

## **CHAPTER TWO**

### **LITERATURE REVIEW**

This chapter provides the literature review related to this study. The literature review mainly concentrates on the rationales and modes of water privatisation in Malaysia as well as overseas.

#### **2.1 Water Privatisation History**

In 1872, privatisation of water supply projects was first introduced in Paris, France. After 1850, the provision of piped water in urban areas spread rapidly in Europe and America. In Hawaii, water has been privatised for many years until today (Hutchins, 1946). Water works have been privatised in a number of developing countries in the Middle East, the Philippines, and Latin America (Roth, 1987).

#### **2.2 Rationale of Water Privatisation**

Based on a paper written by Harper (1988), privatisation in the water industry in England and Wales is primarily because of financial interest. The British Government hoped to achieve zero financing in the water industry. Privatisation will be a means of freeing the financing in water industry. This enables the British Government to achieve their overall financial and broader policy objectives.

In emerging market economies of Central and Eastern Europe, many infrastructure projects including water industry were privatised to obtain the financing necessary for investment requirement (Rull and Lethbridge, 1996).

Roth (1987) concluded that the water projects have been privatised with a view of obtaining higher efficiency.

In Malaysia, there is an urgent need to provide an adequate and reliable water supply due to the rapid development over the last decade (Syed Muhamad Hooi and Binnie, 1994). Water supplies are often short of funds even for the minimal maintenance and repairs of water supply systems (Public Works Department, 1997). The reasons are mainly to relieve financial and administrative burdens of the Government. Furthermore, water privatisation also aims for a higher efficiency.

Some of the past studies have justified the rationale of water privatisation mentioned above. Hanke (1993) reported that private enterprises are more efficient and productive compared with public enterprises in the water supply sector. In the 1940s, about 186,000 small capacity tube wells in Pakistan were installed by the private sector. Assessments by World Bank staff (World Bank, 1983) concluded that the private tube wells had been managed efficiently. In addition to that, a study that was carried out in the United States showed that average operating costs per thousand gallons of water produced is 25% lower when water is produced privately rather than publicly (Crain and Zardkoohi, 1978). These have indicated that privatisation led to increased efficiency.

## **2.2 Modes of Privatisation**

In the UK, ten water authorities were privatised by using asset sales of stock in 1989 (Yarrow, 1993). Design, Build, Own, Operate and Transfer (DBOT) are

famous modes of privatisation in Central and Eastern Europe (Rull and Lethbridge, 1996).

Roth (1987) reported that in the twentieth century, the French private water companies became the most advanced, technically and commercially in respect of water privatisation. Under the French system, there are three common water privatisation arrangements namely the management contract<sup>1</sup>, concession system, and leasing contract. Under the management contract, a public authority may contract with a private company to provide services for the operation and maintenance of a water service. Examples of these services include metering, billing and collection of bills. The responsibility of the private company would be limited to that part of the system operated on behalf of the public authority. The customers legally remain clients of the public authority.

Under the concession system<sup>2</sup>, the public authority contracts a construction and operation concession to a single private operator. On termination of the concession, the water system must be returned to the public authority. However, under the leasing contract, the public authority handles the construction of the system by itself but contracts out the operation and maintenance work, collection of charges, and relations with the consumers to a single private operator.

The concession and leasing contract arrangements were mostly implemented in North and West Africa such as Congo, Guinea, Algeria, Madagascar and Tunisia, Italy, Spain and Morocco. More recently, French water companies have extended their service to other countries such as Canada, Japan, Thailand and Malaysia. Table 2.1 shows the examples of some modes of water privatisation in Latin America.

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<sup>1</sup> Similar to the MC in this study

<sup>2</sup> Similar to the BOT in this study.

**Table 2.1 Modes of Water Privatisation**

<b>Country 1</b>		
<b>Santiago, Chile</b>		
Private Companies	Lo Castillo Ltda.	De Agua Manqueue
Mode	Concession Sys. (BOT)	Concession Sys. (BOT)
Concession	Since 1943	Since 1981(30 years)
System	Integrated	Integrated
<b>Country 2</b>		
<b>Guatemala City, Guatemala</b>		
Private Company	De Agua Mariscal	
Mode	Concession Sys. (BOT)	
Concession	Since 50 years ago	
System	Integrated	
<b>Country 3</b>		
<b>Abidjan</b>		
Private Company	SODECI	
Mode	Leasing Contract	
Concession	Since 1967	
System	Integrated	

Source: Roth, 1987

In Oman, BOO or BOT approach is used in expanding the Muscat Water System (Journal of Economic Cooperation among Islamic Countries, 1996). Similar trends have become apparent also in Bahrain, and the United Arab Emirates.

In the case of Malaysia, the Government has privatised its water supply projects mainly through MC and BOT. In future, other modes of privatisation such as profit sharing contract and full privatisation may be considered (Syed Muhamad, Hooi dan Binnie, 1993).

The historical studies generally show that the rationale for water privatisation are mainly due to financial interest and expected increase in efficiency. It also reveals that sale of equity, BOT and MC are the common modes of privatisation in water industry.