent Variable: ln Y									
Variables:	Model 1 (Lag=1, Lead=1)			Model 2 (Lag=1, Lead=2)			Model 3 (Lag=2, Lead=1)		
	Coefficient	S.E	t-Statistic	Coefficient	S.E	t-Statistic	Coefficient	S.E	t-Statistic
lnFD	0.010	0.09	6.31***	0.010	0.09	6.92***	0.010	0.09	5.88***
lnDPI	0.006	0.13	2.77**	0.010	0.13	2.07**	0.005	0.13	2.04**
lnFDI	-0.003	0.12	-1.34	0.001	0.12	0.01	-0.004	0.12	-1.57
lnBUD	0.125	2.19	3.29**	0.050	2.19	1.17*	0.140	2.19	3.45***
lnFIXIE	0.008	0.14	3.31***	0.010	0.13	4.00***	0.006	0.14	0.01***
lnLF	0.012	2.18	0.33	-0.24	2.18	-5.89***	-0.017	2.18	-0.42
R-Squared	0.439			0.488			0.494		

Note: \*\*\* denotes significance at 1% level, \*\* for 5% level and \* or 10% level, N\*T=260 and S.E indicates Standard Error.

The estimation of this model also shows that the coefficient of fiscal decentralisation (FD) is positive and statistically significant at 1% for the full specification of Y (the growth of real SGDP per capita or regional growth) indicating that fiscal decentralisation has a positive relationship with regional growth in the long run. Specifically for Model 3, on average, a 1% increase in fiscal decentralisation increases regional growth by 0.01%, implying that fiscal decentralisation is an effective system in improving the states' economic performance, which is consistent with the claims of pro-federalism theories proposed by Tiebout (1956), Musgrave (1959), Oates (1972) and other MPF proponents.

Other determinants are also important in justifying the relationship between fiscal decentralisation and regional growth in Malaysia. In this model, all variables are significant except for labour force (LF) and foreign direct investment (FDI) with negative signs, making it difficult to draw any predictions or conclusions with respect to the signs or magnitudes of this estimation. Overall these two coefficients have neutral impact on regional growth.

The statistically insignificant FDI means that the role of investment has changed due to changes in external environment where domestic private investment is unable to deliver equivalent returns. As a result, Malaysia needs to attract efficiency enhancing investment by increasing productivity instead of labour intensive FDI to benefit the economy in the long run. This has caused Malaysian Investment and Development Authority (MIDA) to become more selective in its approval of FDI. In other words, quality high technology, capital intensive and productivity base industries are prioritised, as quality is more important than quantity of FDI, and possibly the role of FDI as a stimulant for economic growth has diminished considerably (Abdul Rahim 2012).

Consistent with the theory, public fixed investment (FIXIE) is positively significant at 1% level. The result shows that every 1% increase in the fixed public investment (FIXIE)

increases regional growth by 0.006% in the long run. Public investment made by any level of government builds the nation's capital stock by devoting resources to basic physical infrastructures, innovative activity (basic research), green investments (clean power sources and weatherisation), and education (both primary and advanced, as well as job training) that leads to higher productivity and/or higher living standards. While private actors like domestic private investment (DPI) and FDI also invest in these areas, they do so to a much smaller degree, whereas fixed public investment delivers greater growth as its benefits accrue not just to those undertaking the investment but, to a wide range of people and businesses (Bivens 2012; Faridi 2011; Lee 2003). Similarly, for domestic investment, a 1% increase in domestic investment (DPI), on average, increases regional growth by 0.005% in the long run. Overall, the results validate the positive role of domestic private investment and public fixed investment as discussed in the literature (Huang and Chang 2005; Lin and Liu 2000 and Zhang and Zou 1998).

Next, instead of inflation rate, budget balance (BUD) has been chosen as an indicator to measure macroeconomic stability. This coefficient also has a growth-stimulating feature as a 1% increase in budget balance increases regional growth by 0.14%. This positive growth effect is consistent with the theory of public finance, which argues that a current surplus will finance future deficits through cuts in distortionary taxation or increases in productive spending, which causes an increase in the expected returns to current investment and growth (Kneller, Bleaney, and Gemmell 1999). In particular, if it is used to finance extra capital spending that leads to an increase in the stock of national assets. For example, state governments may spend more on transport and infrastructure facilities which improve the supply-side capacity of the economy, thus, promoting long-term economic growth. This huge budget surplus significantly increases the level of national savings and private investment leading to the achievement of higher economic growth (Bivens and Irons 2010).

### **7.2.3 Discussion of the Fiscal Decentralisation and Growth**

In general, fiscal decentralisation refers to the powers of subnational governments to set and collect taxes (tax administration), to make spending decisions (budget execution), and to engage in borrowing from higher levels of government or the market (debt management), so that the task of providing public goods and services and other standard public sector functions can be shared across levels of governments (De Mello Jr 2000). Fiscal decentralisation contributes to regional growth through actions that decrease the size of the government, improve resource allocation within the public sector and increase competition among subnational governments (Jooste and Marinkov 2012). In other words, the basic argument in favour of fiscal decentralisation is that it improves the efficiency of the public sector and promotes long-term economic development (Oates 1972). All these are expected

to lead towards improvement in regional and overall economic performance, particularly, if state government authorities shift resources from current to capital expenditures in search of a better response to local needs (Akpan 2011). Next, in the delivery of public services, competition and population mobility across local governments will ensure that governments work harder to satisfy the preferences of local communities (Tiebout 1956) and also limit the capacity of bureaucrats to act as revenue maximisers (Thieben 2003; Brennan and Buchanan 1980; Breton 1983). This process strengthens government accountability and vice versa, the citizens are able to monitor government performance and demand corrective measures. As a result, the governments become responsive and accountable, hence reducing corruption and improving the delivery of public services. In line with the MPF theory, the efficiency of the governments in the allocation of public resources will ultimately leads to higher economic growth (Iqbal, ud Din, and Ghani 2013). Therefore, the incentives derived from fiscal decentralisation which promotes growth as hypothesised by both FGFF, and SGFF were observable in both the expenditure and revenue dimensions of fiscal decentralisation. However, the extent of fiscal decentralisation depends on the ability of lower tiers of government to make independent revenue and expenditure decision within a geographic domain without interference from the federal government (Martinez- Vazquez and McNab 2003).

The findings show that fiscal decentralisation (FD) has positively impacted on regional growth, where, regional growth has increased by 0.01% with a 1% increase in fiscal decentralisation in the long run. This positive relationship is consistent with the view of decentralisation advanced by FGFF and MPF proponents of SGFF. Indeed, this finding parallels other studies using traditional panel regression method in developing countries, such as Iqbal, ud Din, and Ghani (2013), Ismail and Hamzah (2006) for Indonesia, Jin, Qian, and Weingast (2005, 1999), and Lin and Liu (2000) for China, and Zhuravskaya (2000) for Russia. This result, however, contradicts Zhang and Zou (1998) and Davoodi and Zou (1998), who conclude that fiscal decentralisation is negatively correlated to economic growth in developing countries and has no significance in developed countries. There are several justifications for the positive association of fiscal decentralisation with economic growth in Malaysian states.

Fiscal decentralisation affects growth positively by transferring spending power to the best equipped levels of government to meet local demands adequately, to increase the efficiency of service delivery and to reduce operating cost. The implementation of fiscal decentralisation allows state governments to have greater budgetary flexibility in deciding their expenditure priorities due to their physical and institutional proximity with the citizenry. For example, the state governments could either take more responsibility by increasing

infrastructure directed at economic growth (i.e. schools, roads, hospitals etc.) or sub-contracting development projects to the private sector. With the principle of multiplier effect, the national economy would grow and expand as states become more competitive and efficient to attract more business investors and labourers. Hence, these would generate more revenues to state governments through taxes, licences and fees. Improving the state's capacity to spend on market-promoting goods would contribute to higher productivity and economic growth, and in turn, such economic progress generated by state autonomy tends to enhance incentives for more effective governance.

But it must be noted that, since the federal system in Malaysia tends towards a more centralised power structure with dominant functions/expenditure power in the hands of the federal government (as stipulated in the Constitution), state governments have little authority to regulate their markets, or control public goods and service provision, especially spending in key social sectors like health, education and infrastructures. For example in 2009, the allocation of the total federal government expenditure through its various ministries was about 24.3%, 7.2%, 14.9% for health, education and infrastructures (public utilities, transportation and communication) respectively.<sup>61</sup> However, these funds were given as program-based spending and there was no specific allocation for any particular states. Devolving greater policy powers to state governments may enable them to implement policies more suited to local conditions better than a centrally designed one-size-fits-all system. They have a better justification in choosing among these three inputs, as different states have different demographic compositions and spatial disparities, particularly, for states like Sabah and Sarawak which have more rural areas as compared to the peninsular states. For oil-producing states like Sabah, Terengganu and Sarawak which are also known as less-developed states (see Chapter 5), decentralisation provides them equal opportunity to pursue economic growth in their states at par with developed states. With the availability of more funds and autonomy in the decision-making process, these states are compelled into mobilising the available resources in their own jurisdictions, rather than waiting for the solutions to their problems or the provision of public goods and services from the federal government. This leads to a greater emphasis on economic efficiency across jurisdictions within a country and also creates possibilities for local authorities to explore their potentials for economic growth that may have remained untapped due to negligence or ignorance of the central government (Rodríguez-Pose and Ezcurra 2010).

All this also means that there needs to be careful deliberation on the areas and services that should be decentralised. One cannot simply say that education, for example, as a whole

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<sup>61</sup> These statistics are as per Economic Report 2009/2010, Ministry of Finance, Malaysia.

should be decentralised; one must distinguish between the various inputs in education, ranging from school curriculum to school cleaning. Setting what goods and services should be provided in a decentralised fashion is only half of the equation. One must then ensure that the decentralised providers have the financial means of carrying out their mandate (Yilmaz, Vaillancourt, and Dafflon 2012). As emphasised by Jalil (2008), Bakar (2004) and Noh (1991), the empirical findings in this study provide evidence that Malaysian state governments should also be given more revenue responsibilities in order to meet their increasing expenditure commitments. There are also many issues that necessitate decentralisation so that states can cover their fiscal deficits. Under the current arrangement (as discussed in Chapter 4), states face considerable fiscal difficulties in meeting their expenditure needs with their limited sources of income. Most tax revenues assigned to states are natural-resource related such as forestry taxes and land taxes, which are less productive in nature and do not have a strong link to the major economic activities. When state governments have little flexibility in raising additional revenue, they encounter difficulties in facing adverse shocks and fiscal crises, such as rising cost of living or defaults on loans (Jalil 2008). This mismatch between limited revenue and continuous increase in expenditure has led most Malaysian state governments to experience widening deficits in their fiscal balances. With the implementation of fiscal decentralisation, state governments would have broader revenue-generating sources to manipulate either tax rates or tax bases as well as other sources of revenue such as fees or licenses. In other words, if they can legislate and implement their own taxes and/or if they are allowed to impose surcharges on the taxes levied by the federal government at their chosen rates, which can influence the amount of revenues collected at the margin and exercise greater control on their revenues. Marginal revenue raising powers allow residents of subnational jurisdictions to choose the level of public services they want (Yilmaz, Vaillancourt, and Dafflon 2012).

With regard to the findings of this study, from the aspect of MPF this greater economic activity enables state governments to capture a large portion of the increased tax revenue, and also to give them the incentives to provide market enhancing public goods. Such incentives would encourage Malaysian state governments to adopt pro-business policies that would make them a competitive destination for domestic as well as foreign investors. When states are able to undertake revenue generation and mobilisation, they become less dependent on federal government for fiscal transfers particularly in terms of ratio of the total size of public sector. More importantly, decentralisation encourages the states to become more careful with their use of resources as they will bear the political burden of having to raise revenue for their services. In Malaysia, the gap-filling nature of fiscal transfers compensates for low levels of local governments' own tax revenue, and fiscal transfers can,

in effect, create negative incentives for state government to mobilise their own revenues. This greater centralisation and soft budget constraints in the current fiscal system create a mentality that makes the states habitually dependent on transfers from the federal government as these states can simply claim, with some justifications, that they are not responsible for their fiscal woes. In addition, restrictions on the types and sources of revenues will prompt state governments to consider other means to balance their budget. When state governments are not permitted to introduce new taxes, charges or fees other than those determined by law, they are forced to increase current tax rates, charges and fees in order to raise revenues and close fiscal gaps. Consequently, tax distortions may excessively raise costs and burden the private sectors, thus, limiting their ability to compete in the market economy.

Although, decentralisation is an effective growth enhancing mechanism as evident in the model, these less developed states lack the capacity to execute their responsibility of providing public services. Lower literacy rate and lack of skilled and professional workers contribute to the lack of administrative capacity to make use of the resources at their disposals and undertake measures that can foster growth. In relation to the rural states in Sabah and Sarawak, the high illiteracy rate contributes to the lack of the needed skilled and professional workers in the state administration level.

The main point here is that, state governments must have the power to make sure that the economic growth experienced by the country translates into more revenues for them by investing more efforts in their tax collection system. The ability to collect revenue in areas linked to economic activity is vital to increase the states' fiscal capacity. Piggyback taxes practised in the United States are a good example of a local tax base in the fiscal system as it incorporates all the federal collections and deductions by boosting state's portion of the income tax. For example, taxes derived from forestry resources constitute the main source of revenues for most state governments; these may increase with economic growth as demand for forest products for construction activities or for furniture may increase when there is a higher economic growth. In case of revenues on land and property, such as rent or assessment tax, it is fairly reasonable to expect some increase in their proceeds when there is higher economic activity as the value of land and properties upon which these taxes are usually based will also increase due to more demand either from the population or from the business communities. And the same goes for entertainment taxes which may also increase in tandem with economic activity, where income increases parallelly with spending on entertainment.

Next, as emphasised in the Public Choice approach, another aspect of fiscal decentralisation is that it can create competition between state governments with regard to taxation and other

policies. This competition can be beneficial when states compete to reduce red tape or improve social services. More importantly, it forces discipline upon public officials who tend to pursue their own interest and seek to maximise their revenues. Similarly, fiscal competition among different levels of government converges with MPF which minimises the extent of government interventions, hence maintaining market efficiency (Weingast 1995). Although competition gives greater opportunity to less developed states with weak fiscal capacity to compete, but they have to bear the risk of falling land values and the loss of capital and labour and hence valuable tax revenue. This situation can also take a 'race-to-the-bottom' approach if states compete in wasteful ways to attract investments, such as offering larger subsidies or relaxing environmental regulations. Consequently, this would reduce the state governments' revenue and lead them to the deficit problems, which will jeopardise the country's fiscal performance at large. In terms of government accountability, it creates a yardstick for competition in which local residents evaluate the performance of their state governments by comparing the achievements in neighbourhood jurisdictions (Besley and Case 1995). But, this is especially important for Malaysia as the political landscape has changed since the last three elections and at least three states are under the rule of opposition parties.

Viewed in this light, Malaysia needs an efficient fiscal federalism to implement fiscal decentralisation in both expenditure and revenue particularly to induce a sense of responsibility, otherwise it would further deteriorate state governments' deficit problems. Therefore, this finding supports Hypothesis 1 (H1) formulated on basis of the SGFF literature that fiscal decentralisation has a positive effect on regional economic growth as it provides state officials with incentives to improve social welfare (Weingast 2009). In other words, fiscal decentralisation promotes growth hence it strengthens the support for the adoption of MPF in Malaysia. Malaysia should strive to fulfil the requirement of giving primary authority over economy and public goods and service provisions to the state governments (condition F2).

#### **7.2.4 Regional Disparities and Fiscal Decentralisation in Malaysia**

Regional disparities seem to be the greatest obstacle for the success of fiscal decentralisation in Malaysia. These disparities can be viewed from the aspect of economic wellbeing of states (as indicated in the growth rate of SGDP per capita); a composite index of development indicates that some states that have weak fiscal capacity due to inability to generate revenue. Fiscal decentralisation can have different degrees of impact on regional disparity, depending on the types of instruments used in expanding the local governments' fiscal capacity. Indeed, for states with weak fiscal capacity, decentralisation would mitigate or exacerbate inequities when they have to spend less on social services like education,

health and infrastructures, and to tax less from progressive bases, as in Spain and Italy (Sacchi and Salotti 2011). In Malaysia more than half states are classified as less-developed – Sabah, Sarawak, Terengganu, Kelantan, Kedah, Pahang and Perlis – showing that addressing the issue of regional disparities (as discussed in Chapter 5) is crucial for Malaysia to achieve the status of a developed nation by 2020. These states normally lack the capacity to execute the responsibility for their public services, as compared to more urbanised states like Selangor and Penang, so this will give rise to further development imbalance in Malaysia.

In other words, fiscal decentralisation could further deteriorate the problem of horizontal imbalance/ regional disparities in Malaysia as some less-developed states with reduced tax capacity would fall behind. Indeed this is consistent with a study done by Canaleta, Arzoz, and Garate (2004) who found a negative relationship between fiscal decentralisation and regional disparities in developed countries. Clearly, regional disparities have been a central issue for the effectiveness of fiscal decentralisation aimed at fulfilling the MPF principles. With ongoing regional disparities, the issue often becomes a political agenda (Moon 2003). The capitation grant is the only grant aimed at reducing horizontal gap between the states, but unfortunately, it has been unable to resolve current problems. In fact, the current fiscal transfer system has tended to focus on equity considerations or entitlement to revenue rather than emphasising the incentive effect of transfers on subnational government policymaking or growth (Singh and Srinivasan 2006). This is evident from the fact that the major problems facing the state governments in Malaysia is the ever increasing amount of tax arrears that are yet to be collected, constituting up to 30% of total income in some states (Jalil 2011). This is because the fiscal transfers system in Malaysia is only concerned with alleviating vertical and horizontal imbalances, but ignores its role in providing incentives to foster thriving local economies as emphasised in the MPF theory. Another example is that economic development grants are intended for less-developed states to balance economic and social disparities between states and promote state development, but the federal government has imposed some significant constraints on state flexibility in decision-making on expenditures.

