International Review of Business Research Papers
Vol.5 N0. 2 March 2009 Pp. 161-172

Why Poor Regions Remain Poor? Evidence From Malaysia

Hasnah Ali* and Sanep Ahmad**

In Malaysia, the various economic reforms and strategies undertaken by the government since the Third Malaysia Plan beginning in 1971 until the present Ninth Malaysia Plan have not brought about significant convergence in real per capita income and output across the country. Despite all states recording economic growth, the development gaps between regions, states and rural-urban areas remained wide. Moreover a pattern of regional unemployment has persisted, with unemployment rates being consistently higher than the national average in those states with lower than average real per capita income and output. The purpose of this study are firstly to determine why the gaps remained wide that is some poor states stay poor and rich states become richer for the past years and secondly to identify industries or sectors in which the states has had a comparative advantage. Using location quotient analysis, this study utilizing Malaysian data for the period 1970 till 2006. The results suggest that the development gaps between regions and states in the Malaysian economy remained wide due to the fact that economic activities of the poor regions of the east and that of Sabah and Sarawak are concentrated in the agricultural sectors while that of the richer regions in the centre are concentrated in the manufacturing and the services sectors. Similarly the poor states of Kedah and Kelantan are characterized by economic activities concentrated in the agriculture sector while the richer states of Penang and Selangor are characterized by the manufacturing sectors. This finding indicates that Malaysian government economic reforms and development strategies need to be reevaluated and restructured .

Field of Research: Regional Economics, Regional Development Policy

1. Introduction

The focus of regional development in Malaysia is to raise the standard of living and quality of life as well as attain balanced social and economic development across regions and states. Nevertheless, disparity in income between regions and states continues to be a matter of concern. To correct these imbalances is important because according to Hill (2002), regional economic disparities hamper economic growth and that countries with a relatively even spatial distribution of income are likely to grow faster. The existence of regional disparities and the prospect that these inequalities may widen were recognized by the Malaysian government. The five year plans reflect the sincerity of the government to reduce and eradicate the imbalances

* Assoc. Prof Hasnah Ali, Faculty of Economics and Business, University Kebangsaan Malaysia email: hasnah@pkrisc.cc.ukm.my
** Dr Sanep Ahmad, Faculty of Economics and Business, Universiti Kebangsaan Malaysia. Email: nep@ukm.my

between the rich regions and the poor regions. Various efforts and strategies were taken since the seventies to reduce the inequalities. The questions are: How successful is the effort of the government through the various development plans to reduce the disparities between the states and regions? In other words we are questioning whether convergence has taken place. Economic convergence usually refers to a process in which national economies display increasing similarities in the patterns of their performance, in which case this would point to the existence of market forces, which will eventually lead to similar living standards across states.

The various efforts taken since the seventies do not seem to improve the economic convergence of the states in Malaysia. This issue is important from an economic policy point of view. It is used to stimulate a catch-up process for the persistently large gaps between poor and rich states. The catching-up hypothesis suggests the poor states tend to grow by copying the technology from the leader country. Whether poor states tend to converge or diverge is an issue that has attracted the attention of policy-makers and academicians alike for some time. This topic of convergence is important for its policy-oriented implications related to the government economic reforms policy and development strategies. Success or failure in converging the economy would implies the success or failure of the government economic reforms. Thus it is extremely necessary for evaluating whether the economic reforms and development strategies undertaken by the Malaysian government had have achieve the economic goal of reducing the disparities between regions and states. The success would grant the policy-makers for the continuation of the reforms or otherwise the reforms need to be reevaluated and restructured.

The purpose of this study are firstly to determine why some poor regions and states stay poor and rich regions and states become richer for the past years and secondly to identify industries or sectors in which the states has had a comparative advantage. The rest of this paper is organized as follows. Section 2 investigates literature review. Section 3 describes the empirical methodology and research processes. Section 4 shows the regional disparity. Section 5 discusses the empirical result of location quotient. Section 6 concludes.

