

Lee, April 2007



UNRISD

UNITED NATIONS RESEARCH INSTITUTE FOR SOCIAL DEVELOPMENT

“Social policies and private sector participation in water supply – the case of Malaysia”

Cassey Lee Hong Kim
University of Nottingham, Malaysia

prepared for the UNRISD project on
“Social Policy, Regulation and Private Sector Involvement in Water Supply”

DRAFT WORKING DOCUMENT
Do not cite without the author’s approval



The **United Nations Research Institute for Social Development (UNRISD)** is an autonomous agency engaging in multidisciplinary research on the social dimensions of contemporary problems affecting development. Its work is guided by the conviction that, for effective development policies to be formulated, an understanding of the social and political context is crucial. The Institute attempts to provide governments, development agencies, grassroots organizations and scholars with a better understanding of how development policies and processes of economic, social and environmental change affect different social groups. Working through an extensive network of national research centres, UNRISD aims to promote original research and strengthen research capacity in developing countries.

Research programmes include: Civil Society and Social Movements; Democracy, Governance and Well-Being; Gender and Development; Identities, Conflict and Cohesion; Markets, Business and Regulation; and Social Policy and Development.

A list of the Institute's free and priced publications can be obtained by contacting the Reference Centre.

UNRISD, Palais des Nations
1211 Geneva 10, Switzerland

Tel: (41 22) 9173020
Fax: (41 22) 9170650
E-mail: info@unrisd.org
Web: <http://www.unrisd.org>

Copyright © United Nations Research Institute for Social Development (UNRISD).

This is not a formal UNRISD publication. The responsibility for opinions expressed in signed studies rests solely with their author(s), and availability on the UNRISD Web site (<http://www.unrisd.org>) does not constitute an endorsement by UNRISD of the opinions expressed in them. No publication or distribution of these papers is permitted without the prior authorization of the author(s), except for personal use.

Contents

1. Introduction

2. The water sector in Malaysia

- 2.1. Role of water sector in development
- 2.2. Water resources
- 2.3. Design capacity and production
- 2.4. Water coverage
- 2.5. Water consumption

3. Water institutions in Malaysia

- 3.1. Public and private participation
- 3.2. Financial performance in the water sector
- 3.3. Private water companies

4. Social and economic regulation in the water sector

5. Water tariff in Malaysia

- 5.1. Water tariff structure
- 5.2. Tariff revision
- 5.3. Affordability: Lifeline Consumption
- 5.4. Recent regulatory reforms

5. Evidence from household expenditure data

- 5.1. Data source
- 5.2. Equity
- 5.3. Access
- 5.4. Affordability

6. Conclusion

References

1. Introduction

Infrastructure development has been an important component of Malaysia's economic development strategy since the country's independence in 1957. Significant amount of investments were made in the infrastructure sector to enhance and maintain the country's export competitiveness. These investments have also contributed to the eradication of poverty and the elevation of the quality of life in the country. However, despite the progress made in these areas, infrastructure development across and in the different sectors has been uneven.

In the water sector, the more developed states have achieved almost universal access while others continue to struggle with providing access to treated water supply particularly in the rural areas. The inability to recover revenue from water produced (non-revenue water) continues to be a serious problem in the sector. Underinvestment in the sector has also resulted in the deterioration of the water distribution systems.

In Malaysia, water is constitutionally a state matter and some states have opted to privatise their water sector. However, there is currently no consensus on whether privatisation is the solution to water problems in Malaysia. Implicitly, some states continue to support privatisation but others have no plans to privatise their water sector. Many non-governmental organizations (NGOs) continue to vehemently object to privatisation of the water sector. Surprising, despite the significant amount of interest generated by the debate on the efficacy of privatisation, there has been no empirical studies on the issue.

This chapter attempts to shed some light on the impact of privatisation in the Malaysian water sector by employing a quantitative-based empirical analysis. Malaysia is useful country case study on the impact of privatisation in the water sector. There is a variety of forms of institutions in its water sector – full privatisation, partial privatisation and state. The country is also a developing economy, with a significant rural area where access to treated water continues to be serious problem. Thus, the Malaysian water sector provides an opportunity for an empirical test of the impact of privatisation in a developing economy. Finally, this is the first study of the Malaysian water sector using household expenditure data.

The outline of the rest of the chapter is as follows. A brief background of the water sector in Malaysia is presented in the next Section. This is followed by a discussion of water institutions in Malaysia. In the subsequent Section, we examine social and economic regulation in the sector. Next, water tariffs are discussed. Issues of equity, access, and affordability are examined in the following Section using household expenditure data. The last Section concludes.

2. The water sector in Malaysia

2.1. Role of water sector in development

Infrastructure development has made significant contributions to Malaysia's economic growth and development since the country's independence in 1957.¹ Malaysia's success in transforming its economy from one dependent on primary commodity exports in the

¹ See Naidu and Lee (1997) for further discussions.