As discussed in Chapter 5, the current system of intergovernmental transfer in Malaysia has given less direct attention to address the problem of revenue per capita equity across states, thus poorer regions are being allocated lower levels of per capita development funding. Having a fiscal equalisation is crucial for Malaysia to reduce inequality in the ability of state governments to provide comparable public services at comparable tax rates. In particular,



fiscal capacity equalisation can be formulated like in Australia<sup>62</sup>, to compensate states which have a lower capacity to raise revenue, so that each state can provide a similar standard of governmental services so long as it also puts in similar level of fiscal effort (Dawkins and Grewal 2011). Fiscal transfer should be allocated to the states in a manner that lesser capacity states get larger share of fiscal transfer per capita. This will prevent deterioration in regional disparities after the implementation of fiscal decentralisation.

In sum, an effective fiscal decentralisation policy should consist of appropriate expenditure assignments, appropriate tax and revenue assignments and efficient design of a transfer system and its proper implementation (Malik, Mahmood-ul-Hassan, and Hussain 2006). The finding shows that fiscal decentralisation stimulates regional growth in Malaysia implying that if Malaysia focuses simultaneously on both dimensions of decentralisation, revenue and expenditure, then it will be helpful in enhancing the income per capita. This finding also rejects the anecdotal belief that state governments in Malaysia lack the size or efficiency to achieve economies of scale by carrying out large scale infrastructure development projects. Fiscal disparities being the primary problem for fiscal decentralisation, reforming the fiscal transfer system for greater equalisation should become the main agenda. In order to make decentralisation more compatible with balanced regional development as emphasised in Ninth Malaysia Plan (9MP), the policy instruments for decentralisation must be carefully selected. The Malaysian federal system is still relatively centralised. Although it gives limited fiscal authority to the state governments, thus satisfying the F1 condition, the federal government needs to provide local governments with better incentives to support market development and economic prosperity. The findings of this research show that the implementation of fiscal decentralisation, if pursued further in a strategic manner, could enhance further growth and development in the long run. Therefore, the adoption of MPF for reforming fiscal federal system in Malaysia is justifiable.

### **7.3 Empirical Findings for the Fiscal Incentives Model**

The principal implication of SGFF is that certain types of decentralisation and federalism can provide governments with better incentives to support market development and economic prosperity (Jin, Qian, and Weingast 2005, 1999). However, the incentives for fostering and preserving markets would depend on the extent to which the federal system in a country satisfies the principles of MPF. The theory of MPF highlights how various institutions create government incentives for local revenue generation for fostering local economic performance. Specifically, theories of MPF emphasise the importance of incentives for

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<sup>62</sup> Australia has applied a fiscal capacity equalisation since 1936, when the Grants Commission recommended in its first report on special grants to the fiscally disadvantaged states (Dawkins and Grewal 2011).

linking local government's revenue collection with their expenditure and limiting central government's redistribution among local governments. In other words, the states should be encouraged to be self-reliant and there should be limited borrowing/ grants following the hard budget constraint condition of MPF (F4). Hence, the first part of this section discusses the result from testing the hypothesis on fiscal incentives stated in Chapter 6 as:

**Hypothesis 2:** Malaysian state governments are not subject to hard budget constraints.

Although interjurisdictional competition can be an important device to provide incentives for this purpose, this mechanism is imperfect as competition can also lead to a situation of 'race to the bottom' (Weingast 2006). Therefore, fiscal incentives measured by retention revenue of state governments have been advocated as the main mechanism to promote local business development. According to Jin, Qian, and Weingast (2005, 1999), revenue retention refers to the ability of state government in keeping a significant portion of the tax revenue generated from their jurisdictions as a result of decisions including business regulations and taxes, which may have either favourable or adverse effects on local business investment. If the state government's fiscal reward is unrelated to, or even worse, is negatively related to its policy efforts, this would indicate that the state government has no fiscal incentives to support local business. The second part of this section discusses the result from testing of the hypothesis stated in Chapter 6 as:

**Hypothesis 3:** Malaysian state governments support improving market development through private business investment.

There were two models to test the structure of fiscal incentives in relation to fiscal governance and business promotion in the state. The first model of fiscal incentive measures the strength of fiscal incentives of state governments in relation to the linkage between expenditure and revenue. Its objective is to examine the extent of locally generated revenue that is available to state governments for expenditure without having to rely on federal fiscal transfers (grants or borrowings). The second fiscal incentives model evaluates the effect of fiscal incentives available to state governments to foster private business investment.

Method of panel regression, including General Least Square (GLS) with fixed and random effects regressions have been employed for two estimated equations of fiscal incentive models using data from nine years (2001 to 2009). Before the presentation of formal regression results, Table 7.5 provides the descriptive statistics of the variables used for panel data estimations. It shows a pattern and trend for 117 observations (from 2001 to 2009) for five variables. Most of the variables have wide variations (see the standard deviations) with the highest value for local revenue (REV), followed by labour force (LF), the private sector employment (EMP) and expenditure (EXP). For the variable with percentage

value particularly the key variable, fiscal incentive (FI) has the maximum value of 64.25% and the minimum value of 2.69% with the highest standard deviation of 16.32%. Overall, the small mean value for the fiscal incentives indicates that weak fiscal incentives can be related to the values of other variables especially for private business investment.

**Table 7.5: Descriptive Statistics: Panel Data Variables for Fiscal Incentives Models (N\*T)= 117**

Variable	Mean	Std.Deviation	Min	Max	Observation
REV (Local Revenue)	2.92E+09	3.06E+09	1.17E+08	1.31E+10	MYR (million)
EXP (Expenditure)	121577.9	107755.8	12381.47	450761.9	MYR (million)
FI (Fiscal Incentives)	22.43	16.32	2.69	64.25	Percentage
LF(Labour Force)	749435.9	501283.3	58800	2173300	Unit
BI (Private Business Investment)	24408.55	18557.19	1000	93400	MYR (million)

### 7.3.1 Empirical Evidence for Fiscal Incentive Model 1: Examining the Link between Local Revenue and Local Expenditure

Following Jin, Qian, and Weingast (2005, 1999), the equation (6.18) in the previous chapter was estimated to examine the link between local revenue or total potential state revenue (REV) and expenditure (EXP). This relationship would in turn align the link between state government's fiscal incentives and state economic performance/ development.

Panel regression in Table 7.6 reports the result of the link between local revenue (lnREV) and local expenditure (lnEXP) derived from the current system of fiscal federalism in Malaysia.

**Table 7.6: Estimation Results for Local Expenditure and Local Revenue**

Dependent variable: lnEXP (Expenditure)			
Variables:	(1) Random Effect Model	(2) Random Effect Model with Time Effect	(3) Random Effect Model with Time Effect (Robust)
lnREV (Local Revenue)	0.559 (0.076)***	0.411 (0.186)***	0.411 (0.075)***
Constant	-0.551 (1.615)	2.805 (3.890)	2.34 (1.615)*
R-Square	0.531	0.551	0.551
LM test (p- value)	0.000		
Hausman test (p-value)	0.996	NA	NA
Modified Wald Test for Heteroscedasticity (p-value)	0.000		
Serial Correlation (F-value)	0.000		

Note: \*\*\* denotes significance at 1% level, \*\* for 5% level and \* for 10% level, N\*T =117. Figures in the brackets are the normal Standard Error (S.E).

NA is not applicable.

Unlike state-owned revenue and total revenue,<sup>63</sup> the local revenue (total potential state revenue) is represented by REV which is the fiscal revenue generated by states including both components of federal and states revenue.

As the first step, the LM-Breusch Pagan test has been performed, the result of 0.000 reveals that random effect is preferred to pooled-OLS model. The next step is to test whether the random effect model or fixed effect model is more appropriate by performing the Hausman-test, where the p value shows 0.996 (insignificant at 5% level), leading to the non-rejection of the null hypothesis of no correlation between the state-specific error component and the right hand side variables. Thus, random effect estimation is preferred for this equation as shown in Column 1. As the time dummy variables are jointly significant, random effect model with time effect is also found to be the appropriate model for this estimation (one way panel). The result of Column 2 shows a quantitatively significant and positive coefficient of state revenue (REV) in its expenditure equation.

Since some of the explanatory power of independent variables is very low in all estimated panel equations (as shown by the R-square values), this aspect of the results prompted us to check for violations of OLS assumptions. Table 7.6 also presents the diagnostic check for the random-effect estimations which lead us to generate robust estimations as presented in Column 3. In the analysis, Modified Wald test indicates a significant presence of heteroscedasticity of less than 5% level (0.000) in the regression performed. Lastly, serial correlation problem does exist hence, rejecting the null hypothesis of no serial correlation as it is less than 5% significance level (0.000). However, for the purpose of testing robustness, the random effect model gives a consistent result and any correlation between dependent variable and independent variables cannot be attributed to inherent state characteristics. Since the time dummy variables are jointly significant, the robust random model with time effect is found as the appropriate model for this estimation (one way panel). The result of Column 3 shows a statistically significant at 1% level and positive coefficient of local revenue (REV) in its expenditure equation.

This correlation between local revenue and local expenditure provides evidence of the strength or weakness of state incentives as a 1% increase in local revenue (REV), on average, would increase by 0.4% in state expenditure (EXP) in the long run. Coefficient of 0.4 indicates that the federal government has extracted about 60% of any increase in state revenue. The result demonstrates that the fiscal system in Malaysia has produced a weak link between local expenditure and local revenue generation. Both these measures reduced fiscal incentives for the states as the high-performing states could not directly reap the

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<sup>63</sup> This includes tax revenues, non-tax revenues and grants.

benefits from enhanced economic activity in their jurisdiction, and under-performing states assured of continued help from the federal government overlooked the necessity of stimulating business. This translates into weaker fiscal incentives for state governments to pursue local prosperity in order to increase their revenue base. As a result, the states in Malaysia tend to be 'less self-financing' at the margin. More importantly, this situation shows that the state governments may have not only relied on their own revenue sources but fiscal transfers (grants or borrowings). Since the federal government collected most of the components of tax revenue (e.g. individual tax, corporate tax, sales and excise tax as stipulated in the Constitution), theoretically it gives the state officials less incentives to create new market opportunities as a means for increasing their fiscal proceeds generated by the markets. As a result, federal government is the prime mover for development work across the states through various ministries that are responsible for managing all the development programs and initiatives in line with the assigned functions as in the Constitution as well as Malaysia's economic policies (as outlined in Malaysia Plans).

### **7.3.2 Empirical Evidence for Fiscal Incentives Model 2: Private Business Investment and Fiscal Incentives**

The structure of fiscal incentives in the federal system in Malaysia can be further examined by testing its correlation with the formation of private business investment. The test is conducted on the premise that states facing lower revenue retention rate tend to be less interested in developing the local tax base. This confirms the view of SGFF theorists who contend that tax sharing arrangement could play a critical role in establishing incentive support of local development. Table 7.7 illustrates the result of random effect test where the LM-Breusch Pagan statistic is significant as p-value 0.00 is less than 5% level and Hausman specification test of Chi-Square 2.32 is insignificant, so random effect estimation is preferred for this equation.

The results from Table 7.7 reveal that the VIF for this panel model is 1.17 which rules out the presence of multicollinearity in this estimation model, but there is evidence for heteroscedasticity (0.00) presence in this regression which is significant at 5% level. Therefore, a robust regression with year dummies is considered to improve the panel result of private business investment and fiscal incentive model. Column 3 shows a better result with robust standard errors. From the robust estimation results, the strength of fiscal incentives (FI) is significant at 5% level and negatively related to the private business investments in the states. A 1% increase in fiscal incentives (FI) reduces private business investment (BI) by 0.56% implying that when state governments increase their revenue

retention (through higher tax rate or licences imposed on business firms) private business investment formation would decrease correspondingly.

**Table 7.7: Estimated Model for Private Business Investment and Fiscal Incentives**

Dependent Variable: lnBI (Private Business Investment)			
Variables	(1) Random Effect	(2) Random Model with Time Effect	(3) Random Model with Time Effect (Robust)
lnFI (Fiscal Incentives)	-0.494 (0.305)	-0.559 (0.281)**	-0.559 (0.297)**
lnLF (Labour Force)	1.676 (0.334)	1.595 (0.290)***	1.595 (0.368)***
lnEXPPC (Expenditure per capita)	0.275 (0.335)	-0.084 (0.330)	-0.084 (0.391)
Constant	-1.674 (4.976)	1.555 (4.464)	1.550 (6.284)
R-Square	0.454		
LM-test (p-value)	0.000	0.498	0.498
Hausman-test(chi-square)	2.321		
VIF	1.17		
Modified-Wald test for Heteroscedasticity (p- value)		0.000	

Note: \*\*\*denotes significance at 1% level, \*\* for 5% level and \*for 10% level, N\*T =117. Figures in the brackets are the normal Standard Error (S.E). VIF indicates Vector Inflation Factor.

Therefore, the formation of domestic private business investment in states is negatively correlated with the state governments' fiscal incentives.

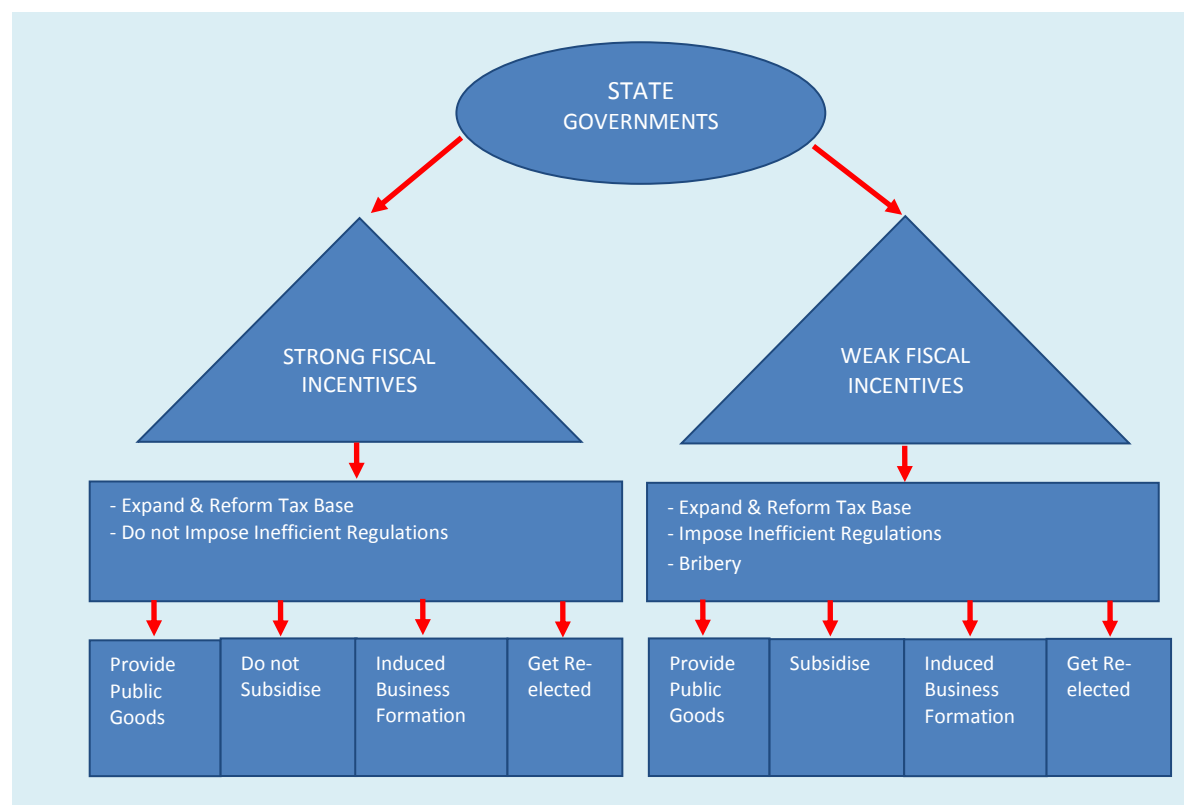
For the control variables, expenditure per capita (EXPPC) and labour force have different results. As the coefficient lnEXPPC is statistically insignificant in Malaysia, its impact on private business investment (BI) has remained neutral. However, this negative sign shows that higher expenditure per capita has created an inflation leading to high production cost which could motivate business investors to relocate to places that can offer lower cost of production. Lastly, the labour force (LF) has a significant positive coefficient at 1% level, as a 1% increase in labour force increases private business investment by 1.6% on average in the long run. A positive relationship with business investment indicates that states with an abundant supply of labour, especially, skilled labour, are able to attract more businesses.

### 7.3.3 Discussion of the Results of the Fiscal Incentives Models

Malaysian state governments seem to have weak fiscal incentives, particularly in regard to increasing their own revenue base (or total potential state revenue in this case) for local economic prosperity. Malaysian state governments have no incentives to be 'self-financing' at the margin but instead continue to rely on transfers from the federal government which violates the F4 condition of hard budget constraint. In terms of the impact of fiscal incentives

in linking revenue and spending, on average, a 1% increase in state revenue only increases expenditure by 0.4% in the long run, which implies that state governments are only able to spend about 40% for every increase in their revenues. Since most of these revenues are collected by the federal government (despite being generated in states), state officials have less incentive to spend for market enhancing public goods and to provide incentives to focus on growth-enhancing policies as illustrated in Figure 7.1.