2. Literature Review

Although a large number of articles and studies contributing to the debate on the causes and consequences of regional inequalities have appeared throughout recent decades, renewed interest is evident in the recent literature. For example, a series of studies attempting to evaluate tendencies of convergence or divergence between countries in the new, internationalized, economic environment appeared (Barro and Sala-i-Martin 1991, 1992, 1995; Levine and Renelt 1992; Sala-i- Martin 1994; Quah 1996; Sala-i-Martin 1997) In Japan for example, several researchers have emphasized the increase in individual income inequality, for example, Tachibanaki (1998), Ohtake (1994, 2000), Ohtake and Saito (1998). Tachibanaki (1998) for example has drawn attention to the increase in individual income inequality. Ohtake (1994) also noted the following four reasons for this increase in the 1980s. First, family income differentials have

grown due to the aging of the population. Second, wage differentials have grown within the same age and between the ages[i] simultaneously. Third, the inequality in asset distribution has increased due to the rising of land prices in the second half of the 1980s. Fourth, progressivity in the tax system has weakened because of the tax reform in the second half of the 1980s. Ohtake (2000) and Ohtake and Saito (1998) have pointed out that the rapid aging of the population has caused an increase in the 1990s.[ii]

Although the increase in individual income inequality is common knowledge in Japan, does the interregional income inequality converge? Following the results of Barro and Sala-i-Martin (1992), individual income converges to the same level. Barro (1991) also says that the levels of GDP per capita in poorer countries have caught up with those in richer countries. For example, Barro (1991) examines the convergence of the GDP per capita from the data of 98 countries. As mentioned Barro and Sala-i-Martin (1992) examines the convergence of the GDP per capita in Japan and the US, and confirms that the level of GDP per capita converges to the same income level even throughout prefectures and states.

Although it is not in the scope of this paper to review the theoretical debate on the convergence hypothesis, it should be briefly mentioned that the controversy surrounding regional convergence arises from the debate of two opposing growth paradigms, the neoclassical growth theory and the endogenous growth theory. The two approaches have substantially different policy implications. In essence, according to the neoclassical perspective, convergence is due to the presence of diminishing returns to capital. Since the convergence process will operate to reduce initial income differentials, policy interventions to correct territorial disparity are viewed as unnecessary. In contrast, according to the endogenous growth theory the presence of increasing returns to scale leads to the possibility of persistent or even widening levels of regional income disparities. The research focus on the convergence hypothesis, therefore, is seen as a means to test these two competing approaches towards economic growth. Yet, the empirical evidence and the theoretical and methodological foundations of this type of analysis have been at the centre of an intense debate.

3. Methodology

The study focused on location quotient (LQ) analysis. The LQ analysis is a technique that mathematically indexes a region's economy to a large reference (national) economy. The method can be carried out easily, quickly and inexpensively. It is computed as follows.

$$LQ = [a_i / b_i] / [A_a / B_i]$$

a_i = total output in sector i in state s
b_i = total output in state s
A_a = total output in sector i in national economy n
B_i = total output in national economy n

The LQ shows on the sector's contribution to the regional economy compared to the sector's contribution to the national economy. If the value is less than one, the sector's share of the total regional output falls short of the same sector's share of total output in the national economy. Otherwise, if the value is greater than one, the sector's share of total regional output exceeds the same sector's share of total output in the national economy. There are14 states in the Malaysian economy. The states are Johor, Kedah, Kelantan, Melaka, Negeri Semblian, Pahang, Penang, Perak, Perlis, Selangor, Terengganu, Wilayah Persekutuan, Sabah and Sarawak. In this paper we divided the economy into 5 regions. Regions are divided according to the followings.

- Northern Region (Kedah, Perlis, Perak and Penang)
- Central Region (Selangor, Malacca and Negeri Sembilan)
- Eastern Region (Kelantan, Terengganu and Pahang)
- Southern Region (Johor)
- Sabah
- Sarawak

Furthermore, the five sectors under study include agriculture, mining and quarrying, manufacturing, constructions and services. In this study we compare the performance of the rich regions and the poor regions namely central region and the regions of eastern and Sabah & Sarawak respectively. The performance of two rich states and two poor states are also analyzed. Rich states represented by Penang and Selangor while Kedah and Kelantan representing the poor. The LQ analysis of these regions is compared to the national economy using the number of employment for the particular sectors. We use secondary data that are compiled from the various government department and Bank Negara Malaysia for the period 1970 till 2006.

