Water Sector Privatization In Jordan

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Abstract: Jordan is a semi-arid area characterized by its low rainfall rate, high rate of evaporation, low rate of surface water flow, groundwater depletion and lack of unconventional water resources. Population growth in Jordan is expected to continue at over 3.2% per annum while agricultural intensification is adding to national water burden. For this reason Jordan is facing a water crisis. Renewable resources do not meet present water demands and alternative supplies are being sought (desalination and recycling). Water resources shortage and deterioration of water quality are the major environmental issues in Jordan. A constant focus should be given to these issues relative in relation to the national, social and economic security. Privatization policy constitutes an extension to include the concept of managing a public sector property by a private sector in whole or in part particularly in water sector due to the proven private sector’s efficiency and public sector’s failure with respect of such tasks. To demonstrate the advantages and disadvantages of privatization many methods have been reviewed. It is concluded that privatization in general and of the water sector in particular indicates a fundamental change in the political prospective of the state concerned. It causes an indirect change from providing jobs for the unemployed and other essential services to citizens free of charge or for very low prices towards creating opportunities for profit making and wealth in favor of those contributing to privatization. Privatization, though generally viewed by some economists as reducing the economic role of the government, leads to the expansion of control and organization, as viewed by others.

Key words: Jordan • privatization • water • semi-arid • private sector

INTRODUCTION

Water resources shortage in Jordan and deterioration of water quality is the major environmental issue. A constant focus should be given to water resources being ranked in the first place to the national, social and economic security. The geographical area where the country of Jordan lies in semi-arid climate and is known of its low rainfall rate (50 mm in the desert area and 600 mm in the north-west highland), high rate of evaporation and low rate of surface water flow, underground water depletion and lack of unconventional water resources [1]. Privatization of water and sewerage service is spreading rapidly throughout the world as a tool to add an input for any social or economical activity.

In developing countries, there has been a pressure from donor agencies to privatize water. The development and management of water resources in Jordan presents a challenge for water managers and experts. Privatization is one of the most important strategies which could help to meet the unsatisfied water demand in Jordan.

WATER PROBLEMS

People always believed that water, wherever it is, can never be exhausted and never thought that the next crisis will be related to water deficit and not food issue. Malthus and others in 1798, have predicted that population would increase exponentially and pre-capita food production would decrease the gap between population and food supply would lead to famines, epidemics and wars [2]. The anti-Malthusians argue that technology will save the human race. In a similar way, scientists kept warning throughout the 1970s against the forthcoming coolness of the earth and subsequent threats as a result of accumulating smoke and gases, but those scientists are now predicting something to the contrary, that is, rising earth temperature.

We are talking now about a world food crisis has declined or vanished and it is now the global water crisis that has come to the surface. It is commonly believed that the water crisis and not/ population increase which will cause starvation. Sandra Postil/Director of the World...
Water Policy Project has raised this question, saying: “All past civilizations that were based on irrigation have failed; so, our present civilization going to face the same destiny [3, 4].

Perhaps it is the water crisis and its severe repercussions that prompted such a water expert as Shawn Telly to expect that “water in the 21st century will assume the same situation as that one of the 20th century and that this commodity (water) will determine the wealth of nations and will constitute the difference between greatness and degeneration as a result of the way in which a certain country tackles its water problems”.

The water problems cannot be resolved solely in terms of engineering. In other words, the solution to water problems is not only in the hands of engineers, but requires political, administrative, educational and cultural inputs... because the water issue is a very knotty and complex one [5].

As the water problem is a question of life and death, it follows then that any water privatization program that is socially unfair and a failure could become a threat to stability. That is why any acceptable program has to adopt the utmost degree of transparency, justice and fairness. Privatization paves the way for corruption in most cases. So there should be an integration of social justice and economic principles and such integration is the desired objective. Rain, springs, streams, rivers, lakes, underground and sea water is a public property and not simply an ordinary commodity. It is a human right which governments should secure and only related water operations may be subjected to the absolute market economy. Privatization solely based on economic principles that does not take social implications into consideration is transferring the responsibility for water costs from governments to consumers directly [6].

In other words, water scarcity and water related corruption have a negative impact on economic prosperity, food security, social stability and regional and international peace. The world has 214 rivers, each crosses two or more countries, as Postil said. Perhaps it is this particular important aspect that led the Sri Lankan Water Executive Director to describe water as the earth’s blood. Leonardo de Vinci compared human arteries to rivers on Earth, the pulsing of blood through the body to the flow of mountain streams and arterial bleeding to river flooding.