**Figure 7.1 The effects of fiscal incentives**



Source: Based on Zhuravskaya (1999)

Stronger fiscal incentives should lead to higher efficiency in provision of public goods, because a smaller portion of public expenditure is wasted. In particular, it gives state governments the incentives to innovate in the production and supply of public goods and services. This would reduce rent-seeking, corruption and waste in government, and this greater accountability would lead to greater allocative efficiency (Oates 2005). This weak fiscal incentives indicates the dependency of the state governments on intergovernmental grants/transfers which would reduce their fiscal discipline as well as sense of responsibility. Indeed, grants can make state governments less accountable to their fiscal decisions as they may increase their spending without increasing taxes. In other words, the weak authority of state governments on fiscal matters (delink between revenue and expenditure) have encouraged these states to spend beyond the means available from their own resources. This has further prompted the state governments to blame the federal

government for any of their economic failures, and cemented their expectations of bail-outs from the federal government in times of crisis. Indeed, weak fiscal incentives increase state government spending on subsidies to inefficient enterprises (as has been reported in the General Audit Report) and reduce spending on productive expenditure which clearly violate the hard budget constraint condition of MPF. Therefore, Hypothesis 2 (H2) is supported with the conclusion that Malaysian state governments are not subject to hard budget constraints. Consequences of such soft budget constraints as shown in the persistent state government deficits (see Chapter 4 and 5) that are not only dangerous to the states but also to the national economic performance as emphasised in the MPF theory. Therefore, states' finances need to be strengthened to promote more financial freedom and minimise their over-dependence on the centre for funds. States should be given incentives to become fiscally more efficient and less reliant on grants. It is necessary to strengthen the state governments' finances by reforming the tax system, for example, the federal government should assign more productive taxes to the state governments in areas of economic activities that are closely related with state economic growth, reassigning more independent revenue sources, improving tax collection system and so on. If this were done, the states would be able to implement MPF measures in regenerating the state's economy, and subsequently, states' revenue could benefit from national GDP growth.

At the same time, many political and economic issues of equity and redistribution policy need to be addressed alongside hard budget constraints on deficits, accountability and governance. In agreement with Rodden and Ackerman (1997), the absence of intergovernmental transfers as suggested in MPF theory, would not be able to combat interstate inequalities. For example, less developed states like Kelantan and Perlis will not be able to compete with industrialised states like Penang and Selangor. Another crucial role of the federal government is to equalise peninsular states with the two Borneo states (Sabah and Sarawak) to keep the federation from falling apart.

Next, the primary finding from the private business investment panel regression is that fiscal incentives appear to have a negative relationship with the growth of private business investment. As fiscal incentives (FI) coefficient represents the percentage of revenues retained by the region (the so called 'marginal retention rate'), decreases in fiscal incentives will reduce the marginal benefit of productive spending vis-à-vis other possible uses of spending. The absence of fiscal incentives has deleterious effect on private business formation. The negative sign of the coefficient for FI reveals that the retained revenue held by the state governments has not been channelled into productive activities. Malaysian state governments have limited scope of function assigned to them, such as providing public amenities for the well-being of their people rather than supporting economic/market



activities.<sup>64</sup> Since state governments have not been allowed to capture the major portion of revenue generated by their economic growth (weak fiscal incentives), this leads to the predatory behaviour of government toward private businesses (Zhuravskaya 2000). State officials have less incentive to provide market-enhancing public goods and implement policies or regulations that support market activities, particularly in investment for improving business environment, providing support for new business entry and enterprise restructuring. Economically unjustified political intervention into businesses, such as excessive regulations, encourage the practice of corruption among the state officials, adversely influence entrepreneurial activities and lower the government's tax base as illustrated in Figure 7.1. Shleifer (1997) found the same situation in Russia where the predatory nature of local governments hindered lower governments' incentives for providing infrastructure to private business development leading to poor economic performance. This claim was further supported by Zhuravskaya (2000) who attributed the difference in economic growth between Russia and China to the better model of fiscal incentives in place in China.

As a centralised system, the Malaysian federal government has been assigned more responsibility in functions relating to stimulation of business activities by providing good infrastructures and incentives to attract investors. For example, the federal agency of the Ministry of International Trade and Industry (MITI)<sup>65</sup>, MIDA provides business investment incentives to investors. On the other hand, state governments have focused on their limited capacity to attract foreign and domestic investors by offering non-fiscal incentives such as discounts for land premium, quit rent, property evaluation and land lease for a fixed period with in-built flexibility. Therefore, Hypothesis 3 (H3) is rejected with the conclusion that the growth of private business investment in Malaysian states is not correlated positively with the state government's fiscal incentives. In other words, Malaysian state governments do not support improving market development. However, following the New Economic Model (NEM), the Malaysian government has adopted a 'new way of doing business' by emphasising the need to empower the state and local authorities to develop and support growth initiatives as well as encourage competition.

Overall, the greater centralisation in Malaysian fiscal federalism system has adversely influenced state governments' incentives to foster markets particularly on the business investment growth. This is because the state officials have not been able to benefit from an

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<sup>64</sup> Generally, the Neoclassical model also assumes that public spending can add to the stock of capital production, although a number of later studies confirmed that not all public spending is productive (Devarajan, Swaroop, and Zou 1998; Aschauer 1989; Landau 1983).

<sup>65</sup> Malaysia offers a wide range of tax incentives under the Promotion of Investments Act 1986 and the Income Tax Act 1967 such as pioneer status, investment tax allowance (ITA), reinvestment allowance, industrial adjustment allowance etc.

increase in the local tax base, hence lack of revenue to expand the tax base. This means that fiscal incentives need to be radically restructured to enable state governments to partake in revenue-generation in their region. One aspect of the fiscal incentives would be to allow states a greater degree of freedom to generate and spend their revenue. Such fiscal incentives would create a stronger link between revenue and expenditure in the state as state officials would have to make spending decision cautiously in view of the revenue available to them. The presence of such a mechanism of fiscal incentives would not only improve fiscal governance but induce a degree of autonomy where the states are not reliant on the federal government. Confronted with this situation of self-reliance, state officials are forced or motivated to create attractive policies that would attract investments in their states, as has been emphasised by Grewal (2000). This will foster the second aspect of fiscal incentives in relation to private business investment promotion. Jin, Qian, and Weingast (2005, 1999) argued that fiscal incentives play important roles in pursuing market-supporting activities in the case of Chinese style federalism, and similarly Figueiredo and Weingast (2001) confirmed the same situation in Russia. Competition among states will accelerate economic efficiency and innovation, especially in their struggles to lure investment which require them to behave and to function based on market principles. The ability to compete and innovate will hopefully prepare state governments with readiness not to expect to be bailed-out if its budgetary decisions result in losses (Dawkins and Grewal 2011). Echoing the study done by Zhuravskaya (2000) for Russia, it may not be far-fetched to claim that the federal system in Malaysia represents a model that deserves to be labelled as 'market hampering federalism' since state revenues are independent of local economic prosperity.

#### **7.4 Regional Competitiveness and Efficiency Analysis**

Until now, the chapter has focused on testing the hypotheses about fiscal federalism advocated by MPF in relation to the overall performance of the federal system in Malaysia. This section discusses the results from testing of the hypotheses on state efficiency measurement and state efficiency determinants stated in Chapter 6 (Research Approach and Methodology).

**Hypothesis 4:** The level of state efficiency will be determined by the level of a state's fiscal capacity.

**Hypothesis 5:** The level of fiscal decentralisation provides incentives for states to become more efficient in allocating fiscal resources.

**Hypothesis 6:** Higher productive spending indicates a higher level of state efficiency.

Efficiency measurement is an important analytical tool to measure the actual levels of efficacy displayed by different states in fiscal decentralisation. Policies concerning inputs to the production process, such as infrastructure and human capital, that are sensitive to local conditions are likely to be more effective in encouraging economic development than centrally determined policies that ignore geographic difference (Thießen 2000; Martinez-Vazquez and McNab 1997). More importantly, this measurement would be able to explain the institutional quality of the public sector which is consistent with the concept of regional competitiveness. In particular, states play the important role in supporting the private sector and the market economy. The findings will provide greater understanding of the features of competition and efficiency of state governments in the Malaysian fiscal federalism system. Specifically, the objectives of these models are to:

1. Examine the regional competitiveness by measuring the efficiency of the state governments in Malaysia.
2. Examine to what extent the level of fiscal decentralisation determines the technical efficiency levels of state governments in Malaysia.
3. Examine to what extent the productive spending determines the technical efficiency level of state governments in Malaysia.

DEA and Tobit panel data regression model are conducted on data for all the thirteen states in Malaysia from 1990 to 2009. The DEA under dynamic condition (time dependent method), which is also known as window analysis, has been used to measure changes in performance of the states over time. As an extension of the DEA, Tobit panel data regression model is needed to identify the factors that influence technical efficiency in Malaysia. More importantly, it also identifies factors that attributable to the efficiency in MPF. The two output variables in the DEA model are state revenue and private investment. In determining the input-output variables, a Granger analysis was performed to identify a strong causal relationship between the input and output variables (see Table 7a, Appendix 7).<sup>66</sup> Following a number of suggestions in the literature, this study employed public expenditure as the input to measure efficiency of states (Tirtosuharto 2009; Herrera and Pang 2005). Therefore, this technical efficiency analysis is actually an analysis of spending or expenditure efficiency.

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<sup>66</sup> State spending potentially affects output growth (SGDP) from a theoretical standpoint; however, the Granger test in Table 7a (Appendix 7) shows an insignificant F-statistic, which means that the assumption that state spending directly affects growth is not observed. State spending was a small fraction of SGDP and its effects on regional growth might come through private sector production driven by the multiplier effect of government spending (Tirtosuharto 2009).

#### 7.4.1 Results and Discussion of Technical Efficiency Analysis of State Government Using DEA

This section presents the results of how state governments utilise their fiscal resources to support market development in consistence with the requirements of MPF. For the purpose of measuring technical efficiency analysis, this study chose to use Data Envelopment Analysis (DEA) under dynamic condition as this dynamic condition or time dependent setting in DEA is able to observe excessive use of resources that are intended to produce future outputs (Charnes, Cooper, and Gorlarry 1985). A window analysis has been adopted to identify the most recommended set of performance figures (efficiency scores) by measuring changes in performance over time. The properties of the window analysis are measured as below:

With thirteen DMUs ( $n$ ) and twenty years of observation ( $k$ ), this study uses a five year window length ( $p$ ) to examine the consistency of the scores. The numerical illustration that defines the application of window analysis is:

Formula	Application
No. of windows $w = k - p + 1$	$w = 20 - 5 + 1 = 16$
No. of DMUs in each window $np / 2$	$13 \times 5 / 2 = 32.5$
No. of different DMUs $np (k - p + 1)$	$13 \times 5 (20 - 5 + 1) = 1040$

Since this study covers a twenty-year period ( $k=20$ ), substantial differences can be expected in state governments because there would have been a lot of changes in the laws and policies, technology employed and other structural changes in the market place in that period. The window length (width or  $p$ ) is selected on a trial and error basis, so a five- year window (width = 5) was found to be appropriate as it coincides with the five year-duration of economic planning followed in the New Economic Policy (NEP). A different set of data is made for each window and each state is represented as a different DMU at each interval of five successive years. Thus, following Pjevcevic et al. (2011), the results of various DMUs per five-year window are derived to measure differences in efficiency-performance of states. With this method, the performance of DMU in one period is compared not only with the performance of other DMUs but also with its own performance in other periods.

**Table 7.8 Technical efficiency in Malaysia's states 1990-2009**

INPUT Indicators: (1) Capital Expenditure, (2) Current Expenditure

OUTPUT Indicators: (1) State Government Revenue, (2) Private Investments

Year	Johor	Kedah	Kelantan	Melaka	Negeri Sembilan	Pahang	Perak	Perlis	Penang	Selangor	Terengganu	Sabah	Sarawak
1990	1.00	0.96	0.80	0.92	1.00	0.40	0.55	1.00	0.97	0.55	1.00	0.98	0.65
1991	1.00	0.62	0.89	1.00	1.00	0.38	0.97	0.91	1.00	0.45	0.87	0.70	0.87
1992	0.34	0.58	0.75	0.92	1.00	0.35	0.96	0.76	0.76	0.48	0.77	0.99	0.77
1993	0.39	0.49	0.73	0.78	0.90	0.34	0.43	1.00	0.63	0.63	0.91	0.74	0.67
1994	0.35	0.35	0.55	0.70	0.95	0.35	0.44	1.00	0.71	0.80	0.77	1.00	0.57
1995	0.34	0.32	0.61	0.66	0.56	0.29	0.57	0.75	0.59	0.74	0.68	0.78	0.59
1996	0.35	0.32	0.57	0.47	0.55	0.32	0.48	0.82	0.65	1.00	0.65	0.68	0.62
1997	0.31	0.27	0.60	0.41	0.45	0.57	0.49	0.72	0.52	0.69	0.68	0.70	0.52
1998	0.25	0.38	0.60	0.44	0.44	0.40	0.26	0.72	0.42	0.47	0.80	0.72	0.48
1999	0.19	0.39	0.63	0.82	0.41	0.34	0.40	0.75	0.67	0.35	0.73	0.70	0.56
2000	0.17	0.36	0.62	0.73	0.46	0.50	0.56	0.79	0.53	0.48	0.83	0.56	0.48
2001	0.19	0.36	0.53	0.57	0.46	0.36	0.28	0.76	0.52	0.38	0.69	0.61	0.72
2002	0.17	0.36	0.43	0.30	0.31	0.59	0.29	0.80	0.69	0.27	1.00	0.64	0.82
2003	0.20	0.30	0.32	0.34	0.36	0.39	0.34	0.62	0.91	0.34	0.59	0.75	0.91
2004	0.22	0.29	0.26	0.27	0.62	0.43	0.35	0.75	0.96	0.38	0.89	0.78	0.91
2005	0.33	0.21	0.32	0.32	0.35	0.49	0.30	0.53	1.00	0.37	0.90	0.55	0.94
2006	0.25	0.17	0.26	0.39	0.33	0.43	0.28	0.76	0.76	0.40	0.58	0.52	0.96
2007	0.69	1.00	0.22	0.42	0.41	0.41	0.23	0.72	0.67	0.33	0.36	0.44	0.83
2008	1.00	0.13	0.27	0.27	0.29	0.36	0.31	0.56	0.83	0.30	1.00	0.42	1.00
2009	0.15	0.13	0.31	0.24	0.31	0.32	0.26	0.50	0.54	0.34	0.38	0.62	0.72
AVE-RAGE	0.39	0.40	0.51	0.55	0.56	0.40	0.44	0.76	0.72	0.49	0.75	0.69	0.73

Note: Efficiency scores are within the range of 0 to 1, with 1 means the most efficient.

Sixteen windows are represented as sixteen rows per one state based on  $w = k - p + 1$ . The test was conducted on variable return to scale (VRS) where a rise in inputs is expected to result in disproportionate rise in outputs (Banker, Charnes, and Cooper 1984) because DMUs cannot operate optimally due to limited resources, imperfect competition and institutional issues.

Table 7.8 compiles the results of the window analysis where technical efficiency scores have been calculated as the average score in each window year. The VRS efficiency score represents pure technical efficiency, which is a measure of efficiency without scale efficiency (Avkiran 2001). The states that have an efficiency score of 1.00 or 100% are considered to be efficient and they lie on the efficient frontier. A higher technical efficiency score indicates a higher spending efficiency level or can be simply interpreted as a better allocation efficiency of fiscal resources by state governments.

The results show that the average efficiency level for all states in Malaysia was less than 1.00 with fluctuating trends over the twenty year period (1990-2009). The efficiency levels were even worse during the economic crises in 1997-1998 and in 2008-2009 and decreased significantly in those times.<sup>67</sup> The results for the efficiency level for each state are mixed, but overall the average efficiency level for thirteen states was around 0.56 or 56%, which can also be interpreted as 44% shortfall with reference to the efficiency frontier.

Among the developed states (Selangor, Penang, Johor, Melaka, Negri Sembilan and Perak), surprisingly, Selangor which is known as the richest state in the country, had an average efficiency level around 0.49 over the twenty years and this level has not surpassed 0.5 since 1997. Johor was the most inefficient compared to other states as it had an average around 0.39. In contrast, Penang appeared to be the most efficient among the states as the efficiency level was an average of 0.72, followed by Negri Sembilan and Melaka (0.56 and 0.55 respectively).

It is often assumed that developed states are more competent in managing their fiscal allocation due to their strengths in human resources, management system and technologies. They are also expected to have a higher productivity of public capital investments because of economies of scale and positive externalities driven by them. These figures provide evidence that more developed states have weak incentives and low decentralisation in planning an effective strategy and priority to utilise their fiscal resources to support development. This could be the case with a state like Selangor which has had little incentive

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<sup>67</sup> During the financial crises, there were greater constraints on fiscal resources resulting from lower revenue and limited transfers from the federal government. At the same time, the need for spending kept increasing which led to cut in capital expenditure that was allocated for supporting critical infrastructures. As a result, private investment and state resources declined as state became less competitive.

to achieve high efficiency despite achieving high growth and better local economic performance compared to other states. Being the closest to capital city of Kuala Lumpur and administration centre Putrajaya, Selangor shares land and developments with federal government. It has benefitted from many federal government projects and attracts many foreign investors as well as highly skilled and educated labours. But, Selangor was among the least efficient states indicating that more expenditure for the state also created more room for fiscal leakages and misallocation of resources and inefficiencies. The situation is again similar to that found in Indonesia by Tirtosuharto (2009) where resource-rich states were not always more efficient as higher levels of state spending leads to higher levels of inefficiency.

In the case of less-developed states (Pahang, Kedah, Kelantan, Perlis, Terengganu, Sabah and Sarawak),<sup>68</sup> three oil-producing states with high revenue were more efficient than other states in Malaysia, with Terengganu being the highest with 0.75 followed by Sarawak 0.73 and Sabah 0.69. Kelantan, which is considered the poorest state, has an average efficiency level of 0.51 that is almost equivalent to other states. Despite being ruled by the opposition party for more than two decades, Kelantan has managed to allocate their resources as efficiently as other state governments, even under the constraint of possible hostility and discrimination from the federal government, which has been alleged in the past. Surprisingly, Perlis, which is known to have fewer resources, was the most efficient state in Malaysia with an average efficiency level of 0.76 over the twenty years and scored 1.00 three times in the 1990s. Perlis seems to have had the capability to allocate expenditure and resources to productive investments that contribute to the growth of the private sector and the market economy at the state level. Sabah and Sarawak (Borneo states) have a special position in the Federal Constitution (Jalil 2008) and have been devolved more resources with special grants and more responsibilities compared to other states in Peninsular Malaysia, so it seems inappropriate to make any comparison between them and other states.