4. Regional Income Disparity In Malaysia

Table 1 shows real GDP per capita for various states in the period of 1970 till 2000. In the earlier period, Negeri Sembilan, Perak, Selangor, Sabah and Wilayah Persekutuan registered real GDP per capita that is above the national average. However, in 2000, Malacca, Penang, Selangor, Terengganu and Wilayah Persekutuan were experiencing rapid growths in the GDP per capita which exceed the national average. Sabah has shown a decreasing GDP per capita as the state was the third richest state in 1970 but the third poorest state in 2000. Kelantan remain as the poorest state throughout the period. Meanwhile, Selangor and Wilayah Persekutuan remain the richest states in Malaysia for the past decades. Table 2 shows the ranking by state according to real GDP per capita. The poor state of Kelantan remained last throughout the years while Kuala Lumpur maintained in the top position. Table 3 shows the poverty line index (PLI), incidence of poverty and hardcore poverty. The incidence of poverty and the hardcore poverty are very high in the poor states of Sabah, Terengganu and Kelantan.

5. Results Of Lq Analysis

The LQ analysis for Northern Region indicates that the region has a relatively higher concentration of employment in the manufacturing sector with the LQ values at 1.32, 1.08 and 1.31 in 2003, 2004 and 2005 respectively.

TABLE 1: REAL GDP PER CAPITA 1970-2000 (MALAYSIA = 100)

States	1970	1980	1990	2000
Northen Region:				
Kedah	73	61	59	60
Perak	103	93	79	81
Perlis	72	60	66	66
Penang	96	113	118	143
Central Region				
Melaka	72	75	83	104
Negeri Sembilan	104	101	84	93
Selangor	148	156	142	124
W.P. Kuala Lumpur	176	197	191	205
Eastern Region				
Kelantan	44	60	38	42
Pahang	93	79	82	67
Terengganu	81	71	159	154
Southern Region				
Johor	84	89	91	96
Sabah	118	101	85	65
Sarawak	92	80	88	90
Malaysia	100	100	100	100

While the values of LQ for other sectors like services, construction, agriculture and mining and quarry sectors are less than 1 except for the construction sector in 2004. LQ of less than one means that the Northern Region has a smaller proportion of employment in those sectors (Table 4). Meanwhile the Central Region seems to have a higher concentration of employment in services sector in 2003 compared to other sectors. In 2004, 2005 and 2006, the services sector still contributes higher concentration of employment but in decreasing trend. While Central Region, manufacturing and construction sectors showed an increasing trend from 0.96 and 0.98 in 2003 to 1.12 and 1.01 in 2004, 1.11 and 1.15 in 2005 and reached the values of 1.19 and 1.01 in 2006. The Eastern Region seems less dependent on the manufacturing

sector as the values of LQ are less than 1 for the years studied. Its look like Kelantan, Terengganu and Pahang are still dependent on agricultural sector as the LQ increased from 1.50 in 2003 to 1.57 in 2006. The mining and quarrying and construction sectors showed a decreasing and constant trend for Eastern Region but it is still greater than one.

TABLE 2: RANKING BY STATE ACCORDING TO REAL GDP PER CAPITA, 1970-2000

States	1970	1980	1990	2000
Northern Region:				
Kedah	11	13	13	13
Perak	5	9	11	9
Perlis	12	12	12	11
Penang	6	4	4	3
Central Region:				
Melaka	13	10	9	5
Negeri Sembilan	4	5	8	7
Selangor	2	2	3	4
W.P. Kuala Lumpur	1	1	1	1
Eastern Region:				
Kelantan	14	14	14	14
Pahang	7	6	10	10
Terengganu	10	3	2	2
Southern Region:				
Johor	9	8	5	6
Sabah	3	7	7	12
Sarawak	8	11	6	8