So, it is feared that society may be divided into water-oriented classes according to the quality of water each class drinks or uses. In this sense, water comes from the public network, osmosis and underground water bottles of a high quality. Such division of society will become an actual reality if the social dimension of water scarcity and privatization is not taken into consideration.

CURRENT SITUATION OF WATER AND RESOURCES IN JORDAN

Available water resources are the main factor in determining the irrigated area. These resources consist of traditional surface and underground water resources as well as treated waste-water. The surface water, resources are spread over fifteen aquifers with an aggregate permanent flow of around 495 million cubic meters (MCM) per annum. Total flood-water volume reaches around 326 MCM per annum. Thus the total available resources come to about 821 MCM per annum. Yarmouk aquifer is the most productive since it contributes to 51% of the total surface water resources [7].

The underground resources exist in twelve aquifers. The most important are: Yarmouk, Anman, Zarqa, Dead Sea and Disi aquifers. The average extracted from renewed aquifers is around 275 MCM. An average of 143 MCM can be pumped from unrefilled aquifers (Disi, Jafra and Azraq). Agriculture consumes about 610 MCM of water representing 68% of the total water resources currently used for all sectors. Underground water contributes to about 358 MCM of the total water irrigation. The rest of consumption comes from surface water, springs and treated waste-water [7].

For development purposes, Jordan has been divided into three major regions beginning in the west with Ghor of Jordan, extending to the south of Lake Tiberias up to Gulf of Aqaba, the high land region and Badia region.

In the Heights and Badia regions, the uncontrolled expansion of agriculture has led to the depletion of many aquifers which consequently resulted in a remarkable drawback in the level of the underground water and in a declined quality. Grave continuous pumping will lead to the loss of many aquifers. In the Jordan valley, the problem is reflected in the irregular water supply and variety of its resources. Since Jordan is a country which suffers from water deficits, consumption of water from main aquifers requires a fundamental solution. In this regard, it is noted that there is a lack of information relative to controlling irrigation water and to studies on the reuse of whole treated waste water as well as low-quality water. As the uses of water in the Jordan Valley and Heights, it is noted that water prices do not give motivation to ration water consumption. The cost of water is considered very low in agricultural inputs which are dependable in the first place on the availability of this element.
PRIVATIZATION

Privatization has been a world-wide trend since the 1980s. In the first wave, privatization has focused largely on industrial and financial firms, especially in competitive sectors. Infrastructure privatization followed in a second wave from the late 1980s and peaked up in the late 1990s. There has been a recent slowdown in infrastructure privatization, coupled with some high-profile project cancellations. A third wave in social sectors and some formerly core government administrative services started a few years ago and are underway [8].

Privatization is to transfer a public proprietorship to a private sector. This definition does not cover all aspects or concepts of privatization, which we advocate in water sector, since this concept does not apply, for example, on management contracts which are one of the privatization aspects. In the light of the current situation in water sector, this definition should be modified so that privatization is defined as a relinquishment by a public sector of its management of water sector or public property to a private sector or to share management or parts of that sector with the latter. This definition constitutes an extension of privatization to include the concept of managing a public sector property by a private sector in whole or in part particularly in water sector due to the proven private sector’s efficiency and public sector’s failure with respect of such tasks.

Table 1 shows the different kinds of privatization and their connection with public and private sectors. The major three types in order of increasing risk transfer to private operator are management contract, lease contract and concession contract.

All these structures may involve public-private partnerships, where operating company is a joint venture between the public owner of the assets and the private company which has day-to-day management control, where it, does not have majority of shares.

MOTIVES FOR PRIVATIZING WATER & SEWAGE SECTOR

The motives which make countries apply privatization to some of their services sectors in general and water and sewage sector in particular, can be divided into two parts: general motives and special motives.

General motives: The major changes in the economic conditions and the role of the international financial institutions pushing the developing countries in particular to adopt a privatization policy, aiming at the following:

- To give the chance to the private sector to lead the economic development because of this sector's management and technical ability as well as its financial capability. This sector has proven an ability that could be described at least as the ability that surpasses to a great deal the ability of the public sector, since the public sector has proven its failure to manage its corporations and has carried on the bureaucracy of management and failed to cope with the developments and to perform public services efficiently. Hence, these have led to the exhaustion of the public property because of the lack of control.
- To establish a sort of competition among the private sector's institutions for provision of best services which in turn will have an effect on upgrading the economic growth in the field of water and sewage sector.
- To give people the chance to share in the proprietorship of water and sewage sector.