All of the oil-producing states actually enjoyed 5% petroleum royalties from the federal government giving them more revenue to spend on their development. Specifically, Terengganu managed to achieve full efficiency level of 1.00 in 1990 and 2002, indicating that the capital expenditure was efficiently allocated and the cost of operating expenditure successfully minimised. With the advantage of being one of the highest revenue recipient states, Terengganu had more incentives to expand its scope of expenditure that could address specific needs of its people, deliver basic public services and maintain state's

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<sup>68</sup> These states have lower real SGDP than the developed states that are located in the west coast of Peninsular Malaysia. This was caused by the lag of development and the fact that states in eastern region (except for Kedah and Perlis are in northern region) are geographically and historically disadvantages.

assets. The results are inconclusive, so Hypothesis 4 (H4) that the level of state efficiency will be determined by state's fiscal capacity is not proved by the data. This is consistent with the findings of Tirtosuharto (2009) in Indonesia who also found that not all developed states are efficient and not all less developed states are inefficient.

The results have shown that in a centralised system, the federal government has failed to address specific needs of each state resulting in low efficiency level, the decrease in the efficiency and effectiveness of state resource allocations. Therefore, the findings support the earlier findings of the importance of fiscal decentralisation for fulfilling the requirements of MPF theory. In general, under the current system of fiscal federalism, all states, whether more or less developed, are not able to utilise their abundant fiscal resources efficiently. Some states that are rich in resources have a tendency to spend more in proportion to their large fiscal capacity which leads to higher level of efficiency. It can be concluded that the efficiency of different states can fluctuate over time to different extents, and as a whole, the efficiency levels in state governments had no improvement over the twenty year period. Lack of competitiveness among the state governments from greater centralisation is identified as the primary factor of the low efficiency level. Indeed, less fiscal competition discourages spending on public inputs, including spending to attract mobile labour and capital, as found in a study on German counties by Borck (2005). Limited revenue resources as well as soft budget constraint are among the factors that demotivate them, especially their state officials, from becoming more innovative and efficient in allocating their resources. Thus, fiscal leakages due to corruption or rent seeking behaviour would arise as a result of failure to satisfy the MPF requirements, particularly, decentralisation in economic authority and hard budget constraints.

#### **7.4.2 Results and Discussion of State Technical Efficiency in a Tobit Panel Regression Data Model**

Having elaborated the efficiency levels across states in the last section, the objective of this section is to reveal the factors that determine the technical efficiency of the state governments. The results of the Tobit panel data regression are presented in Table 7.9, in which the average efficiency levels of thirteen states in Malaysia over the twenty years (1990-2009) are treated as the dependent variable (EFF), while FD, InCAPEX, InOPEREX, InSGDPPC, InEXPPC and LESSDUM are the independent variables.

In the Tobit panel data regression model, the magnitude of likelihood for each factor determinant is measured by the marginal effect and relevant factors are identified according to the degree of significance (z-ratio). As Tobit panel data model is inherently non-linear in



the coefficients, its estimated parameter does not by themselves respect marginal effects of the explanatory variable on the dependent variable.

**Table 7.9: Determinants of state technical efficiency in Malaysia, 1990- 2009**

Dependent Variable: EFF		N*T = 260 Observations (13 States)	
Variables	Coefficient	z-ratio	Marginal
FD (FiscalDecentralisation)	0.182	3.280***	0.182
lnCAPEX (Capital Expenditure)	-0.108	-4.640***	-0.107
lnOPREX (Operating Expenditure)	0.005	0.230	-0.005
lnSGDPPC (Real SGDP Per capita)	0.037	0.860	0.037
lnEXPPC (Expenditure Per capita)	0.134	3.340***	0.134
LESSDUM (Less Developed State Dummies)	0.063	1.400	0.062
Constant	1.222	-	-
Log-Likelihood	-20.183		
Wald Chi2	44.25		

Note: \*\*\* denotes significance at 1% level, \*\* for 5% level and \* for 10% level.

Instead, the marginal effects are functions of both the parameters and the data (Wooldridge 2006; McDonald and Moffit 1980). All the coefficients in the model, except for real SGDP per capita (SGDPPC), operating expenditure (OPREX) and less developed state dummies (LESSDUM), are significant at 1% level. This reveals that technical efficiency is influenced by all the remaining determinants and confirms the robustness of the twenty year observations model for identifying these factors.

The coefficient FD has a positive sign with the highest marginal effect of 0.182 and significant at 1% level indicating that fiscal decentralisation is the most important factor for the technical efficiency level compared to other factors. This demonstrates that when state governments are given the opportunity to determine their spending according to their needs and priorities, they avoid unnecessary spending and achieve higher efficiency. This advantage is consistent with MPF literature which stipulates that devolution of fiscal freedom to states provides them the incentives to allocate their fiscal resources efficiently. From the dimension of revenue, states that are able to generate their own revenue/ have extra revenues tend to not be dependent on federal government transfers, for example, oil producing states are more likely to be more efficient in managing the level of fiscal decentralisation (see Table 7.8, DEA results). In addition, higher fiscal decentralisation implies that states' administrators could become more responsible to ensure that more

revenues can be generated for state budgets, particularly in generating revenues to close the fiscal gap in their budget. More importantly, local revenue generation makes local governments more responsive to citizens, reduces corruption and increases the incentives to provide market enhancing public goods as claimed by the SGFF. Therefore, the result supports Hypothesis 5 (H5) that fiscal decentralisation provides incentives for states to become more efficient in allocating fiscal resources.

The results for productive spending as proxied by capital expenditure (CAPEX) is negative and significant at 1% level, which means that it is likely to reduce the technical efficiency level. Productive spending (capital expenditure) is an important variable indicating the ability of state to allocate resources efficiently for public welfare and long term development. Since capital expenditure (CAPEX) shows negative association, this could mean that there are leakages in capital spending and the state governments have no proper spending in allocating the resources in the states. This is reflected in the case of Selangor which has been endowed with many development projects but has low efficiency level due to inefficiencies in the allocation of capital expenditure. Therefore, productive spending shows unexpected inverse correlation than the assumption of Hypothesis 6 (H6) that productive spending leads to higher level of state efficiency.

Generally, effective spending is assumed to indicate the ability of the state in allocating resources sufficiently, particularly for public welfare and long term development. The model demonstrates that the level of expenditure per capita is positively associated with technical efficiency level. The level of spending per capita (EXPPC) has a positive marginal effect and is significant at 1% level.

Lastly, SGDPPC, OPREX and LESSDUM variables have neutral effects on the increase in technical efficiency score. The results for the less developed states' dummy variable (LESSDUM) indicate that there are no differences in terms of technical efficiency levels between states (developed and less developed) despite variances in the capability and capacity of state to manage fiscal affairs and public capital investments. This validates the finding in the last section which shows that efficiency is not related to the development level of the state and also means that a separate panel model for less developed states is not needed in this analysis. In conclusion, fiscal decentralisation is an important determinant of technical efficiency in Malaysia. It could provide incentives to state governments to become more competitive and more efficient.

## **7.5 Summary and Conclusion**

This study has produced several findings which generally favour the implementation of fiscal decentralisation in Malaysia and has unveiled the loopholes in the past performance of the

federal system in the country that have disallowed the country to reap the full benefits of decentralisation.

First, fiscal decentralisation in relation to regional economic growth has helped state governments to develop markets leading to higher regional economic growth as shown by the panel DOLS. The implementation of fiscal decentralisation will only be successful if state governments function within the discipline of the hard budget constraints; otherwise their public finances would further deteriorate. Indeed, the reliance on grants has also diminished in terms of ratio of the total public sector size, implying that the states are now more self-reliant with greater fiscal responsibility. This situation indicates that the adoption of hard budget constraints is on the rise. However, the state governments have different fiscal capacities, hence, the adoption of fiscal equalisation to address the problem of regional disparities is warranted. Therefore, reform in intergovernmental fiscal transfers is required such that the goals of self-reliance and hard budget constraints are met while not overlooking the need for fiscal equalisation across states (Grewal 2008a, 2008b).

Second, the empirical results of the fiscal incentives model show that fiscal incentives can lead to better revenue sharing between federal government and state governments and can provide market-supporting environments that foster private business. However, in Malaysia the positive impact of fiscal incentives has not been delivered to its full potential. As a result of greater centralisation, the major portion of states' revenues is captured by the federal government resulting in poor incentives for the state governments to practice fiscal accountability. The lack of fiscal incentives structure amplifies the inability of state governments to generate their own income and increases their reliance on intergovernmental grants, all of which lead to the soft budget constraint problems, deficits and macroeconomic instability.

Next, the results of DEA reveal evidence of the inefficiency of Malaysian state governments particularly from the aspect of public expenditure. In this case, Malaysia's centralised fiscal federalism system has been unable to create a competitive environment among Malaysian state governments resulting in low levels of efficiency in Malaysian states. The dependency of states on the federal government for transfers/grants or soft budget constraints has encouraged improper fiscal discipline in the states as they spend money without having responsibility to raise additional own revenue. However, this analysis does not capture other causes of inefficiencies such as corruption or rent-seeking behaviour that might take place in the system due to less state government incentives. The Tobit panel data regression identified many determinants of state efficiency. State governments which have failed to mobilise their tax potentials to the maximum and continue to rely on federal grants/transfers

show lower efficiency. Federal grants/transfers may stimulate more spending by state governments leading them to increase their spending beyond their means, engage in more corruption, provide non-remunerative benefits to interest groups and give endless subsidies to inefficient enterprises. These tests provide evidence that fiscal decentralisation with hard budget constraints can improve state efficiency levels.

In summary, our analysis in this chapter has highlighted a cross-sectional examination of three key aspects of the performance of fiscal federalism: fiscal decentralisation, fiscal incentives and efficiency. These aspects are, however, interrelated with each other and must be considered in a cohesive manner for a successful implementation of policy in the country. Here, our findings echo the main argument of MPF theory that states become more efficient if more power is devolved to them whilst ensuring that they spend within their fiscal capacity. When the federal government loosens the constraints on states, states have the incentive to become innovative and competitive, and fiscal independence and economic growth can be improved significantly. More importantly, the importance of grants will be diminished but fiscal responsibility and fiscal accountability will be increased. Malaysia also needs to take rigorous steps to improve state government's efficiency level through the system of fiscal decentralisation and incentives proposed by the MPF theory. As the conclusion to this thesis, the next chapter will reflect on these empirical findings to consider the ways in which MPF principles can be articulated into strategic policies to reform the current system in Malaysia.

## **CHAPTER 8**

### **CONCLUSION AND POLICY IMPLICATIONS**

#### **8.1 Chapter Aims and Description**

This empirical study has examined the federal-state financial relations in Malaysia from the perspective of market preserving federalism (MPF) using data from the period 1990-2009. A range of econometric approaches were used to evaluate the four critical attributes of Malaysian federalism, namely, fiscal decentralisation, subnational competition, efficiency of public finances, and equity of outcomes. The study also considered the potential benefits of fiscal decentralisation under MPF to encourage regional competition, increase accountability in governance, and create sustainable growth in Malaysia.

This final chapter reflects on the research accomplished in the study and its implications for an MPF-based fiscal decentralisation in Malaysia. The chapter begins with a brief summary of the research undertaken in this study to reiterate the findings from the different econometric analyses. This is followed by a discussion of the fiscal impact of the current federal system and the scope for reforms in the current federal framework. Taking up this need for reform, the next section reflects on the policy implications for greater efficiency, fiscal equalisation transfers and institutional reforms to adopt a decentralised fiscal system that can foster markets, business investment and inclusive economic development in Malaysia. In the final section, the chapter also discusses research limitations and outlines suggestions for further research before ending with a concluding note.

#### **8.2 Research Summary**

The econometric analyses in this research outlined the repercussions of the relatively centralised fiscal arrangements in Malaysia for the performance of federal and state governments. The econometric results in this study provide systematic evidence on the importance of fiscal decentralisation, fiscal incentives and efficiency in public expenditure across the states. Specifically, the descriptive analyses illustrate the trends in centralisation, interstate disparities, fiscal gaps and vertical imbalances as well as the role of federal transfers as a fiscal balancing device. These analyses validate the need for reforms towards a more decentralised fiscal system and pave the way for rethinking these reforms along the paths suggested by MPF theorists.

Given that the main aim of MPF is to enhance long term economic performance of an economy, it seems reasonable that empirical analyses should be focused primarily on efficiency. This thesis goes further, however, in investigating the feasibility of MPF for Malaysia by considering the implications of strictly subjecting state governments to hard budget constraints while some of the states are in much weaker position than other states to finance social and developmental public spending.

### **8.2.1 Fiscal Decentralisation and Regional Growth Model**

The first objective of the analysis was to investigate the extent to which fiscal decentralisation<sup>69</sup> can support a market economy and state level economic growth. The finding in this study leads to the conclusion that Malaysia needs to adopt fiscal decentralisation simultaneously on both dimensions of decentralisation (expenditure and revenue) as this will be helpful in enhancing the economic growth and delivering significant advantages over the fiscal system currently in place. States should be given more fiscal autonomy in terms of revenue generation as well as determining expenditure priorities, especially in critical sectors like education, health and infrastructure to support regional productivity and development. Limited revenue capacity of the state governments leads them to rely perpetually on federal fiscal transfers, diminishing over time fiscal responsibility at the state level. This situation subsequently leads to worsening of country's overall growth prospects and regional disparities among the states which strongly require the implementation of fiscal equalisation.

The data analyses in Chapters 4 and 5 showed that regional growth in Malaysia has been uneven and unsustainable because of a centralised system that has failed to foster subnational competition between regions and empower state/local authorities to develop growth initiatives in their jurisdictions. As the states do not have the incentives or powers to foster business growth, economic development has continued to be confined to the already developed regions which have the infrastructure and markets in place. Rapid growth has been limited to the Peninsular Malaysia states particularly in the west coast regions classified as developed states, whereas less developed states including the east coast states and two East Malaysia states, Sabah and Sarawak, have not shown any significant level of economic development (see Chapter 5). As in most developing countries, historical reasons have contributed to regional disparities in Malaysia, where the British colonial government concentrated on resource rich regions to develop infrastructure and facilities, such as the tin-producing state of Perak (Wee 2006). This imbalance in development still

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<sup>69</sup> Similar to study done by Iqbal, ud Din, and Ghani (2013), this study used the composite fiscal decentralisation variable, in which revenue decentralisation and expenditure decentralisation reinforce each other.

continues to make the less-developed states less competitive than their counterparts on the west coast in terms of public service provision, job opportunities and investment (see Chapter 5). This situation prevails despite the federal government's pledge to balanced regional development and a series of economic policies (New Economic Policy) that have been in place for the last five decades. It should come as no surprise when the Ninth Malaysia Plan (2006-2010) reported that, while the overall rate of economic growth in the country was positive, the development gaps between regions, states and rural-urban areas were widening.

The result showed that the implementation of fiscal decentralisation stimulates regional growth (see Section 7.2.2, Chapter 7). This proves that decentralisation is a potent strategy to support regional growth as even a minimal change in the direction of fiscal decentralisation is shown to have discernible effects. This implied that Malaysia also would be able to benefit from a system of federalism which empowers state governments to make policies for their jurisdictions and to compete with one another for better services and higher investment, as advocated by many economists (Brennan and Buchanan 1980; Oates 1972; Tiebout 1956). Competition among state governments is regarded as a potent source of efficiency and innovation to stay competitive (Dawkins and Grewal 2011). Hence, competition is the mechanism that creates incentives that result from satisfying the MPF conditions and subsequently leading to the achievement of higher regional economic performance.

Our research has also emphasised that decentralisation tends to benefit the leading states (developed states) more than the lagging states, because the former states are more prepared and capable of exploiting the advantages of larger fiscal capacities. Leading states are also argued to be more competent in managing fiscal decentralisation with their human resources, management systems and technologies. Therefore, decentralisation for effective competition must be accompanied by the condition that the lagging states are helped, for an initial period at least, by a system of fiscal equalisation. Otherwise the lagging states will not be able to compete with the leading states and competition will only make regional inequalities worse (Grewal 2008b).

Generally, fiscal decentralisation confers greater freedom to the states to determine their own priorities, enabling state governments to deliver public goods efficiently and innovatively. Greater freedom in expenditure and budget flexibility would allow state governments to channel their revenues in a more targeted manner that comes from local knowhow. In terms of expenditure, it is disconcerting to note that the states have less control on their developmental progress as important issues such as communication, transport, education and health are entirely beyond the scope of the state. This restricts their ability to

exercise influence over these matters, leaving the economic development of states very much to the discretion of the centre. For example, Penang has long complained about its worsening traffic congestion and the need for the Ninth Malaysia Plan (9MP) to make federal allocation for the improvement of transportation within the island as well as for the provision of a second bridge to connect it to Peninsular Malaysia (Nambiar 2007). At any rate, the federal government has sole jurisdiction though perhaps not sole discretion over the disbursement of all development funds. As suggested by Nambiar (2007), development considerations are mostly biased with political leverage being accorded primacy.<sup>70</sup> The tight control exercised by the federal government ensures that the state governments must rely on the centre for the implementation of development projects (Nambiar 2007; Jomo and Hui 2002). Lack of consideration by the federal government to address specific needs of a region potentially decreases the efficiency and effectiveness of state resource allocation (Tirtosuharto 2009). Improvements in the states' efficiency levels<sup>71</sup> should ultimately contribute to higher productivity and greater economic growth in all Malaysian states.

Hence, fiscal decentralisation must be implemented in a prudent and cautious manner as excessive expenditure not only affects macroeconomic management but also leads to efficiency and equity problems. This would happen through compensating actions to avoid macroeconomic instability, excessive reductions in federal spending or excessive overall tax levels.<sup>72</sup> Consequently, decentralisation can result either in insufficient provision of federal public goods, in larger overall public expenditures and taxes or in macroeconomic instability.