The results also indicate that the Southern Region is dependent on manufacturing sector from 2003 until 2006, with a very high value of LQ. Johor's mining and quarrying sectors increased abruptly from 0.80 in 2005 to 1.28 in 2006 indicating that Johor is attempting to also depend on this sector. Johor's construction sector also shows similar trend. The main contributor for the economy of Sabah, Sarawak and W.P. Labuan is agriculture and mining and quarrying although there is a decreasing trend. For these regions, manufacturing and construction sectors contributes less compared to other sectors in the national economy. The concentration of the industries in the agriculture and services sectors is the central drivers of the poor states of Kedah and Kelantan economies. The results also indicate that these states import much of its mining and quarrying, manufacturing and construction goods in 2000. LQ values for these sectors are less than one (Table 5)

TABLE 3: MONTHLY PLI, INCIDENCE OF POVERTY AND HARDCORE POVERTY, 2004

State	Household Size	Overall Poverty[2] Gross PLI (RM)	Overall Poverty[2] Per Capita PLI (RM)	Overall Poverty[2] Incidence of Poverty (%)[3]	Hardcore Poverty[2] Gross Food PLI (RM)	Hardcore Poverty[2] Per Capita PLI (RM)	Hardcore Poverty[2] Incidence of Hardcore Poverty (%)[4]
Johor	4.3	634	151	2.0	384	91	0.3
Kedah	4.6	654	143	7.0	402	88	1.3
Kelantan	5.2	675	130	10.6	438	84	1.3
Melaka	4.4	650	151	1.8	385	89	0.2
Ng Sembilan	4.2	598	146	1.4	371	90	0.2
Pahang	4.2	609	147	4.0	392	94	1.0
Penang	4.1	615	152	0.3	373	91	neg.[5]
Perak	4.2	589	144	4.9	371	90	1.1
Perlis	4.2	587	140	6.3	367	87	1.7
Selangor	4.6	726	159	1.0	420	92	neg.5
Terengganu	5.0	734	148	15.4	469	94	4.4
W.P.KL	3.9	713	189	1.5	373	98	0.2
Peninsular Malaysia	4.4	661	152	3.6	398	91	0.7
Sabah[1]	5.2	888	173	23.0	503	97	6.5
Sarawak	4.6	765	167	7.5	482	105	1.1
Malaysia	4.5	691	155	5.7	415	93	1.2

Notes: [1] Includes Wilayah Persekutuan Labuan
[2] Based on 2005 methodology.
[3] Based on gross PLI.
[4] Based on gross food PLI.
[5] Less than 0.05 per cent.

For the richer states, the driving force for the economy of Penang, Selangor and Wilayah Persekutuan has been the manufacturing and the services sectors from 1970 to 2006. Construction sector also contributes in the drive of Selangor and Wilayah Persekutuan economy. The results show that the states of Kedah and Kelantan are not performing as well as the national average. On the other hand, the states of Penang, Selangor and Wilayah Persekutuan are performing well above the national average.

TABLE 4: RESULTS OF LQ ANALYSIS

Regional	Sectors	Location Quotient			
		2003	2004	2005	2006
Northern Region	Agriculture	0,73	0,66	0,83	0,86
	Mining & Quarry	0,82	0,43	0,67	0,78
	Manufacturing	1,32	1,08	1,31	1,29
	Construction	0,86	2,83	0,88	0,83
	Services	0,97	0,77	0,96	0,96
Central Region	Agriculture	0,28	0,40	0,31	0,35
	Mining & Quarry	0,52	0,58	0,89	0,62
	Manufacturing	0,96	1,12	1,11	1,19
	Construction	0,98	1,01	1,15	1,01
	Services	1,21	1,12	1,12	1,10
Eastern Region	Agriculture	1,50	1,49	1,55	1,57
	Mining & Quarry	1,82	1,40	1,62	1,22
	Manufacturing	0,62	0,59	0,60	0,59
	Construction	1,23	1,22	1,22	1,23
	Services	0,97	0,98	0,96	0,96
Southern Region	Agriculture	0,85	0,78	0,69	0,69
	Mining & Quarry	0,65	0,63	0,80	1,28
	Manufacturing	1,53	1,55	1,54	1,52
	Construction	0,93	0,89	0,89	1,02
	Services	0,84	0,88	0,91	0,89
East Malaysia	Agriculture	2,18	4,83	2,17	2,11
	Mining & Quarry	1,62	0,78	1,37	1,38
	Manufacturing	0,56	0,26	0,58	0,58
	Construction	0,99	0,39	0,96	0,96
	Services	0,86	0,35	0,85	0,87

