

Examining the Malaysian State Governments Fiscal Effort: The Case of Forest-Based Revenue 2000-2008.

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Abstract. The paper seeks to examine the effort exerted by the state governments in Malaysia in collecting their forest-based revenue for the period of 2000-2008. The underlying objective is to see whether state governments are using its tax base optimally or not. These measures of tax efforts can later be used as a basis in calculating the amount of intergovernmental grants that the federal government can transfer to the state governments. The method used in order to measure the tax capacity and the tax effort is the representative revenue system (RRS) approach. The paper found that state governments in Malaysia differ significantly in both their tax capacity and tax effort. It is also found that the less developed states seem to be relatively more dependent on the forest-based revenues as compared to the more developed ones.

Keywords: state governments, fiscal effort, fiscal capacity.

1. Introduction

In Malaysia, the state governments rely heavily on federal transfers to finance their expenditures. This situation can be explained by the fact that the state governments have a very a limited sources of revenue as most of the tax bases are devolved to the federal governments. Due to this limited source of incomes, it has become more and more difficult for the state governments to meet their expenditures needs. It can be argued that even though the responsibilities of the state governments remain the same, the demand of the population in term of the quality of public services will increase with the increase the population level of education. Consequently, this mismatch between limited revenue and continuous increase in expenditures has led most of the Malaysian state governments to experience a widening deficit in their fiscal balance. One solution would be to devolve more tax revenues to the state government. Another would be to increase the amount of federal transfers. However, both solutions would require a thorough examination of how well the state governments are using their tax bases. It is therefore the aim of this paper to examine and measure the fiscal effort exerted by the state governments by using the representative revenue system approach. We will use the forest-based revenue as a case study.

The paper is organized as follows. The next section provides a brief review of the literature. Section 3 discusses the data and the methodology used in the study. The results of the estimations will be presented in Section 4. Finally, section 5 concludes.

2. Literature review

In order to measure fiscal need, we need to first have a measure of fiscal capacity. And several measures have been proposed in order to calculate fiscal capacity. However, the most widely used measure was per capita personal income. In 1962, two economists (Selma Mushkin and Alice Rivlin) at the U.S. Advisory Commission on Intergovernmental Relations (ACIR) has introduced a new measure of fiscal capacity - the representative tax system (RTS). The measure was then expanded to include non-tax revenues and it was known as the representative revenue system (RRS). Based on this approach, the ACIR have produced 12 reports during the period of 1962-1993. After ACIR was disbanded, the project was taken over by Robert

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Tannenwald at the Boston Federal Reserve took over the project and published reports approximately every two years in the remainder of the 1990s.

The same method was employed by other authors in different settings. Yilmaz et al. (2002) used the approach to measure the fiscal disparities across the 50 states in the US in fiscal year 2002. The authors find that Connecticut ranks first with the highest representative revenue capacity of \$6,272 per person. Alaska displays the highest representative revenue effort of all states, collecting \$8,537 compared with its capacity of \$5,496; and New York had the second highest, collecting \$6,376 compared with its capacity of \$5,240. The author concluded that differences in state revenue capacity and expenditure need might justify federal intervention in terms of equalizing grants.

RRS approach has also been used to measure tax capacity of local and county governments. Hy et al. (1993) examined property taxes and "combined lesser discretionary revenues"(CLDR) which include a variety of fees and other charges. The results show that Arkansas counties (and the state as a whole) generally underutilize tax capacity. More recently, Chervin (2007) applied the RRS approach to measure fiscal capacity of the counties in Tennessee. Calculated tax effort ranged from a low of 56% in DeKalb County to a high of 133% in Morgan County. Using the same method, Sobarzo (2004) evaluated tax effort and tax potential of the Mexican state governments. The analysis of the results RTS reveals that with some exceptions, both the best and the worst tax performances occur in relatively rich states. The difference, however, is that the best positioned states are those whose capital cities are of medium size, such as Aguascalientes and Baja California Sur. The worst tax performances occur in states characterized by large capital cities such as Mexico City, Jalisco and Nuevo Leon.

3. Data presentation and methodology

The study is based on the land-based revenues collected by the state governments in Peninsular Malaysia for the period of 2000-2008. Land-based revenue constitutes one of the two major sources of revenues of the state governments. The data is sourced from the Yearly Financial Statement of the state government issued by the State Financial Office.