However, weak revenue raising capacity and limited revenue generating sources for Malaysian states governments result in difficulties in meeting their expenditure needs. Therefore, the states need to be given the ability to generate and retain sufficient revenue to avoid cost externalisation and reduce their dependence on the federal government. If the state governments are made to mainly depend on their own budgetary resources, this will improve economic efficiency and make them more innovative because the local public sector would function more on market-based principles (Dawkins and Grewal 2011). This situation

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<sup>70</sup> With that, the ruling National Front Party (BN/ Barisan Nasional) would maintain its hold over the state government. Under this system, it is possible to punish those states led by opposition parties, while rewarding those led by the National Front Party.

<sup>71</sup> Efficiency can be measured by the role of state institutions and organisations on the allocation of resources and its effect on economic growth. An efficient economy is measured by its ability to efficiently allocate or distribute resources. This implies that states should optimise the use of their limited fiscal resources to serve the welfares of both individual citizens and firms, which is consistent with the principles of Neoclassical theory. The theory of efficiency and effectiveness focuses on the relationship between inputs and outputs. In particular, this study measures the performance of state governments based on whether resources are allocated to deliver effective or productive results, which is concluded in Section 8.2.3.

<sup>72</sup> In order to maintain equilibrium, the central government responds by cutting its own expenditures—larger than optimal spending on local public goods, lower than optimal spending on national/federal type of public goods. If the central government responds by increasing taxes so as to keep fiscal equilibrium, the result will be bloated states (Dillinger, Perry, and Webb 2001).



would be effective only in the absence of destructive competition that often occurs due to the moral hazard problem created by their heavy dependence on fiscal transfers from the central government. However, the mismatch between limited revenue and continuous increase in expenditure has led the state governments to experience widening deficits in their fiscal balances (macroeconomic instability). Indeed, differences in revenue-raising capacities among the states mean that states would not be able to generate regional growth equitably.

From the equalisation aspect, implementation of fiscal decentralisation would make the less-developed states with low taxable capacity, like Kelantan, Perlis and Kedah, fall behind and further deteriorate the horizontal imbalance problem in Malaysia. The horizontal fiscal imbalance does not only affect the economic performance of state governments but will also affect the whole country at large leading to greater interference from the federal government. On this ground, although there should have been a greater degree of control over the direction of state expenditure financed by the federal grants, some form of fiscal equalisation is imperative for implementing an effective fiscal decentralisation so that regional disparities could be alleviated in Malaysia. Clearly, fiscal decentralisation is important with the condition that some form of fiscal equalisation, such as capacity and categorical equalisation (which are discussed in Section 8.4.3), should also effectively implemented. In particular, the calculations are based on the principle of horizontal fiscal equalisation (HFE) which is aimed at reducing inequality in the ability of subnational governments to provide comparable public services at comparable tax rates (Dawkins and Grewal 2011).

In summary, fiscal decentralisation has the potential to drive up long term regional growth if the states are given the incentives and ability to determine their budgetary priorities according to their local resources and needs. The competition derived from decentralisation generates efficiency in policy choice in terms of fiscal decisions as well as service provision and subsequently creating healthy local economy or market supporting environment. This means that fiscal decentralisation in both expenditure and revenue components will be successfully implemented to achieve thriving markets, but fiscal equalisation also needs to be given equal consideration to reduce interstate disparities (Grewal 2008b).

### **8.2.2 Fiscal Incentives Models**

As the MPF theory uses a system of incentives to link decentralisation with economic growth, it is imperative to examine the fiscal incentives model in relation to the efficacy of the federal fiscal system in Malaysia. The second objective of the study was to measure the strength of the fiscal incentives available to state governments. This was done by calculating the share of locally generated revenue that was available to the state government for allocation among competing expenditure priorities. In particular, the analysis highlighted the

lack of incentive structures generated by the current soft budget constraints which then drive down regional and national economic performance.

The analyses revealed that despite the amount of revenues generated within the states, the state governments were unable to benefit from these local tax revenues since they had a limited share of the spending budget (as stipulated in the Constitution). The Malaysian federal government extracted about 60% of the increase in locally generated state revenues. Consequently, state governments were unlikely to pursue revenue incentives to broaden the tax base or provide market-enhancing public goods since they could only capture a small portion of the increased tax revenue generated by greater economic activities. Specifically, the MPF approach highlights that the Malaysian federalism system provides low incentives for the state governments/officials to choose market-fostering policies. Since Malaysian states were unable to self-finance at the margin, and relied on the transfers/grants from the federal government, this situation displayed a high degree of dependence on such transfers to close the fiscal gap between state own revenues and state development expenditure. The fiscal help assured through intergovernmental transfer mechanism reduced the urgency for proper fiscal management and a sense of responsibility among state governments. Indeed, such grants have little flexibility to raise additional revenue when faced with adverse shocks.

Currently, there is weak linkage between taxation and spending, which has led the state authorities to deviate from the efficient service provision. This means that the federal government had trouble in providing local public goods to small groups of citizens. Indeed, this weaker local fiscal capacity subsequently generates smaller accountability. More importantly, the delink between local revenue and local expenditure means that state governments have given up credible commitment to hard budget constraints and subsequently hindering the adoption of MPF in Malaysia. The limited state revenue collection gave Malaysian state governments less policy independence in which the federal government almost always accompanied the transfers associated with revenue dependence with rules and restrictions that inevitably limited or compromised the policy authority. For example the high percentage of the specific purpose grants over the general purpose grants.

The soft budget constraint can also become the source of a problem for the federal government as it contributes to the huge deficit in the federal government account. Any deficit in federal accounts indirectly affects the state grants and transfers, and all the planned development expenditures in state may be affected or deferred. The accumulated debt resulting in large annual interest payments hinder the development of state's infrastructure and provisions to the people.

Next, in meeting the third objective of this study, the importance of fiscal incentives in MPF was further validated by the relationship between fiscal incentives and the growth of private business investment. In this case, limited functions assigned to the state governments prevented them from using their retained revenue to stimulate business investment, and only given priority to the provision of amenities. As a centralised system, the federal government reserved most of the power in functions related to stimulating business activities, such as providing infrastructure or strategising tax systems. For example, under the Ministry of International Trade and Industry (MITI)<sup>73</sup>, the Malaysian Industrial Development Authority (MIDA) provides many business investment incentives for investors. More importantly, Malaysian state governments have not been allowed to capture major portion of revenue generated by their economic growth, so state revenues are independent of local economic prosperity. This leads to the predatory behaviour of government toward private businesses. State officials have less incentives to provide market-enhancing public goods and implement policies or regulations that support market activities. However, the decentralisation of authority in decision making is useless if the federal government does not devolve revenue-raising powers linked with business activity that give state governments the incentive to support their markets.

### **8.2.3 Regional Competitiveness and Efficiency Analysis**

This section addresses the fourth and fifth objectives of the study which were raised in Chapter 1. Findings from the analysis of the fourth objective of the study reveal the level of regional competitiveness by measuring the efficiency level of Malaysian state governments. An efficient state is expected to have the capability to allocate expenditure and resources on productive investments, in turn, contributing to the growth of private sector and market economy at state level. In other words, states become efficient if they could assign their fiscal resources for productive spending and generate sources of revenue independently. Efficiency of public finance from the expenditure aspect is a vital measure of regional competitiveness among Malaysian state governments. Findings from the expenditure efficiency (technical/ allocative efficiency) analysis using DEA demonstrated that most states in Malaysia have had a low efficiency level over the past twenty years (1990-2009).

These findings also showed, counter-intuitively, that the level of efficiency did not depend on the level of development of the states. The developed states were not necessarily more efficient and the less developed states were not necessarily inefficient. For example, despite having the advantage of being close to the Federal Territory (Kuala Lumpur and Putrajaya),

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<sup>73</sup> Malaysia offers a wide range of tax incentives under the Promotion of Investment Act 1986 and the Income Tax Act 1967 such as pioneer status, investment tax allowance (ITA), reinvestment allowance, industrial adjustment allowance etc.

achieving high growth and better local economic performance compared to other states, Selangor has had no incentive to achieve high efficiency. Developed states were assumed to have an advantage over other states in utilising their fiscal capacity to support regional development. However, the greater expenditure in these states resulted in more inefficiency due to low decentralisation in planning an effective strategy of utilising their fiscal resources to support development.

Additionally, soft budget constraints create a form of common pool problem in which the costs of state governments' fiscal profligacy are borne by others. Malaysian state governments have reduced (or no) fiscal incentive to make prudent financial decisions as the expectation of additional funds from outside means that they need not foster local economic prosperity to generate revenue. Consequently, the state and local governments spent without any responsibility to generate their own local revenue. Indeed they have failed to mobilise their tax potentials to the maximum (Jalil, Harun, and Mat 2012; Jalil 2008). Finally, in order to meet the fifth objective of the study, the Tobit model showed evidence that fiscal decentralisation had positive and significant influence on state efficiency level. Thus, this study supports the contention that fiscal decentralisation provides incentive structures to support higher state efficiency levels. In particular, higher revenue independence affects state efficiency levels through an underlying assumption that state governments can be more efficient as they become more independent in generating revenue from their own resources. The capital spending had an inverse relationship with state efficiency levels in Malaysia indicating that the current system of fiscal federalism signified increased capital spending that resulted in higher inefficiencies in resource allocation. In other words, the state governments were less efficient under such a system.

Part of the inefficiencies could be attributed to poor capital expenditure (development expenditure) choices by the state governments as they spent less on market-enhancing public goods. They could also be due to soft budget constraints, increased rent seeking and corruption practices at the state level. Since the productivity level of public capital expenditure had been uncertain or ambiguous, it was higher in less developed states compared to the developed states, implying that inefficiency or the extent of rent seeking and corruption practices was much higher in the developed states.

In summary, the current system in Malaysia does not place state governments in higher degree of responsibility, accountability and competition (effective competition) with one another due to not fully satisfying the MPF conditions<sup>74</sup>, so the state governments nearly

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<sup>74</sup> Such as having a centralised fiscal federalism system (violating F2 condition), and practising a soft budget constraint (violating F4 condition).

failed to promote pro-development policies. This can lead to a host of problems including costly market intervention, corruption, revenue predation and rent seeking at all levels of government. The data show that the state dependency on federal government was growing and state governments were unable to finance their expenditure without transfers from the federal government. The reliance on grants/transfers meant that state governments did not develop an adequate sense of fiscal responsibility to manage their fiscal affairs as they confidently assumed consistent help is available from the federal government (Jalil 2008).

The allocation of responsibilities between the federal and state governments, as specified in the Constitution, generally, seems to conflict with the normative principles of MPF theories. Indeed, following the orthodox definition of federalism it may be difficult to regard Malaysia as a true federation due to the greater power of the federal government (Bakar 2004). The centre seems hesitant to reassign more revenue sources to the states as there are not only 'limited revenue sources' that can be reassigned to the states but giving more resources to states could weaken the political leverage of the centre.

As a result of this centralised system, the major factor behind the financial difficulties faced by the states is their limited revenue potential. In absolute terms, the total consolidated state government revenue for all states in Malaysia fluctuated from 1990 to 2009 implying that the state government's capacity for revenue collection has diminished. The average annual growth of federal government revenue between 1995 and 2000 was about 4.4% but between 2000 and 2005, it was approximately 9.8%. This trend indicated that the sources of revenue in terms of rate of growth for federal government were growing but the sources of revenue at the state government level were declining.

Many scholars have attributed the weakness of the existing financial arrangements to the shortcomings in the design of fiscal federalism and advocate the need for reforms to ensure that states' interests are preserved (Jalil 2008; Bakar 2004; Noh 1991).<sup>75</sup> Their main argument is that because the federal government continues to be in the hands of the incumbent coalition (National Front Party), no formal restructuring of the federal system has yet occurred. This entrenched political situation makes it difficult for reforms as the ruling government seems to have a comfortable grip on power and avoids any challenge to the status quo. The ruling party, UMNO<sup>76</sup>, itself is involved in business which has negative consequences for the states' ability to raise revenue and poses a threat to public governance (Gomez and Jomo 1999). In addition, political dominance in the institution has resulted in serious claims of practices of nepotism, cronyism and favouritism. Often, the

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<sup>75</sup> As a member of federation which has the right to be fairly treated by the federal government without political bias.

<sup>76</sup> United Malays of National Organisation (UMNO) is a component of National Front Party (BN).

opposition-led state governments claim that the federal government purposely uses delaying tactics in grant disbursement, as part of the political game (Bakar 2004). These issues create market distortions which are far from fulfilling the requirements of an efficient market-preserving federal system.

The efforts made by the federal government thus far to bring about financial relief to the state governments remain unsatisfactory, inadequate and not intended to solve long term problems of fiscal imbalance (Bakar 2004). The limited revenue sources currently assigned to states are unjustified as Article 110(4) of the Federal Constitution allows the federal government to transfer the proceeds of any tax or fee collected to the state governments, as well as to reassign responsibility for collecting any taxes, to states. Specifically, Article 110(4) of the Federal Constitution says:

‘Parliament may by law:

- i. Assign to the States the whole or any portion of the proceeds of any tax or fee raised or levied by the Federation; and
- ii. Assign to the States the responsibilities of collecting for States purposes any tax or fee authorised by federal law’.

In fact Article 110(2) also stipulates that ‘Parliament may from time to time by law substitute for any source of revenue specified in section 1,3,4,5,6,7,8,12, or 14 of Part III of the Tenth Schedule or for any source of revenue so substituted, another source of revenue of substantially equal value’.

Clearly, there is flexibility in the assignment of revenue sources and considerable scope for amending the existing revenue receipts of the states. Although the Federal Constitution has provided for flexibility in the matter of alterations to revenue assignment and fiscal adjustment, in practice, however, no significant changes have been made since independence. The underlying factor is the question of political will on the part of the federal government. Without political will, there appears to be no foreseeable prospect of fiscal reform.

This call for reforms seems justifiable, since there has been no significant change in the division of revenue sources and fiscal adjustment since Independence in 1957, except ad hoc measures taken to overcome a state's temporary financial difficulties (e.g. contingency grants- see Chapter 5). Although the new arrangements mean a loss of the powers of the centre, the reassignment of revenue sources requires strong political will, given the nature of the political system. In the absence of political will, federal financial transfers continue to be

used as the main method of fiscal adjustment in Malaysia and thus far from fulfilling the MPF condition of hard budget constraint.

### **8.3 MPF in the Malaysian Context: From Theoretical View to Empirical Validity**

In general, we find that Weingast's theory of federalism, particularly MPF theory, has been more concerned with de facto decentralisation of political power in countries like China than de jure decentralisation of political power in federations. Weingast predominantly focuses on non-federal states like China and eighteenth century England as leading examples to be emulated by other federations. This focus on such non-federal nations is not only unjustified and invalid, but reduces the applicability of MPF to existing federations. In particular, the implications of MPF seem narrow given the actual diversity and complexity in federations existing across the world, for example, the highly centralised federal system in Malaysia. No federation in the world completely replicates or emulates the federal system theorised by MPF, but on the other hand, federal countries can only work closely with the principles associated with MPF.

Given this context, there are several points to be made about the actual validity and applicability of MPF as a theoretical construct. The purely market-based framework of MPF is important, but this cannot be adopted in totality given the pressing issues of regional disparities and fiscal equalisation in most developing countries. Instead certain elements of MPF must be drawn practically to provide federal countries with market mechanism principles of governance. A complete adoption of MPF without consideration of the needs of the empirical context would also hamper redistribution as competitive subnational governments without a strong central government have little incentives to engage in redistribution role. Despite all the argument of the hard budget constraints under MPF, some amount of fiscal transfer is necessary especially in an unequal economy like Malaysia to solve horizontal fiscal imbalance and regional disparities as some states would not be able to raise sufficient revenues even if they had power to levy the same taxes as other richer states. In light of these implications, this study has shed light on the aspects of MPF that can be applied in the Malaysian context by outlining the role of central government in developing a market-based federal system while observing some degree of fiscal equalisation in favour of weaker states.

Since the theoretical framework of MPF can provide economic principles for the policy goals of the New Economic Model (NEM) to bolster a high-income economy focused on market competition and private entrepreneurship, it is justifiable for this study on the applicability of MPF on Malaysia to be treated as a supplement for the NEM. Besides the intention to foster the private sector's role in spearheading the economy in the future, NEM emphasises the

role of the government as a driver of change but without specifying the role to be played by all levels of government. Most of the measures outlined seem very general in nature and indicate that all the initiatives are under the responsibility of the federal government with less recognition of the importance of the intergovernmental relation for economic development as a whole. This lack of clarity on intergovernmental relations would continue the trend of a centralised federal system and stifle the capabilities of lower governments to act independently to foster their own local economies. By outlining the significance of the MPF in the Malaysian context, this study has shown that as a federation, the lower governments should be allowed to participate in determining the direction of the development of the country. This study has emphasised that the role of states should not be underrated as their collective fiscal decisions impact upon the macroeconomic stability of the country.

While maintaining a centralised governance system, the NEM, however, does empower state and local entities to perform tasks on a local level that are necessary for the improvement of decision making processes. This measure, to some extent, signals the importance of decentralisation for efficiency enhancement towards achieving long term growth, but is not adequate for generating the incentive structures and power devolution strategies necessary for states to be efficient participants in the economy. At the same time, greater decentralisation of budgets and its management with proper accountability and transparency have been addressed to improve efficiency and responsiveness among government agencies. Moreover, the empowerment of the MIDA (Malaysian Investment and Development Authority) as a federal government agency to facilitate domestic and foreign investments seems to conflict with the initiative to strengthen the role of lower governments for strategic decision making process indicating the states still lack greater autonomy in investment decisions.

However, such initiatives are unclear and far from the realm of decentralisation and a market preserving governance system. This study gives more weightage on fiscal decentralisation for Malaysian state governments as the focal issue and looks at the challenges in devolving power, enhancing efficiency, improving transparency and accountability, and addressing regional disparities for long-term economic growth. In other words, MPF principles provide a clearer prescription for accelerating Malaysia to achieve these goals on a regional and national level. By drawing on the MPF, the NEM policy can reap the full benefits of decentralisation including the attention for strengthening oversight on policy development and development particularly on service sector as a new source of growth enhancing sector can be undertaken efficiently.