1950s and 1960s (e.g. rubber and tin) to one based on manufacturing activities is partly due to the government's emphasis on investments in infrastructure development. Foreign direct investment has played a significant role in the development of the manufacturing sector in Malaysia. The availability of efficient infrastructure has been instrumental in attracting foreign direct investment (FDI) in the manufacturing sector.

Infrastructure development has also made important contributions to socio-economic development in Malaysia. Following the racial riots in Malaysia in 1969, the Malaysian government began putting emphasis on solving two problems that were perceived to be the main causes of social instability in the country, namely, poverty and unequal wealth distribution. Thus, the Malaysian government's development policy since the early 1970s has also focused on both poverty eradication and wealth redistribution (between the different races). Both the number of poor households and the incidence of poverty in Malaysia have declined in the past 30 years (see Table 1). The achievements in wealth redistribution remain a contentious issue even though the mean household income levels in all ethnic groups have increased significantly during the same period (Table 1).

Table 1: Poverty and income distribution in Malaysia, 1970-2004

	1970	1980	1990	2004
No. of Poor Households				
Rural	1,203,400	568,500	530,300	219,700
Urban	402,600	97,600	89,100	91,600
Total	1,606,000	666,100	619,400	311,300
Incidence of Poverty (%)				
Rural	58.7	47.8	21.8	11.9
Urban	21.3	17.9	7.5	2.5
Total	49.3	39.6	17.1	5.7
Mean Monthly Household Income (RM, at Current Prices)	1970	1979	1995	2004
Bumiputra	na	492	1,604	2,711
Chinese	na	938	2,890	4,437
Indian	na	756	2,140	3,456
All Ethnic Groups	na	693	2,020	3,249
Gini Coefficient	na	0.51	0.46	0.46

Sources: 1970 poverty figures are from the Fifth Malaysia Plan (p.86), 1980 poverty figures are from the Fourth Malaysia Plan (p.34), 1979 mean household income figures are from Bruton (1992), p.319, 1990 poverty figures are from the Sixth Malaysia Plan, p.32, 1995 mean household income figures are from Eighth Malaysia Plan, p.61, 2004 figures are from Ninth Malaysia Plan, p.330 & p.333, na - not available.

An important aspect of the poverty eradication program in Malaysia is the provision of adequate infrastructure services (such as water and electricity) especially in the rural areas. This emphasis can be seen from the Federal Government's development expenditures in these sectors (Table 2). In the Eighth Malaysia Plan, the Federal Government's development expenditure for the infrastructure sector amounted to about

RM39.7 billion (or USD 10.7 billion).² Of these, 12.1 % were allocated to water supply. These funds were primarily used for capital expenditures such as the construction of dams, new treatment plants, the rehabilitation and upgrading of treatment plants and distribution systems.

Table 2: Infrastructure development expenditures, 1996-2005 (RM million, current prices)

Sector	7 th Malaysia Plan 1996-2000	8 th Malaysia Plan 2001-2005*
Water Supply	2,382.7	4,810.0
Sewerage	665.3	1,666.0
Energy	2,543.6	2,288.8
Transport	20,484.2	30,941.8
Total	26,075.80	39,706.60

Source: Eighth Malaysia Plan

* Allocation

The allocation for the rural water supply program in Malaysia has increased during the period 1976-1990 (Table 3). For the more remote rural areas (especially in Sabah and Sarawak), alternative water supply systems such as gravity flow, tube well and rainwater harvesting were also implemented. One such project under the Eighth Malaysia Plan is the Alternative System of the Rural Water Supply Programme, which benefited 43,000 people in Sabah and 10,000 people in Sarawak.³

Table 3: Rural Water Supply Programme, 1971-2005

Development Plan	Allocation (RM million)	Beneficiaries (Person)
Second Malaysia Plan (1971-1975)	5	NA
Third Malaysia Plan (1976-1980)	147	300,000
Fourth Malaysia Plan (1981-1985)	350	1,800,000
Fifth Malaysia Plan (1986-1990)	1,430	2,022,600
Sixth Malaysia Plan (1991-1995)	NA	1,500,000
Seventh Malaysia Plan (1996-2000)	12	53,000
Eighth Malaysia Plan (2001-2005)*	734	354,000

Source: Actual expenditures*, Third Malaysia Plan, p.377, 379 & 383, Fourth Malaysia Plan, p.337, 339 & 342, Fifth Malaysia Plan, p.471 & 476, Sixth Malaysia Plan, p.340
Mid-Term Review of the Eighth Malaysia Plan, p.258, Ninth Malaysia Plan. p.380

² Based on the exchange rate of RM3.70 = USD1.