In order to measure the fiscal effort of the state governments in Peninsular Malaysia, we will use the Representative Revenue System (RRS) methodology. This approach was originally developed by the U.S. Advisory Commission on Intergovernmental Relations (ACIR). More precisely, fiscal effort is calculated as

$$FE_{sr} = \frac{TC_{sr}}{TP_{sr}} \quad (1)$$

Where

FE_{sr} = fiscal effort of state s and revenue r,

TC_{sr} = actual collection of state s and revenue r,

TP_{sr} = tax potential of state s and revenue r,

TP_{sr} is defined as

$$TP_{sr} = t_r * B_{sr} \quad (2)$$

Where

B_{sr} = tax base of revenue r in state s

t_r = the national average tax rate for revenue r

t_r is estimated as

$$t_r = \sum t_{sr}^e / S \quad (3)$$

Where

t_{sr}^e = the effective tax rate of revenue r in state s

t_{sr}^e is calculated as

$$t_{sr}^e = \frac{TC_{sr}}{B_{sr}} \quad (4)$$

4. Results and discussion

The results of our estimations are reported in table 1. The table shows that in 2000 the state that has the highest level of fiscal effort is Perlis with an index of 507.36. This is followed by Kedah with an index of 176.20 and Melaka with an index of 169.82. Kelantan, Johor and Pahang are also found to have above average tax effort index. Meanwhile, Penang, Selangor and Negeri Sembilan are three states that have the lowest revenue effort index.

In 2008, Perlis although its revenue effort index has been declining over the years, it continues to be ranked first with an index of 342.12. Kelantan comes second with an index of 211.48 due to the continuous increase in its index. Kedah is ranked third with an index of 160.39. It is noteworthy that Kedah witnesses its index decreasing sharply during the period of 2000-2005 to reach a record low of 41.74 in 2005. Its level of revenue effort starts to increase back in 2006 and in 2008 there is sudden jump of 117 percent in its revenue effort from 73.83 to 160.39. Selangor is another state that witness a drastic change in its revenue effort from 43.62 in 2000 to 112.99 in 2008. Trengganu is the state that has the lowest level of fiscal effort with an index of only 60.98. Perak, Pahang and Penang are the other states that have relatively low level of fiscal effort with an index of 64.16, 72.03 and 72.33 respectively.

Table 1. Forest-based revenue effort

	2000	2001	2002	2003	2004	2005	2006	2007	2008
Johor	109.68	69.41	114.12	106.82	110.96	88.04	126.68	107.69	98.58
Kedah	176.20	69.62	56.78	46.59	69.33	41.74	74.39	73.83	160.39
Kelantan	122.96	145.19	119.97	102.38	110.10	193.43	187.24	197.75	211.48
Melaka	169.82	129.23	172.87	77.97	206.07	157.85	186.54	115.70	138.71
N.Sembilan	46.78	69.99	88.62	127.60	96.26	89.98	77.51	125.46	85.70
Pahang	100.44	115.37	93.03	89.60	103.23	95.21	83.44	69.97	72.03
Perak	73.35	51.63	61.73	49.64	64.24	63.04	68.49	66.79	64.16
Perlis	507.36	589.87	701.65	577.68	448.44	447.90	330.67	327.74	342.12
Penang	44.41	71.75	48.71	43.55	35.69	42.40	143.17	51.12	72.33
Selangor	43.62	54.97	51.96	58.62	89.90	86.63	99.91	125.76	112.99
Trengganu	93.97	121.67	178.86	235.44	140.98	87.48	75.58	100.32	60.98

Figure 1 displays the evolution of the fiscal effort index of the state governments during the 2000-2008 period. The revenue effort for forest-based revenue seems to be more volatile across the 2000-2008 period. As can be seen, states such as Pahang, Trengganu and Perlis witness a drop in their fiscal effort index over the years. For example, the fiscal effort index of Pahang decreases from 115.37 in 2001 to 72.03 in 2008. As for Perlis, its fiscal effort index drops by more than 50 percent for the period of 2002-2008 (from 701.65 in 2002 to 342.12 in 2008). Meanwhile, Selangor, Kelantan and Negeri Sembilan all experience an increase in their fiscal effort during the same period. The highest increase is recorded by Selangor (by almost 60 percent).