The need to reviewing federal-state fiscal arrangements has been paid little attention in the NEM, as it focuses more on per capita criterion and the use of more varied indicators such



as poverty levels in the respective states for the purpose of improving efficiency and effectiveness in the state expenditure program. On the other hand, this study has provided strong evidence that fiscal decentralisation is the primary factor for technical efficiency to show that the concept of fiscal federalism should in fact be treated as a core principle of the NEM. In other words, the right revenue assignment and the devolution of functions should be clearly revised and improved especially for health and education which are imperative for alleviating widening regional disparities.

With regard to productivity and efficiency, the NEM is concerned with productivity-based remuneration system in the public sector as an incentive for higher productivity. Similar to the concept of fiscal incentives of MPF as highlighted in this study that the state governments would incline to create the market-supporting environment if their actions are rewarded. This study has also outlined the important role of incentive structures in motivating state government institutions for supporting the private sector and preserving a market economy. The implementation of decentralisation and inculcation of the right incentives in state governments are imperative for driving productivity and improving efficiency and subsequently transforming them into an active agent of development at the regional and national level.

In general, the NEM indicates that Malaysian government has recognised some form of decentralisation as part of its efforts, but this emphasis needs to be strengthened with formulation of accompanying policy changes in structure of intergovernmental relations. This institutional move towards decentralisation would also be more efficient and wholesome if accompanied by the hard budget constraint. The hard budget constraint nurtures the state governments to be more responsible in their fiscal decision making as well as competitive in their performance. Moreover, the study confirms that the lower competitiveness of state governments due to low degree of decentralisation and moral hazard problem are created by the soft budget constraint.

In conclusion, this study has found that MPF is consistent with the NEM's goals of elevating Malaysia out of the middle income trap, thus, this study can assist in policy formulation aimed at better implementation of NEM based on concrete economic principles and evidence. This study supports that Malaysian states should be run based on market principles suggested in MPF to achieve the goals outlined in the NEM. This study has found that fiscal decentralisation, fiscal incentives and hard budget constraint principles from the MPF form an appropriate prescriptive framework to strengthen the NEM as a more wholesome policy for accelerating Malaysia to become a developed country by 2020. But this shift towards MPF principles also needs to be accompanied with more attention to be given to empowering the weaker states through a properly designed system of fiscal

equalisation so as to be able to develop their respective regional economies and to eventually compete with the other states for investment and development.

#### **8.4 Policy Implications**

Given the host of problems plaguing the current fiscal system including regional disparities, soft budget constraints, misallocation of resources, weak fiscal capacities and inefficient governance, extensive policy reforms are called for. The following discussion presents a list of actions for the state governments to benefit from a comprehensive plan of fiscal decentralisation and hard budget constraints. These actions relate to reforms in four main areas:

- first, how to maximise the benefits from the implementation of decentralisation in strengthening factors that influence state efficiency levels;
- second, how to reduce disparities at the regional level through better intergovernmental fiscal transfer systems;
- third, how to strengthen fiscal capacities of the weaker states; and
- fourth, how to strengthen government institutions and legal frameworks to implement the reforms.

##### **8.4.1 Factors that Influence State Efficiency Levels**

The foregoing analysis reveals a number of factors that influence state efficiency levels under the current fiscal federalism system. One policy that can raise state efficiency levels is the decision to allow states to generate their own revenues. States' finances need to be strengthened to minimise states' dependence on the centre for funds. It is necessary to reassign independent sources of revenue to the state for strengthening a state finances. Therefore, the following fiscal decentralisation policies should be helpful in achieving higher efficiency levels for state governments:

i) A review should be performed of policies that regulate public borrowing and public debt at state level. With the expansion of Malaysia's market economy, states should be able to finance developmental expenditures through market mechanisms. Before being allowed to sell local bonds in domestic capital markets, states must demonstrate their fiscal capacity to manage local borrowings without expecting to be bailed out by federal government.<sup>77</sup> If Malaysia introduces a system of independent credit rating of state governments, this will

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<sup>77</sup> It is important that state governments recognise the dangers or risks of excessive spending that is financed with debt. This issue becomes more critical when states' spending on specific capital investments is not efficient or productive.

create strong incentives for each state government to improve its fiscal efficiency so as to be able to raise capital for financing developmental plans.

ii) It is important to ensure that there is sufficient funding for programs and services that are being transferred to the states to better overcome unfunded mandates. With changes in the distribution or allocation of revenue and expenditure, the federal government transfers a number of programs and services to the state governments without considering the financial consequences to the states. State governments may suddenly find themselves responsible for funding part or all of these programs and services. However, restrictions on the types and bases of revenue that states can generate would create problems of insufficient funds to cover the costs of these programs and services. As a result, an interruption of public services may arise and subsequently jeopardise production activities of firms and enterprises, hence risking a state's competitiveness. In order to prevent this situation, there is a need for greater policy coordination between the federal and state governments.<sup>78</sup> For example when states are not allowed to issue debt, promotion on public-private partnerships to finance the development of public services is an alternative for limited state budgets. These partnerships will not only provide the means for states to access capital, but also reduce the risks associated with certain capital investments.

iii) It is important to support policies that promote good governance. These policies should encourage transparency, accountability and the rule of law. In many developing countries, one factor that has negatively influenced the efficiency and productivity of public capital expenditure is corruption and rent-seeking activities.<sup>79</sup> State institutions should have strong good governance policies in place otherwise decentralisation will not be effective.<sup>80</sup>

iv) Growth policies at the state level should take into consideration the investment needs of the private sector. Private capital investment at the state level is affected by labour and population growth in addition to public goods and services that are provided by the state. From the supply side, skilled labour is a key production input for firms and enterprises. From the demand side, the private sector's decision to invest is driven by population growth, which ultimately determines what and where to produce.

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<sup>78</sup> Thus, the issue with allowing the private sector to finance critical public services is related to how much balance exists between the service charged to consumers and the return to investment to private investors.

<sup>79</sup> These illegal activities increase transaction costs and cause the regions to be less competitive. The role of institutions is important and cannot be considered as an exogenous factor anymore since it determines the quality of institutions and development process as a whole (Bodmer, Kobler, and Borner 2004).

<sup>80</sup> In a democratic system, decentralisation should ensure the accountability of state government as demanded by the public.

#### **8.4.2 Strengthening Fiscal Capacities**

MPF model emphasises the importance of local taxation authority for creating both greater accountability and fiscal incentives for local governments to foster local economic growth. If fiscal decentralisation is to be a reality, state government must control their own revenues to finance the services that they provide (McLure 1997). This means that some reforms in the taxations systems are required that enable state governments to have their own sources of tax revenue and have more effective tax collecting mechanisms. If this were done, the states would be able to implement MPF in regenerating the state's economy and subsequently, states' revenue could benefit from national GDP growth.

##### **i) Reassignment of Taxes**

Reassignment of taxes is only possible through the implementation of a fiscal decentralisation process as practised in other federal countries. According to Holzhausen, 'a change in the substance and composition of the tax subjects or other assured sources of income of the states would be the most appropriate solution to any long-term imbalance in relation between the states' needs and resources' (Holzhausen 1974). By appropriate reassignment of federally controlled taxes to states, states would be guaranteed a stable revenue inflow. Certain taxes, particularly those taxes that are localised in nature, are better assigned to the states as states can manage and collect them more efficiently. Among revenue sources which could be reassigned to the state based on this principle are property tax, stamp duties, and road tax (tax on vehicles) as well as production and consumption taxes as such excise duties, sales and service taxes (Musgrave 1983). Since land matters are the responsibility of the states, any taxes related to landed property, such as estate duty, real property gains tax and stamp duty on land transfers, are appropriately assigned to the states, with policy determined by the federal authority for uniformity purposes. The respective state governments could then determine their own tax rates, depending on prevailing local economic preferences. Similarly, tax on vehicles, which is also localised, is better collected by the states as the database of information on vehicles is available in every state.

##### **ii) Improving States' Tax Collection System**

Fiscal capacity would depend not only on revenue collected but also on the ability to collect revenue. Reassignment of revenues sources is only possible if it is followed by improvements in the states' tax collection system so that the states' absorptive capacity as well tax effort can be increased. Since Malaysian state governments have not been using their tax base efficiently, the devolution of more tax responsibilities towards them will only result in more inefficiency (Jalil 2011). In Malaysia different states have different tax

collection system and there is no standardised mechanism or structure of tax collection. Poor management skills pave the way for federal interference in state fiscal affairs for the sake of efficiency. States' revenue from land tax collection is still below its potential. As a result of bureaucratic red tape, several land applications, for the land titles and transfer of ownership have taken up to fifty years to be resolved (Bakar 2004). This bureaucratic red tape caused states to lose their revenue potential from land premium, although land tax collection is the second major source of states' revenue. Therefore, state governments should explore the potential of land tax as a major source of revenue in future and efficiency of land office administration should be improved by taking steps to ensure constant collection of land revenue and following up on arrears. Inefficiency has also been noticed in the collection of water charges. For example, as of September 2002 a total of MYR 230 million of water charges had not been collected in Kuala Lumpur and Selangor. But instead showing the move to greater centralisation, the federal government formed the National Water Council in August 2003 to centralise water management and take this power away from the states despite objections from opposition party-ruled states. Although land falls under state jurisdiction, the policy is a federal matter (through the National Land Council), and the amendment to the National Land Code 1965 enables the federal government to take over state land for federal purposes. If the states continuously fail to improve their tax collection system and revenue performance, more and more functions will be usurped by the centre. Moreover, by improving the tax collection system, states' tax efforts can also be increased to reach their full potential. The absence of proper tax planning, state governments will be forever dependent on the federal government for funds (Bakar 2004).

#### **8.4.3 Fiscal Equalisation**

The policy implications considered so far have focused on the principles of fiscal decentralisation that are in line with the approach of greater state power and hard budget constraint advocated by MPF. Indeed, SGFF provides several lessons for the design of fiscal transfer system. But given the specific conditions of a developing country like Malaysia where there is acute regional disparity and lack of strong local governance, these policies of fiscal decentralisation need to be combined with actions that do not completely curtail active intervention of the federal government and leave the economic development of states solely at hands of vagaries of the market. Since the fiscal imbalance in Malaysia is long-term in nature, the most appropriate approach to fiscal adjustment would be to assure a steady inflow of income to the state governments regardless of the economic and political cost. However, many reforms are needed to address the flaws in the current fiscal transfer system relating to its soft budget constraint, tendency to promote fiscal irresponsibility and haphazard administration.

The continuance of federal transfers is justifiable because the federal government has strong revenue-raising powers compared to that of the states which is important to equalise interstate fiscal disparities following differences in the fiscal capacities. Although MPF theory dissuades policy makers from employing intergovernmental transfers, our study draws attention to Rodden and Ackerman's (1997) argument that fiscal transfers to states cannot be ruled out. As the federal government in Malaysia reserves most of the revenue-raising powers, fiscal transfers would be necessary to channel resources back to the states. Also, regional disparity is a critical problem in a developing country like Malaysia so intergovernmental transfers are needed to combat interstate inequality.

In order to preserve the principle of horizontal equity, fiscal equalisation is crucial to reduce inequality in the ability of state governments to provide comparable public services at comparable tax rates. In particular, fiscal capacity equalisation needs to be formulated as in Canada, Germany or Australia<sup>81</sup>, so that each state can provide a similar standard of governmental services so long as it also puts in similar level of fiscal effort (Dawkins and Grewal 2011). Fiscal equalisation should be able to remedy the financial hardship of the state governments, and subsequently iron out any fiscal imbalance (horizontal and vertical). Equalisation in practice is almost always motivated by equity concerns with the basic idea being to ensure equality of access to public services regardless of where a citizen lives. The process to address these differences is known as horizontal fiscal equalisation (HFE). The absence of central government fiscal transfers for horizontal equalisation will make things worse for weaker states as different subnational governments typically have different costs and capacities to raise revenue for reasons that are beyond their control (Grewal 2008a, 2008b; Petchey 2001). This would mean that states would not be able to generate regional growth equitably. For example, less developed states like Kelantan and Perlis will not be able to compete with industrialised states like Penang and Selangor. Therefore, two broad approaches are available for responding to inter-state differences in service levels, viz. fiscal capacity equalisation and categorical equalisation.

#### i) Fiscal Capacity Equalisation

The aim of fiscal capacity equalisation is to remove, or reduce, the inequalities in the states' fiscal capacities so that each state can provide a similar (e.g. average) standard of governmental services if it also puts in a similar (e.g. average) level of fiscal effort. In the absence of such a requirement for state fiscal effort, an equalisation scheme would run the risk of becoming an open-ended commitment for subsidising state spending, undermining

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<sup>81</sup> Australia has applied a fiscal capacity equalisation since 1936, when the Grants Commission recommended in its first report on special grants to the fiscally disadvantaged states (Dawkins & Grewal, 2011).

fiscal discipline. Since GST (Goods and Service Tax) will be introduced in Malaysia in April 2015, the Malaysian government can emulate the Australian Commonwealth government for distributing GST revenue among the states on the basis of the principle of fiscal equalisation.

#### ii) Merit Goods and Categorical Equalisation

Merit goods are those private goods whose benefits also accrue to the wider society. Education and health are good examples of merit goods. In the context of a market economy, the concept of merit goods justifies government intervention for encouraging the provision of merit goods for enhancing welfare. More importantly, public sector provision of education, health, low-cost housing is critical, so governments in most countries are involved in the provision of these goods (Dawkins and Grewal 2011; Grewal 2008a).

Along with capacity equalisation to address the original source of inequality, there must be categorical equalisation to address differences in levels of basic services with fiscal transfers that are targeted at basic services. The notion of categorical equalisation is also supported on the criterion of effectiveness in policy implementation, which requires minimisation of waste through leakages and maximisation of impact. If horizontal inequality is perceived in terms of the provision of merit goods, as it is in China and India right now, categorical equalisation would be a more effective intervention than capacity equalisation. Categorical equalisation is used in the USA, where Congress views horizontal equity in terms of local service levels not local tax rates (Dawkins and Grewal 2011; Grewal, 2008b).

### **8.4.4 Reforming Government Institutions**

The economic reforms suggested above need to be supported by reforms in governmental institutions that are better able to align the interests of businessmen, citizens and government officials. The greatest challenge to a successful MPF comes from the nature of the Malaysian Constitution provision in the Ninth Schedule of the Federal Constitution which stipulates allocations of functions and responsibilities that are clearly biased towards the federal government. Any demand to revise the existing arrangements would result in a long constitutional battle as there is no simple answer to the problem of fiscal decentralisation in a federation. Any amendment needs the involvement of not only interest groups, people and opposition parties, but of the three separate independent bodies of executive, legislative and justice. A carefully planned approach would be required to bring about Constitutional change in the legal framework and strengthen government mechanisms for the fiscal reforms.

#### i) Facilitating Constitutional Change for Decentralisation

Reforms should obviously be aimed at a system of revenue allocation from the federal to states, based on objective criteria, and take into account the particular difficulties of states.

First, a precise revision of the Constitution should be conducted to lay the legal and institutional framework before any of these policies can be carried out. Here, possible amendments should be carefully considered after reviewing the advantages and disadvantages of having a centralised fiscal federalism system in Malaysia particularly from the aspect of distribution. The reform should be taken to limit the authority of federal government by increasing the degree of decentralisation: the devolution of economic policymaking and fiscal authority including the hard budget constraint to the states. A clear assignment of functions between levels of government is obviously important for a rational and efficient public sector. In particular, it is important to clarify the areas within the jurisdiction of subnational levels in case of a subnational fiscal crisis. Alternatively, following the example of Argentina, agreements with provinces must be reached as they would take additional functions since the transfers might increase during the stabilisation (Dillinger, Perry, and Webb 2001). The principle of subsidiarity should be the guiding principle in assigning responsibilities between different levels of government (Dawkins and Grewal 2011). Through these reforms great care must be taken to maintain federal spirit (cooperation, trust, partnership and respect) and the political aspect of federalism (political system and party politics).

In order to delegate greater revenue capacity to the states, alterations to Article 110(2) and Article 110(4) (a) can be initiated by the federal government. However, this must be done after consultation with the National Finance Council (NFC) to ensure that states had adequate economic resources and governance structures to take on those responsibilities, before being proposed to parliament. Besides flexibility in reassignment of revenue sources, there is also sufficient scope in the Federal Constitution to revise the existing transfers system to state governments. Article 109(3) and 109(6) of the Federal Constitution provides enough flexibility for fiscal adjustment to be made by introducing new grants (through enactment of a specific law). Specifically, Article 109(3) says, 'Parliament may by law make grants for specific purpose to any of the states on such terms and conditions as may be provided by any such law', while Article 109 (6) provides further flexibility 'the federation may from time to time, after consultation with the National Finance Council (NFC), makes grants out of the state reserve fund to any state for the purposes of development or generally to supplement its revenue. Further, Article 108 (4) (a) and Article 108 (5), provides the federal government power to introduce new grants to states after consultation with the NFC.

## ii) Strengthening Governance Mechanisms

Malaysia will only be able to sustain its economic growth if government institutions, including local councils to Parliament, are transparent and possess greater governance accountability. The Malaysian public sector need to become more efficient and responsive rather than being



driven by the central bureaucracy. More importantly, when new budgetary rights and responsibilities are assigned to state governments, institutional clarity and transparency should be promoted in the budget-making process such that spending matches revenue at the state government level.

The fiscal reforms need to be accompanied by measures to strengthen government institutions that can act as independent bodies capable of objectively evaluating fiscal arrangements. A key measure would be to revive the role of the NFC from acting only as an advisory body to the government to a more independent role promoting better intergovernmental fiscal relations. The institutions of intergovernmental fiscal relations, such as the NFC, have been undermined by political influence, in that most of the decisions made are the outcome of political leverage as part of the centre's political endeavour to pursue the maintenance of one-party dominance. This is unlike the situation in federations like India and Australia, where the institutions of intergovernmental fiscal relations are to some extent politically independent.

Finally, in theory, there is an equal possibility that fiscal decentralisation simply transfers power from national to local elites and that improved access of local elites to public resources increases opportunities for corruption (Bardhan and Mookherjee 2000). In general, the impact of fiscal decentralisation on corruption depends to a large extent on the quality of the supporting institutional framework and in particular, the degree that subnational governments and/or officials can be held accountable. Hence, accountability is imperative to prevent intergovernmental fiscal relations from suffering coordination failures which induces state governments to spend inefficiently and beyond their means.