6. Conclusions

Malaysia has been experiencing regional inequalities since early years up till now. This study was done by comparing two poorest states of Kedah and Kelantan and two richest states of Penang and Selangor. Using the method of LQ analysis, the results suggest that for the period of 1970 up to 2006, the poor regions of the east and that of Sabah and Sarawak economic activities are concentrated in the agricultural sectors while that of the richer regions in the centre, the economic activities are concentrated in the manufacturing and the services sectors. This is also true of the poor states of Kedah and Kelantan which are also characterized by economic activities concentrated in the agriculture sector, while the richer states of Penang and Selangor, the manufacturing sectors are the main contributors to the economic growth. A crucial implication deduced from this finding is that the Malaysian government economic reforms and development strategies previously undertaken do not seem to improve the economic convergence of the states and regions and therefore need to be restructured.

TABLE 5: RESULTS OF LQ ANALYSIS

State	Sectors	Location Quotient					
		1970	2000	2003	2004	2005	2006
Kedah	Agriculture	1,77	2,31	1,00	0,65	1,20	1,16
	Mining & Quarry	0,09	0,05	0,97	0,01	0,57	0,48
	Manufacturing	0,51	0,72	1,30	0,70	1,22	1,27
	Construction	1,1	0,51	0,84	5,32	0,78	0,80
	Services	0,69	1,11	0,91	0,51	0,91	0,90
Kelantan	Agriculture	1,31	1,69	1,42	1,37	1,40	1,43
	Mining & Quarry	0,02	0,14	0,95	0,04	0,71	0,27
	Manufacturing	0,44	0,44	0,65	0,62	0,59	0,53
	Construction	1,28	0,61	1,24	1,30	1,42	1,46
	Services	1,03	1,36	0,99	1,00	0,97	0,99
Selangor	Agriculture	0,45	0,15	0,23	0,26	0,25	0,20
	Mining & Quarry	0,98	0,1	0,32	0,01	1,08	0,62
	Manufacturing	1,74	1,24	1,16	1,11	1,34	1,18
	Construction	1,39	1,33	1,01	1,03	1,22	1,03
	Services	1,16	1,1	1,14	1,16	1,04	1,14
Penang	Agriculture	0,6	0,09	0,14	0,26	0,18	0,16
	Mining & Quarry	0,02	0,02	0,38	0,02	0,42	0,30
	Manufacturing	1,03	1,39	1,72	1,86	1,83	1,74
	Construction	1,27	0,67	0,69	0,80	0,74	0,66
	Services	1,37	1,07	1,00	0,92	0,97	1,01

The LQ analysis also suggests that for the poor economy to catch up with the rich economy, expansion of economic sectors such as the manufacturing and construction sectors is a way forward to increase income among the population. Thus, new strategies and policies for the future that encourage high-tech agro-based industries and targeted for new industries or business should be on the agenda of the states government of the states concern. As such the government feels that a lot more has to be done to bring down the gap between the richer regions and the poor regions. Restructuring the development strategies is seem to be the priory concerned. Therefore, the Ninth Malaysian Plan, the South Johor Economic Region called Iskandar Malaysia, North Corridor Economic Region (NCER), East Corridor Economic Region (ECER), Sabah Development Corridor (SPC) and Sarawak Corridor Renewal Energy (SCORE) are to narrow the gap between the rich and poor states in Malaysia. Iskandar Malaysia is expected to generate an average rate of growth of eight percent for Johor by the year 2020. Meanwhile, NCER targeted a GDP for the region to grow from USD17 billion in 2005 to USD69.1 billion in 2025, while that of SDC projected a GDP growth from USD5.16 billion in 2006 to USD20.4 billion in 2025. Score on the other hand targeted a GDP of USD34.6 billion for Sarawak by 2030. Hence convergence is expected to take place.

References

Abraham, F. & Van Rompuy P. 1995. Regional convergence in the European monetary Union. *Papers in Regional Science*, 74(2), April 1995

Aoki, T 1992. "Japanese FDI and the Forming of Networks in Asia-Pacific Region: Experience in Malaysia and its Implications", in S.Tokunaga (ed), Japan's Foreign Investment and Asia Economic Interdependence, Tokyo: Tokyo University Press, 73-110.