³ Mid-Term Review of the Eighth Malaysia Plan, p.258-259.

2.2. Water resources

Malaysia's location within the equatorial zone ensures that the country has a fairly abundant amount of water resources. Average monthly rainfall in the country varies from 190mm to as high as 450mm in some states during the monsoon season. Annual rainfall volume is estimated to be around 990 km³, of which 36 % (or 360 km³) are lost to evapotranspiration.⁴ The country's total amount internal water resource is estimated at 580 km³/year.⁵ Water resources are not equally distributed across the different states in the country. Several inter-state water transfer projects and agreements between the different states have been implemented to deal with the unequal distribution of water resources. Direct extraction from rivers is the most important source of raw water – accounting for two third of raw water supply in the country (Table 4). Second in importance are storage dams. Groundwater is an important source of raw water in some of the less developed states such as Sabah and Kelantan.

Table 4: Raw Water Resources in Malaysia, 2003 (m³/year)

State	Direct Extraction from River	Storage Dam	Groundwater	Total
Kedah	335,531,444	1,766,168	0	357,297,612
Sarawak*	58,035,000	0	0	58,035,000
Labuan	9,938,360	2,975,940	0	12,914,300
Perlis	16,097,000	15,175,000	2,493,000	33,765,000
Pahang	246,827,600	0	0	246,827,600
N.Sembilan	162,716,598	80,134,090	331,785	243,182,473
Sabah	196,094,090	72,381,086	12,064,928	280,540,104
Perak	343,877,960	0	0	343,877,960
Melaka	143,120,024	54,928,877	0	198,048,901
Kuching**	108,040,941	0	0	108,040,941
Sibu**	33,827,631	0	0	33,827,631
Pulau Pinang	278,526,228	29,337,081	0	307,863,309
Terengganu	85,075,726	55,960,145	79,012	141,114,883
Selangor***	909,768,401	939,680,294	0	1,849,448,695
Johor	167,141,518	256,073,108	0	423,214,626
Kelantan	39,364,288	1,742,340	42,165,524	83,272,152
LAKU**	32,500,699	29,751,900	1,678,015	63,930,614
Total	3,186,483,508	1,539,906,029	58,812,264	4,785,201,801

Note: *Excluding the divisions of Kuching, Sibu, and LAKU
 ** Kuching and Sibu are divisions within the state of Sarawak.
 *** Includes Kuala Lumpur and Putrajaya.

Source: MWA (2005)

⁴ FAO, <http://www.fao.org/ag/agl/aglw/aquastat/countries/Malaysia/index.stm>

⁵ Ibid.

2.3. Design capacity and production

Water capacity and production in Malaysia has increased rapidly as a result of the significant amount of development expenditures spent in the water sector. The water supply design capacity and production in Malaysia expanded at a compounded average growth rate of 7.8 % and 7.6 %, respectively, between 1981 and 2003. By 2003, the water supply design capacity and production reached 13,343 mld and 11,054 mld, respectively.

2.4. Water coverage

The water supply coverage in rural and urban areas in the various states has also improved significantly in most states since 1980 (Table 5). Universal access has almost been achieved in most urban and rural areas in the various states in Malaysia. However, there are a few states where the coverage of water supply is low, particularly in the rural areas. The three states with the lowest coverage of water supply in rural areas are Kelantan (57 %), Sabah (59 %) and Terengganu (79 %). These are states with relatively high levels of poverty and a larger share of population living in the rural areas. It is likely that these states may not have the financial capacity to improve water supply coverage.

Table 5: Urban and rural water supply coverage, 1980-2003 (% population)

State	1980		1985		1990		1995		2000		2003	
	Urban	Rural	Urban	Rural	Urban	Rural	Urban	Rural	Urban	Rural	Urban	Rural
Johor	87	28	92	61	96	67	99	96	100	98	100	99
Kedah	90	52	95	58	98	69	100	89	100	97	100	99
Kelantan	58	17	65	30	70	40	85	45	63	48	72	57
Melaka	98	70	100	82	100	98	99	97	100	99	100	99
N.Sembilan	87	66	89	75	96	89	98	95	100	99	100	99
Pahang	92	47	95	65	98	70	98	86	98	89	98	89
Perak	96	55	98	75	99	77	98	84	100	99	100	99
Perlis	90	45	93	50	97	75	99	89	100	97	100	99
P.Pinang	97	78	98	85	99	96	98	98	100	99	100	99
Sabah	99	18	100	38	100	52	87	42	89	60	90	59
Sarawak	87	20	95	33	98	47	93	80	100	92	100	92
Selangor	90	65	95	73	90	85	100	92	100	98	100	99
Terengganu	75	25	85	40	100	54	90	77	84	78	97	79

预览已结束，完整报告链接和二维码如下：

https://www.yunbaogao.cn/report/index?reportId=5_21221