### **8.5 Limitations of this Research and Suggestions for Future Research**

As with any research effort, this study is also encumbered with some limitations owing to the specificity of its focus and methodology as well as some unforeseen circumstances in the research process. It must be acknowledged that a number of constraints were uncontrollable, and may have affected the outcomes and interpretations of the empirical analysis performed.

The first constraint was the issue of data availability. As a result of a centralised system of accounting, there were limited data at the state level as state governments have no incentive to properly develop their own database and no obligation to report to the federal government. There were also inconsistencies in the data compilation process (e.g. the composition of public capital expenditure for each sector of spending).

The study of fiscal federalism would be comprehensive and complete if the local government units were also considered to examine the performance of district governments. The data

limitation on this front was also a major reason for excluding this cross-section of the local governments. Although the states had an insignificant role in contributing to the economic growth, states were more efficient compared to local districts with a good structure and proportion of revenue sharing.

The empirical models employed in the analyses did not address the other causes of inefficiencies, including corruption, collusion and nepotism occurring in Malaysia. This was due to the difficulty in measuring these inefficiency factors based on accounting data as there was no regionally collected data on the index of corruption or rent seeking.

As this study ends with an argument for greater fiscal decentralisation with a market-based mechanism proposed by MPF, certain areas that emerge from this conclusion should be considered relevant for future studies.

There should be a focused investigation of the implications of the hard budget/soft budget constraints on the regional governments, particularly in terms of budgetary constraints on the economic growth and vertical and horizontal imbalances in Malaysia. Soft budget constraints of subnational authorities result in the emergence of negative macroeconomic effects. Thus, excessive budgetary expenditures and borrowings resulting from soft budget constraints at the subnational levels may create obstacles to efficient pursuit of fiscal and monetary policy by the national authorities (Prud'homme 1995). Besides that, the excessive demand generated by such expenditures affects prices. The consequences of such effects are aggravated by the fact that the excessive level of public expenditures may result in a decline in private investment and private consumption in the economy. Eventually, soft budget constraints of subnational authorities may create serious obstacles to the progress of macroeconomic stabilisation. A further study should investigate and validate if the hard budget constraints as proposed by MPF would be important factors for the Malaysian economy.

Second, any future study on fiscal federalism in Malaysia should give emphasis on the influencing factors that affect the state allocation efficiency as well as the effectiveness of fiscal decentralisation policy in relation to the development of laws and regulations, political aspects and leadership issues amongst state government authorities. These factors can influence a decentralised system due to conflicts of interest between the central and regional governments, power struggle, and the opposing agendas of political parties. Addressing other institutional factors could also advance the literature on relationships between the democracy and decentralisation.

Third, the non-existence of corruption index at the state level needs to be addressed. Future studies may be undertaken to construct the index to improve the growth panel data model

presented here. As a result, there is a need to examine the correlation between corruption and cost inefficiency in discretionary spending. State capital expenditure is associated with finance specific public investments whereas cost inefficiency is closely connected to productivity of public capital expenditure.

Fourth, future research needs to look upon regional imbalances and their influences on state efficiency and regional growth. As the aspects of poverty, inequality of income and disparity distribution of population and labour impact on the allocation of the state governments' fiscal resources, the states' spatial characteristics have an influence on allocation efficiency and economic growth. For example, high densities of population areas are less manageable as compared to smaller states, but urban areas enjoy more benefits from the efficiency of public service delivery. It is appropriate to address these issues in future studies of fiscal federalism to clarify how state's jurisdictions, population density as well as urban-rural outlook affect the process of decentralisation.

## **8.6 Conclusion**

The empirical findings of this study show that the fiscal arrangements under the current federal system in Malaysia are far from the norms of decentralisation of power recommended by MPF. Since Malaysia's federalism diverges from these key MPF principles, it is unlikely to foster thriving markets. Clearly, the functional structure in Malaysia is not only highly centralised, but seems to insidiously promote greater centralisation over time. This can be seen in the lack of incentive structures generated by the current soft budget constraints and its failure to foster regional economic performance. Finally, as a result of common pool problem in a highly centralised system, most transfers in the fiscal system are aimed at redressing vertical and horizontal imbalances, which result in poor fiscal incentives for the state government officials to provide market enhancing public goods.

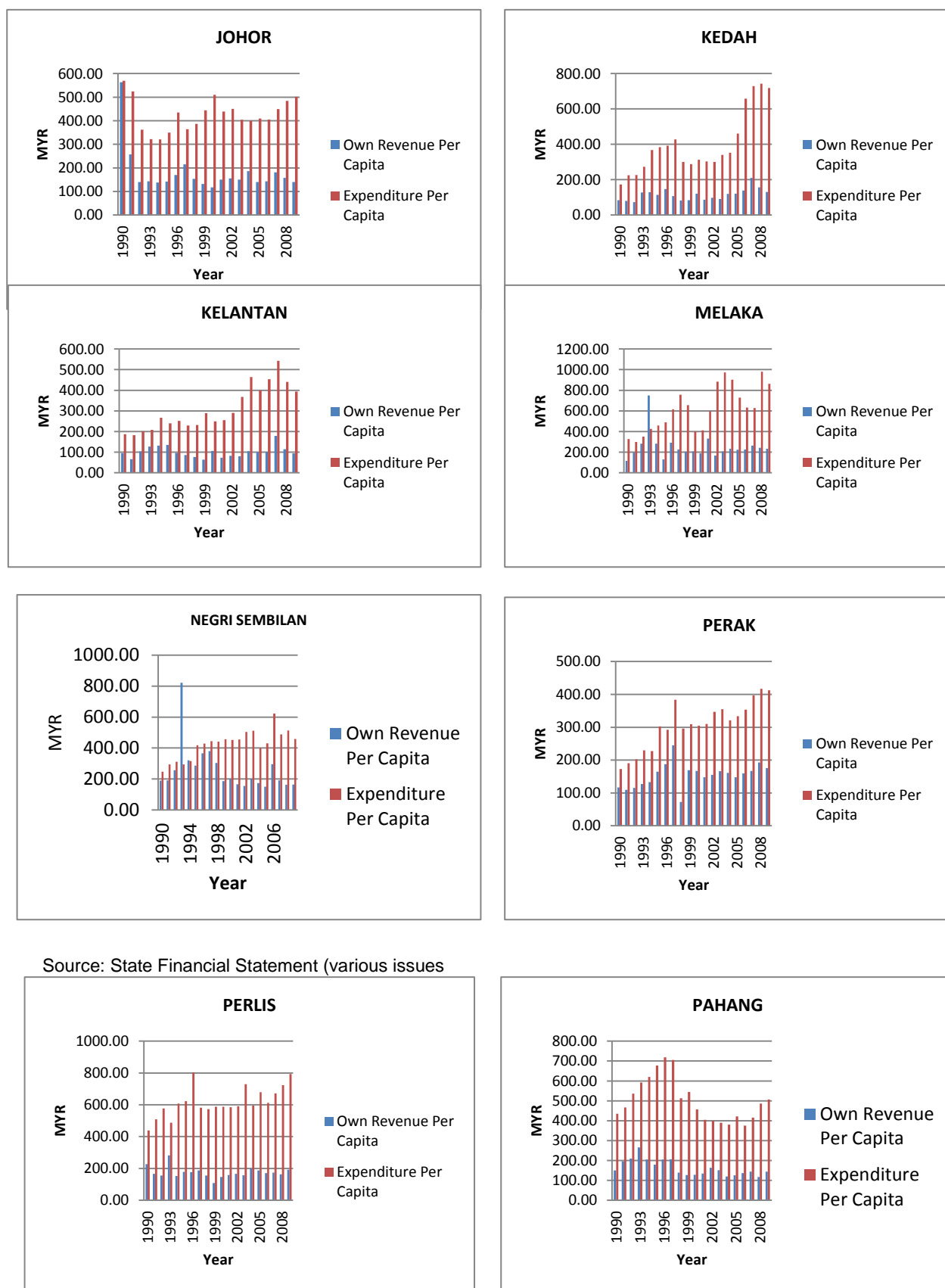
In order to reap the benefits of accelerated regional growth and market-based economy under MPF, the federal system needs to satisfy all the conditions specified under its principles. Malaysia meets the first condition of minimal federalism implying that its federal structure is not in dispute, but Malaysia's federalism departs considerably from MPF as it fails by a long mark to meet the decentralisation and hard budget constraint criteria. The federal government retains enormous control over the economy, setting most economic laws and regulations; state governments have little discretion in revenue raising and spending with the federal government retaining unilateral powers with respect to state powers; finally, states do not face hard budget constraints except for borrowing at the state level. There are a few major obstacles that need to be carefully monitored to ensure that the objective of macroeconomic stability, efficiency and equity can be achieved accordingly.

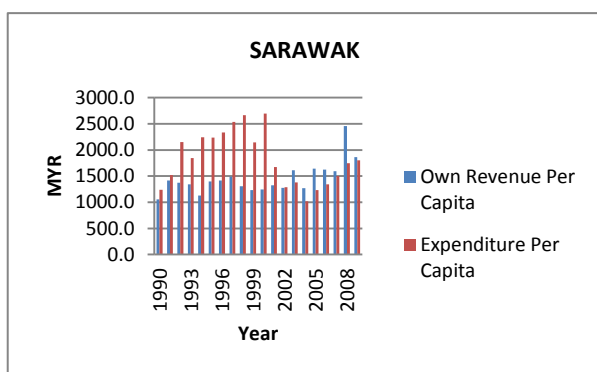
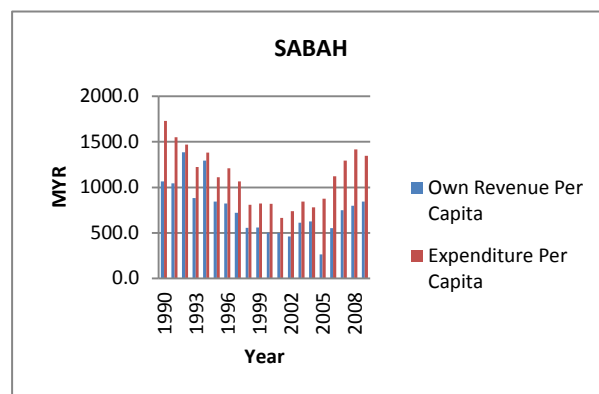
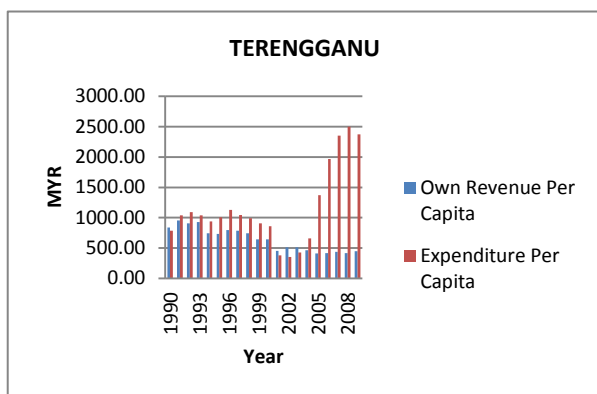
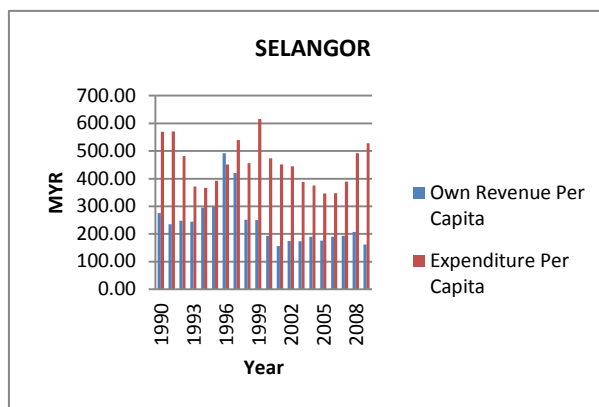
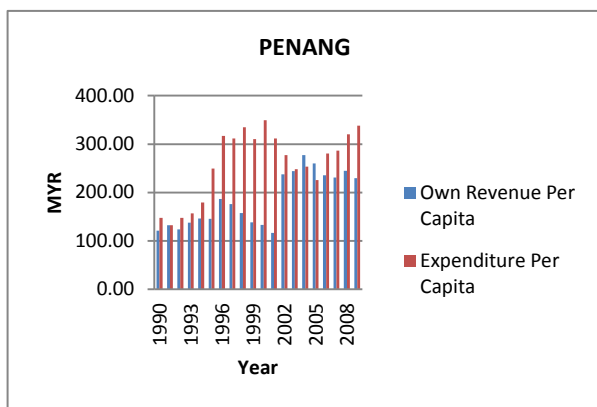
There are many prerequisites that need to be accomplished prior to the adoption of MPF as a new system of fiscal federalism in Malaysia. Several recommendations can be formulated for the Malaysian government to implement MPF principles in an effective and practical manner to reform the current fiscal system. MPF must be initiated by the fiscal federalism reform which includes strengthening the factors that influence state efficiency levels, strengthening the fiscal capacity of states, improving federal transfer system for horizontal equalisation and strengthening government institutions and legal frameworks. It would be imperative to reassign more independent revenue sources to states and devise a proper grants system so that there is no necessity for the states to be so dependent on the federal government for funds. A hard budget constraint is the appropriate way for disciplining the state governments' fiscal management so that states have incentive to become fiscally more efficient and less reliant on grants. If this is done, the states can implement MPF in regenerating the state's economy and subsequently states' revenue could benefit from national GDP growth.

This thesis concludes that combined with a strong commitment to horizontal fiscal equalisation, market preserving federalism (MPF) provides an attractive alternative for the current federalism system which is widely regarded to impact negatively on states' fiscal performance which in turn affecting the overall performance of the economy. In particular, this thesis sheds light on the design of Malaysian federalism in relation to the MPF and how this current model of fiscal decentralisation in Malaysia can be improved to support a market-based economy. The emphasis on decentralised governance is not only based on the greater local autonomy but also greater accountability and transparency in fiscal management. The strengths of MPF should convince Malaysian policymakers especially the National Economic Authority Council (NEAC) about the importance of reforming the system to foster business and inclusive economic development in Malaysia. Furthermore, the adoption of MPF is in line with the latest government's New Economic Model (NEM) which also aims at developing a system of governance that can empower the private sector to generate broad-based inclusive development. It is hoped that the theoretical insights of MPF and prescriptive guidelines for reform in the system of fiscal federalism in Malaysia illustrated here in this study can help the country get out of the middle income trap and eventually achieve the status of a developed nation.

## APPENDIX 1

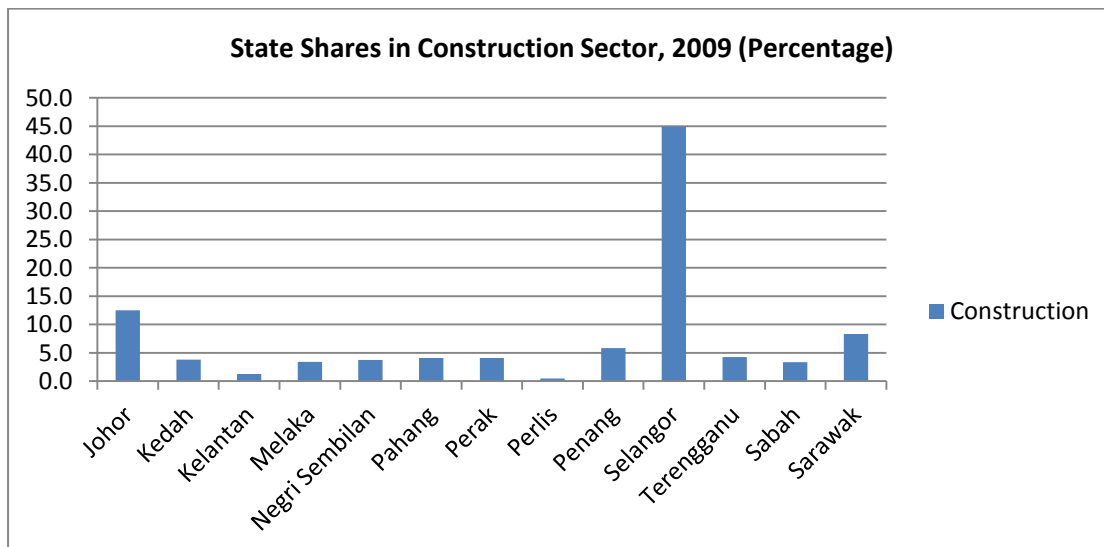
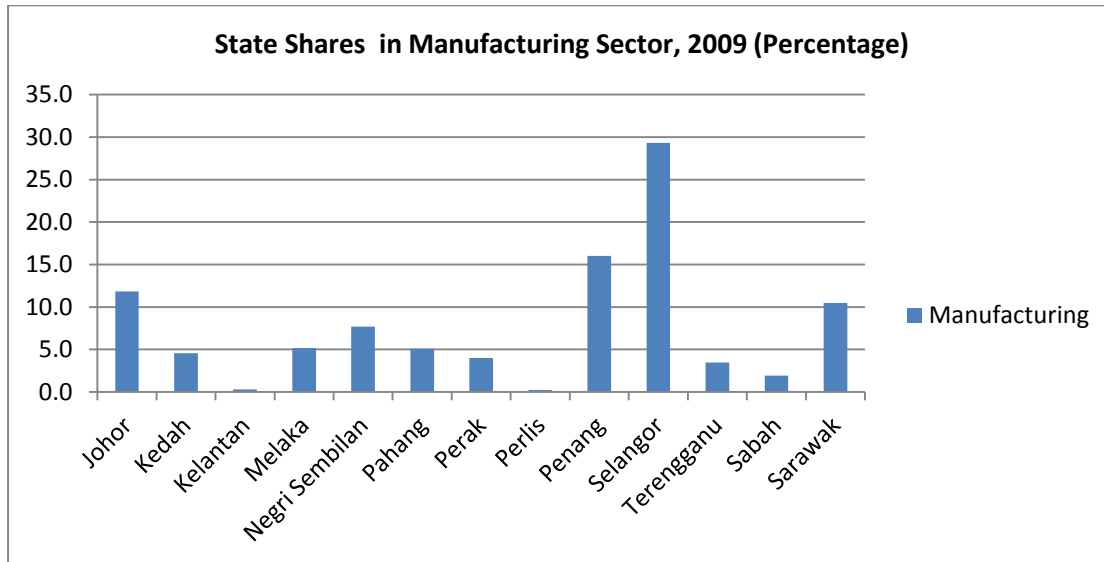
Figure 5a Fiscal gap per capita of individual states