Armstrong, H.W. 1995. Convergence among regions of the European Union, 1950-1990. *Papers in Regional Science*, 74(2), April 1995

Athukorala, P and J.Menon 1996. Foreign Direct Investment and Industrialization in Malaysia: Exports, Employment and Spillovers*, Asia Economic Journal*, 10(1), 29-44.

Barro, R.J. and Sala-i-Martin, 1992. Convergence. *Journal of Political Economy,* 100: 223-251

Barro R.J, Sala-i-Martin, X. 1991. Convergence across states and regions. *Brookings Papers on Economic Activity* ***I***: 107-182.

Barro R.J, Sala-i-Martin, X. 1991. Convergence. *Journal of Political Economy*, 100: 233-251.

Barro R.J, Sala-i-Martin, X. 1991. Economic Growth. McGraw-Hill, New York.

Barro, R.J. 1991. Economic growth in a cross section of countries. *Quarterly Journal of Economics* 106, 407-443.

Barro, R.J., Sala-i-Martin, X. 1992. Regional growth and migration: a Japan-United States comparison. *Journal of the Japanese and International Economies* 16, 312-346.

Baumol, W., J. 1986. Productivity growth, convergence and welfare what the long-run data show. *American Economic Review*, December 765: 1072-1082.

Ben-David, D. 1996. "Trade and Convergence Among Countries". *Journal of International Economics,* Vol.40:279–298

Chatterji, M., Dewhurst, JHLI. 1996. Covergence clubs and relative economic performance in Great Britain, 1977-1991. *Regional Studies 30(1): 31-40.*

Fagerberg, J., Verspagen, B. 1995. Heading for divergence? Regional growth in Wurope reconsidered. *MERIT Discussion Paper* 95-114.

Funke, M. 1995. Europe's monetary future one market, one money. *Discussion Paper No. DP 1-95*, Centre for Economic Forecasting, London Business School.

Hill, H. 2002. Spatial disparities in developing East Asia: A survey. *Asian Pacific Economic Literature,* 16(1), 10-35.

Levine, R & Renelt, D. 1992. A sensitivity analysis of cross-country growth regression. *American Economic Review*, 82(4), 942-963

Malaysia 2001. Third Outline Perspective Plan *2001-2010*. Kuala Lumpur: National Press.

Malaysia 2006. Ninth Malaysia Plan *2006-2010*. Kuala Lumpur: National Press.

Mandel, E. 1968. The Centenary of Marx's Capitalism. *International Socialist Review*, March-April, pp 50-54.

Levine, R., Renelt, D. 1992. A sensitivity analysis of cross-country growth regressions. *American Economic Review*, 82(4): 942-963.

Molle, W., Boeckhout, S. 1995. Economic disparity under conditions of integration-a long term view of the European case. *Papers in Regional Science* 74(2): April.

Ohtake, F. 1994. Income and Wealth distribution in the 1980s. *Economic Studies Quarterly* 45, 283-306 (in Japanese).

Ohtake, F. 2000. Income differentials in the 1990s. *The Japanese Journal of Labour Studies* 42, 2-11 (in Japanese).

Ohtake, F., Saito, M. 1998. Population aging and consumption inequality in Japan. *Review of Income and Wealth* 44, 361-381.

Sala-i-Martin, X. 1994. Cross sectional regressions and the empirics of economic growth. *European Economic Review* 38: 739-747.

Sala-i-Martin, X. 1997. I just run two million regressions. *American Economic Review* 87: 178-183.

Tachibanaki, T., 1998. Economic Differentials in Japan, Iwanami Shoten (in Japanese).

Quah, DT. 1996. Empirics for economic growth and convergence. *Europeans Economic Review*, 40: 1353-1375.

[i] Iwata (1995) investigated income inequality from the social strata point of view, showing that the income inequality between social strata had grown

[ii] Terasaki (1993) surveyed the empirical studies on income distribution in Japan. Mizoguchi et al. (1978) and Yazawa (1992) studied income inequality in Japan through the 1960-1970s, focusing on interregional income differentials.