Figure 1. Evolution of forest-based revenue effort, 2000-2008

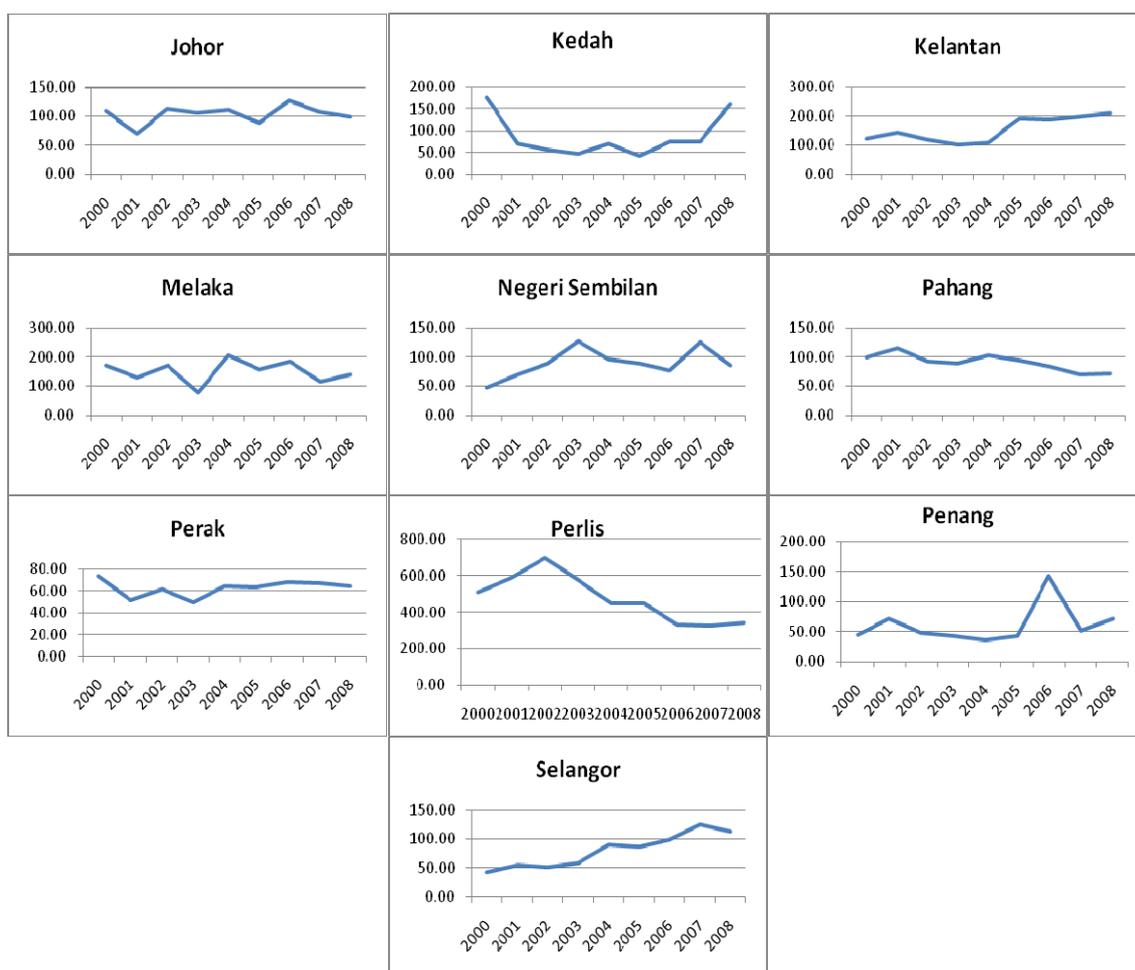


Table 2 summarizes the relationship between level of development and forest-based revenue effort exerted by the state governments in 2008. As can be seen, less-developed states dominate the top three positions in term of tax effort with Perlis in the first place followed by Kelantan and Kedah. As for the developed states, only Melaka and Selangor are found to be in the high tax effort category. The rest of the more-developed states are found to have low tax effort. The fact that less-developed states tend to exert more tax effort in collecting forest-based revenue may be due to the fact that this revenue requires less resources to collect and are easier to administer compared to land tax. As the amount of tax collected will depend on the areas of the forest exploited, state government will be able to collect more revenues if they were to increase the areas transferred to concessionaire for exploitation.

Table 2. Level of development and forest-based effort, 2008 (rank in parentheses)

	Less-Developed	More-developed
High Effort	Kedah (3), Kelantan (2), Perlis (1)	Melaka (4), Selangor (5)
Low Effort	Pahang (9), Trengganu (11)	Johor (6), Negeri Sembilan (7), Penang (8), Perak (10)

5. Conclusion

The main objective of this study is to analyze to what extent the state governments are utilising its tax base. This is achieved by calculating the tax effort using the representative revenue approach. Our results indicate that state governments differ significantly in term of their tax effort. States such as Pahang, Trengganu and Kelantan are found to have the highest level of tax capacity while Selangor, Melaka and

Perlis the lowest. In terms of tax effort, Perlis, Kelantan and Kedah are found to have exerted the highest level of effort. On the other hand, the lowest level of tax effort is recorded by Pahang, Trengganu and Perak. Our results also show that less-developed states tend to exert higher effort in collecting their forest-based revenue as compared to more-developed states. This can be explained by the very nature of forest-based revenue where the amount of tax collected is dependent on the area of forested land contracted to concessionaire for exploitation. The findings of this study imply that state governments should not be treated equally in term of the grant of federal transfers as state governments. The fact that some states are still lacking in their fiscal effort also implies that the increase in tax responsibilities would not necessarily solve the issue of fiscal deficit facing most state governments.

6. References

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