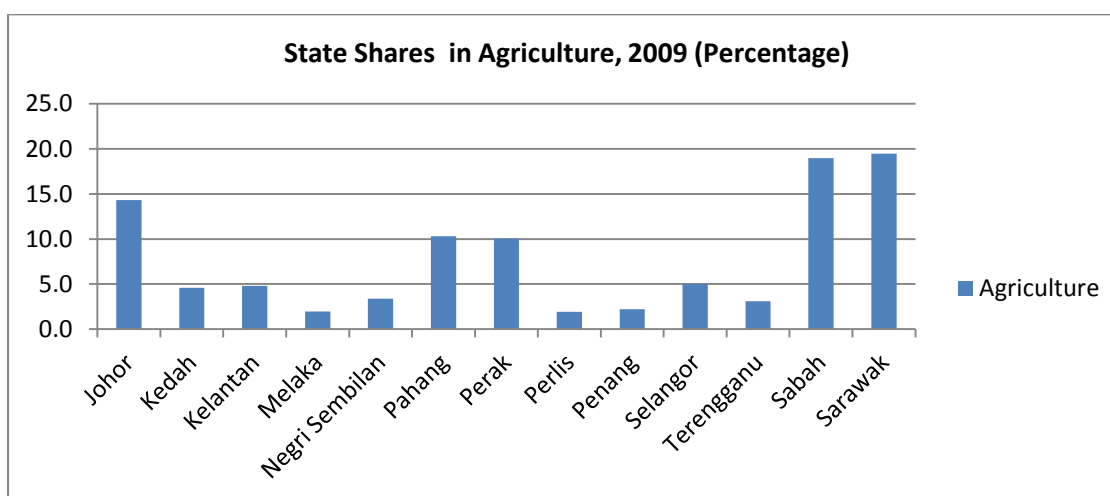
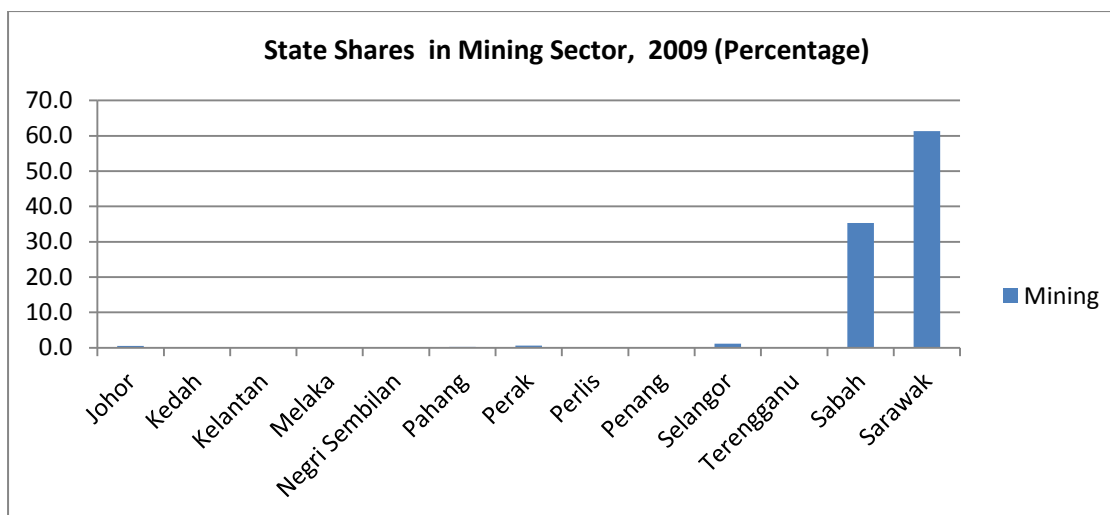




## APPENDIX 2

Figure 5b State shares in total economy, 2009





Source: Ministry of Finance, Economic Report 2009.



### APPENDIX 3

Table 5a: Peninsular Malaysia: Major sources of state revenue-tax revenue, 1990- 2009 percentage distribution												
YEAR	JOHOR	KEDAH	KELANTAN	MELAKA	NEGRI SEMBILAN	PAHANG	PERAK	PERLIS	PENANG	SELANGOR	T'GANU	TOTAL
1990	7.67	6.84	4.69	2.02	4.43	7.68	8.33	0.56	3.95	11.70	42.11	100
1991	6.91	6.35	2.17	1.75	3.76	8.88	7.84	0.58	4.05	11.41	46.31	100
1992	6.66	5.98	4.28	2.03	4.07	9.21	7.44	0.50	4.17	12.37	43.27	100
1993	5.98	9.15	2.91	2.77	11.67	6.82	7.01	0.46	3.62	11.67	37.94	100
1994	6.82	10.15	3.54	1.99	4.26	7.32	8.22	0.56	4.10	15.64	37.41	100
1995	6.45	8.67	4.02	2.80	4.31	6.73	7.51	0.79	4.03	17.56	37.15	100
1996	6.11	9.90	3.19	2.41	4.85	6.10	8.21	0.49	5.54	19.40	33.79	100
1997	7.70	6.12	2.70	2.39	4.69	7.13	9.55	0.47	5.64	19.11	34.49	100
1998	8.34	5.97	2.39	2.24	4.45	5.44	8.94	0.54	5.38	17.68	38.63	100
1999	8.42	5.72	2.52	3.28	4.58	5.96	8.56	0.62	5.73	18.64	35.97	100
2000	8.17	9.48	2.80	3.35	4.60	5.66	9.27	0.58	5.66	20.20	30.22	100
2001	11.27	7.80	2.72	3.50	5.46	6.79	11.09	0.78	6.62	20.52	23.45	100
2002	10.28	6.50	3.00	3.19	5.27	6.59	10.41	0.80	6.59	23.50	23.86	100
2003	10.40	6.04	3.20	3.27	5.17	6.07	11.65	0.74	6.07	23.06	24.35	100
2004	10.06	7.48	3.68	3.05	4.75	6.34	11.05	0.70	6.34	22.02	24.53	100
2005	10.52	8.22	3.62	3.18	4.78	6.90	10.40	0.72	6.90	22.85	21.92	100
2006	13.58	8.67	2.62	3.70	5.54	5.56	10.59	0.56	5.56	24.89	18.73	100
2007	15.55	9.87	3.24	3.48	5.57	5.14	9.95	0.54	5.14	22.71	18.82	100
2008	10.93	9.84	3.22	3.40	5.57	5.29	11.91	0.56	5.29	23.92	20.07	100
2009	11.37	9.14	3.34	3.83	5.49	5.34	11.93	0.59	5.34	22.82	20.81	100
INDEX OF INCREASE (%)	48.24	33.61	-28.77	89.48	23.90	-30.52	43.17	4.97	35.05	95.02	-50.58	0.00

Source: State Financial Statements (various issues).

## APPENDIX 4

Table 5b: Peninsular Malaysia: Major sources of state revenue-non tax revenue, 1990- 2009 (percentage distribution, 2005=100)												
YEAR	JOHOR	KEDAH	KELANTAN	MELAKA	NEGRI SEMBILAN	PAHANG	PERAK	PERLIS	PENANG	SELANGOR	T'GANU	TOTAL
1990	49.89	1.10	2.42	1.85	3.50	8.79	6.71	1.62	3.88	17.76	2.47	100
1991	27.91	1.54	3.25	5.58	5.38	16.02	8.38	1.44	5.85	19.31	5.35	100
1992	13.05	1.35	4.45	8.72	8.33	20.56	9.69	1.43	5.29	20.93	6.19	100
1993	9.49	1.54	4.81	15.32	17.91	12.61	6.21	2.00	4.21	17.91	7.98	100
1994	10.97	2.39	6.11	6.42	9.16	16.60	8.06	1.13	5.62	26.88	6.66	100
1995	12.16	2.13	6.25	1.74	8.11	17.61	12.17	1.28	5.85	26.95	5.76	100
1996	11.32	1.89	2.85	4.80	7.74	13.42	9.86	1.07	4.90	36.94	5.23	100
1997	13.35	1.75	2.57	3.01	7.69	19.38	11.64	1.12	3.81	31.42	4.26	100
1998	16.59	1.66	4.69	5.29	11.15	16.58	0.02	1.62	6.58	30.53	5.29	100
1999	12.61	2.27	3.33	4.17	4.79	20.79	13.26	1.46	4.77	28.65	3.89	100
2000	11.88	2.66	6.16	4.17	6.04	16.21	12.23	1.31	5.16	29.76	4.42	100
2001	17.23	2.30	4.06	10.99	4.45	15.48	10.11	1.44	4.25	24.46	5.23	100
2002	16.69	4.07	4.07	3.71	3.40	13.11	10.17	1.33	13.11	23.47	6.88	100
2003	15.14	3.56	3.56	4.90	5.62	13.58	10.01	1.20	13.58	22.73	6.12	100
2004	18.20	4.32	4.32	5.24	3.92	13.74	8.38	1.48	13.74	23.63	3.05	100
2005	13.78	4.78	4.78	5.71	3.52	14.40	9.02	1.62	14.40	24.26	3.74	100
2006	10.44	5.34	5.34	4.89	9.22	12.97	9.10	1.43	12.97	23.31	4.99	100
2007	12.35	9.36	9.36	5.59	3.56	10.92	8.97	1.29	10.92	22.63	5.07	100
2008	14.14	5.45	5.45	5.31	2.58	12.48	10.28	1.23	12.48	27.06	3.53	100
2009	12.93	4.85	4.85	5.59	3.32	13.80	10.82	1.82	13.80	21.98	6.24	100
<b>INDEX OF INCREASE (%)</b>	-74.09	341.12	100.35	201.93	-4.93	57.00	61.15	12.40	255.47	23.72	152.93	0.00

Source: National Audit Department, General Audit Report (various issues).

## APPENDIX 5

Table 5c : Operating expenditure as a percent of total expenditure by states, 1990-2009 (2005=100)													
YEAR	JOHOR	KEDAH	KELANTAN	MELAKA	NEGRI SEMBILAN	PAHANG	PERAK	PERLIS	PENANG	SELANGOR	TRENGGANU	SABAH	SARAWAK
1990	90.3	76	68.8	63	78.3	74.5	68.5	73.1	72.5	61.6	67.3	71.6	58.7
1991	89.1	68.6	77.8	52	79.7	76.1	72.8	70.5	82.4	69	74.5	71	60.1
1992	80.8	65.9	74.7	50.9	87	71.1	72.5	71	79.1	66.9	75	77.1	58.2
1993	82.5	62.6	74.4	58.6	83.8	74.9	67.8	64.4	77.5	76	81.9	76.5	52.3
1994	79.9	59.5	73.9	68.9	86.1	77.6	71.1	71.5	74.3	82.1	77.5	77.5	67.3
1995	80.7	57.9	74.4	74.4	73.6	73.5	77.6	72	69.9	80.1	73.9	73.7	58.6
1996	80.6	65.1	75.4	65.8	79.3	73.5	74.6	79	72.1	80.2	74.9	73.4	61.6
1997	78.9	55	75.6	50.5	73.1	73.2	72.6	71.6	62.3	78.3	71.7	72.2	52.7
1998	76.9	60.8	77.9	56.5	72.8	68.9	71.7	67.5	55.2	68.8	77.1	73.3	60
1999	74.6	60.8	85.8	73.4	74.2	77.8	72.1	61.1	62.9	71.4	79.8	71.5	58.3
2000	76.3	69.9	78.9	79	73.5	77	76.6	63	60.7	68.5	82.8	63.1	49
2001	76.5	66.8	71.5	78.1	73.3	80.6	70.2	65	70.1	69.2	86.2	72	33.3
2002	75.6	69.5	68.7	45.4	69.4	81.8	71.3	59.5	72.6	68.2	93.5	73.6	43.6
2003	77.6	64.7	59.2	37.3	63.8	79.9	70.6	61	74.4	65.8	86.9	81.2	41.5
2004	78.7	64.8	68.8	56.2	88.3	80.4	78.8	60.8	69.9	67	93	76.2	47
2005	79.6	54	74.8	63	74.6	85.9	76.9	67.5	64.4	67.6	85.4	70.7	43.1
2006	82.9	41.9	68.1	75.3	80.1	83.9	76.3	62.6	70.9	70.1	70.9	63.4	38.9
2008	83.5	45.3	73	68.7	74.8	87.1	74	59.3	66.1	64.8	65	61.2	33.7
2009	85	43.6	74.2	65.5	71.2	87.9	78.4	63.7	65.1	63.3	69.1	67.5	31

Source: Calculated From Data Compiled from States Financial Statements, (various issues).

## APPENDIX 6

Table 5d: Development expenditure as a percent of total expenditure by states, 1990-2009 (2005=100)													
YEAR	JOHOR	KEDAH	KELANTAN	MELAKA	NEGRI SEMBILAN	PAHANG	PERAK	PERLIS	PENANG	SELANGOR	TRENGGANU	SABAH	SARAWAK
1990	9.7	24	31.2	37	21.7	25.5	31.5	26.9	27.5	38.4	32.7	28.4	41.3
1991	10.9	31.4	22.2	48	20.3	23.9	27.2	29.5	17.6	31	25.5	29	39.9
1992	19.2	34.1	25.3	49.1	13	28.9	27.5	29	20.9	33.1	25	22.9	41.8
1993	17.5	37.4	25.6	41.4	16.2	25.1	32.2	35.6	22.5	24	18.1	23.5	47.7
1994	20.1	40.5	26.1	31.1	13.9	22.4	28.9	28.5	25.7	17.9	22.5	22.5	32.7
1995	19.3	42.1	25.6	25.6	26.4	26.5	22.4	28	30.1	19.9	26.1	26.3	41.4
1996	19.4	34.9	24.6	34.2	20.7	26.5	25.4	21	27.9	19.8	25.1	26.6	38.4
1997	21.1	45	24.4	49.5	26.9	26.8	27.4	28.4	37.7	21.7	28.3	27.8	47.3
1998	23.1	39.2	22.1	43.5	27.2	31.1	28.3	32.5	44.8	31.2	22.9	26.7	40
1999	25.4	39.2	14.2	26.6	25.8	22.2	27.9	38.9	37.1	28.6	20.2	28.5	41.7
2000	23.7	30.1	21.1	21	26.5	23	23.4	37	39.3	31.5	17.2	36.9	51
2001	23.5	33.2	28.5	21.9	26.7	19.4	29.8	35	29.9	30.8	13.8	28	66.7
2002	24.4	30.5	31.3	54.6	30.6	18.2	28.7	40.5	27.4	31.8	6.5	26.4	56.4
2003	22.4	35.3	40.8	62.7	36.2	20.1	29.4	39	25.6	34.2	13.1	18.8	58.5
2004	21.3	35.2	31.2	43.8	11.7	19.6	21.2	39.2	30.1	33	7	23.8	53
2005	20.4	46	25.2	37	25.4	14.1	23.1	32.5	35.6	32.4	14.6	29.3	56.9
2006	17.1	58.1	31.9	24.7	19.9	16.1	23.7	37.4	29.1	29.9	29.1	36.6	61.1
2008	16.5	54.7	27	31.3	25.2	12.9	26	40.7	33.9	35.2	35	38.8	66.3
2009	15	56.4	25.8	34.5	28.8	12.1	21.6	36.3	34.9	36.7	30.9	32.5	69

Source: Calculated From Data Compiled from States Financial Statements, (various issues).

## APPENDIX 7

**Table 7a: Granger Causality Tests**

a).Granger Causal Test: (H0) State Spending does not affect SGDP.

Pairwise Granger Causality Tests

Date: 06/30/12 Time: 09:25

Sample: 1990 2009

Lags: 1

Null Hypothesis:	Obs	F-Statistic	Prob.
TOTEXP does not Granger Cause SGDP	247	1.63262	0.2026
SGDP does not Granger Cause TOTEXP		3.4206	0.0556

Prob > F = 0.202 (Insignificant at the 5% level- Accept HO)

b).Granger Causal Test: (H0) State Spending does not affect State Revenue.

Pairwise Granger Causality Tests

Date: 06/30/12 Time: 09:23

Sample: 1990 2009

Lags: 1

Null Hypothesis:	Obs	F-Statistic	Prob.
TOTEXP does not Granger Cause REV	247	71.0396	3.E-15
REV does not Granger Cause TOTEXP		91.0396	2.E-18

Prob > F = 3.E-15 (Insignificant at the 5% level- Accept HO)

c).Granger Causal Test: (H0) Total Public Capital Expenditure does not affect Private Investments

Pairwise Granger Causality Tests

Date: 06/30/12 Time: 09:25

Sample: 1990 2009

Lags: 1

Null Hypothesis:	Obs	F-Statistic	Prob.
CAPEX does not Granger Cause INV	247	6.21267	0.0133
INV does not Granger Cause CAPEX		0.89072	0.3462

Prob > F = 0.01 (Significant at the 5% level- Reject HO)

d). Granger Causal Test: (H0) State Revenue does not affect SGDP

Pairwise Granger Causality Tests

Date: 06/30/12 Time: 09:26

Sample: 1990 2009

Lags: 1

Null Hypothesis:	Obs	F-Statistic	Prob.
REV does not Granger Cause SGDP	247	0.62245	0.4309
SGDP does not Granger Cause REV		4.24115	0.0405

Prob > F = 0.43 (Insignificant at the 5% level- Accept HO)

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