Table 1: Kinds of privatization and their connection with public and private sectors [9, 10]

<table>
<thead>
<tr>
<th>Kind of privatization</th>
<th>Fixed property owner</th>
<th>responsibility</th>
<th>Capital investment</th>
<th>Trading risks</th>
<th>Contract period (Year)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Service contracts</td>
<td>Public sector</td>
<td>Private &amp; public sectors</td>
<td>Public sector*</td>
<td>Public sector</td>
<td>1/2-2</td>
</tr>
<tr>
<td>Management contracts</td>
<td>Public sector</td>
<td>Private sector**</td>
<td>Public sector</td>
<td>Public sector</td>
<td>3-5</td>
</tr>
<tr>
<td>Lease contracts</td>
<td>Public sector</td>
<td>Private sector</td>
<td>Public sector</td>
<td>Public &amp; private sectors jointly</td>
<td>8-15</td>
</tr>
<tr>
<td>Concession contracts</td>
<td>Private &amp; public sectors</td>
<td>Private sector</td>
<td>Private sector</td>
<td>Private sector</td>
<td>25-30</td>
</tr>
<tr>
<td>BOT*** contracts</td>
<td>Private &amp; public sectors</td>
<td>Private sector</td>
<td>Private sector</td>
<td>Private sector</td>
<td>20-30</td>
</tr>
<tr>
<td>Diversification contracts</td>
<td>Private sector</td>
<td>Private sector</td>
<td>Private sector</td>
<td>Private sector</td>
<td>Unlimited</td>
</tr>
<tr>
<td>Parastatals</td>
<td>Public sector</td>
<td>Public sector</td>
<td>Public sector</td>
<td>Public sector</td>
<td>Unlimited</td>
</tr>
</tbody>
</table>

* A public sector: When a company’s shares are wholly owned by a government or by a public sector.
** A private sector: When a private sector owns part of shares of such company.
*** BOT: Build-Operate-Transfer is a form of project financing.
To eliminate the public sector's financial burdens and to assign these funds for other services undertaken by the public sector this consequently will lead to decrease the budget's deficit.

- To attract foreign capitals to invest in sectors intended to be privatized.
- To improve and transfer technical, financial and administrative know-how.

**Special motives:** The Water Authority was established in 1984 as an independent corporation. Soon, it found itself as a government corporation subject to all strict governmental regulations. This resulted in a deteriorated financial situation and a large number of civil servants and employees associated with a decline in performance. It became a bureaucratic corporation (has around 8000 employees, i.e., 11 employees per 1000 subscribers, being aware that the international number in this respect is 4-6 employees per 1000 subscribers). It also has an accumulated financial deficit of 500 million Jordanian Dinars and an annual loss of 37 million Jordanian Dinars in 1999 alone, which incurred Jordan GNP a total loss of 3% [11]. Because water and sewage sector is a Water Authority's sector that provides services of this sector and if we consider the Authority as a commercial institution, it will be considered a bankrupt institution.

The reasons for seeking a private sector to manage water and sewage sector in Jordan can be summarized as follows:

- To find out financial resources for developing and improving water and sewage sector.
- To improve the services and efficiency of water and sewage sector.
- To improve the services rendered to the subscribers of water and sewage sector.
- To reduce water losses in a way better than public sector.
- To improve and upgrade the production and efficiency of water and sewage sector.
- To reduce the public sector's financial burden.
- To shift into market economy.

**Accomplishments of water authority in privatization sector:** The growing demand for the water due to the rapid population growth and the related economic development puts increasing pressure on institutions involved in water management to improve their efficiency so as to satisfy the basic needs of the different user groups and to avoid negative impact on the national economy. In 1997, the Government of Jordan embarked upon privatization program. The Ministry of Water & Irrigation has achieved the following accomplishments in the field of private sector's partnership:

- A contract was concluded with LEMA company which is a consolidation between the French Company “Lyonnaise Des Eaux”, the USA company “Monogtromery Watson” and the Jordanian company “Arabtech Jordaneh” to manage the operational affairs of water and sewage in the Capital governorate of the Metropolis. This includes the management of water resources, their operation and distribution and the management of citizens’ subscriptions and accounting as well as networks maintenance, employees training and management of supporting services.
- Currently, a tender similar to that of the Governorate of the Metropolis covering north governorates, i.e., Irbid, Jerash, Ajloun and Mafraq, is in process of preparation.
- A tender was announced to implement Kherbit Al-Samara/sewage project on a BOT basis.
- An announcement of the government’s intention to seek a private sector partnership for the conveyance of Disi water to the south and center of the Kingdom on a BOT basis has been advertised in the newspapers. The aim of this proposed project is to face deficit in domestic water. Table 2 shows water supply, demand and deficit during the period from 1995 to 2020 in million cubic meters.

**Privatization advantages:** The scarcity of water resources has been a shaping factor for the structure of the Jordanian economy. It has limited the development of sectors with high specific water consumption (like agriculture) and oriented the economy towards the service sector. Privatization the water sector in Jordan aims at orientation of the Jordan's economy more towards private sector participation which has the following advantages:

<table>
<thead>
<tr>
<th>Year</th>
<th>Supply (MCM/yr)</th>
<th>Demand (MCM/yr)</th>
<th>Deficit (MCM/yr)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1995</td>
<td>882</td>
<td>1,104</td>
<td>-222</td>
</tr>
<tr>
<td>2000</td>
<td>960</td>
<td>1,257</td>
<td>-297</td>
</tr>
<tr>
<td>2005</td>
<td>1,169</td>
<td>1,407</td>
<td>-238</td>
</tr>
<tr>
<td>2010</td>
<td>1,206</td>
<td>1,457</td>
<td>-251</td>
</tr>
<tr>
<td>2015</td>
<td>1,225</td>
<td>1,550</td>
<td>-325</td>
</tr>
<tr>
<td>2020</td>
<td>1,250</td>
<td>1,658</td>
<td>-408</td>
</tr>
</tbody>
</table>
• Activate a free competitiveness among economic projects and to lower production costs and prices.
• Redistribute the income, in case of selling and partial ownership, to staff working in projects.
• The government will devote itself in management, setting up policies and legislations and supervision, control and organization.
• Develop local capital markets, attract investors and create new investment opportunities.
• Increase the government’s revenues by sale to corporations and investing privatization funds in the fields of development.
• Eliminate the subsidies granted to some corporations that had been sold or privatized.
• Upgrade the international confidence in the national economy by means of integration with the world economy and attracting a strategic partner.

Privatization disadvantages: There is a significant difference between public and private providers in the water sector. Private sector provides 9% of the world population [1-4]. Privatization is strongly opposed in some developing countries. The following are the most important disadvantages:

• The handing over of the economic power to the private sector which sometimes represents a political influence and makes alliance with the ruling authority seeking its interest, will lead to accumulation of wealth in the hands of few individuals or private companies.
• The government’s quitting of the economic activities and services will negatively affect the standing of the regime.
• When public production corporations are privatized, the government will be deprived from a major resource which contributes funds to the general budget.
• After privatizing public corporations, social and negative impacts will come out because of cutting down labor force or laying off a large number of laborers, spreading unemployment and instability of jobs among employees.
• The apprehension that the foreign companies and capitals will dominate the government’s economic capabilities particularly in case of privatizing strategic public corporations.
• The apprehension that inflation, i.e. rise in consumer prices, will take place since the target of the private sector is to achieve maximum possible profits.

• Administrative and financial corruption will become prevalent in companies especially small shareholders.
• In many developing countries, there was no transparency in the selling of public institutions. In fact, they were sold for cheap prices to government’s intimate friends and favored persons.

JUSTIFICATIONS OF WATER SECTOR PRIVATIZATION

There are specific reasons for any given water privatization. The most common are:

• Obtaining a capital for new investments.
• Improving administration and efficiency and to upgrade productivity and service levels.
• Expanding services network and to cover more sectors of consumers.
• Attenuating the government’s financial burdens.
• Elimination of subsidy.
• Financing needs for investment.

OBSTACLES HINDERING WATER PRIVATIZATION

Privatization of water sector in developing countries is strongly opposed by opposition political parties and civil society groups. There are many obstacles that hinder privatization. The following are some obstacles:

• Water is a public commodity and controlling this commodity will have political and social targets. It is believed that the government is the party that should possess water resources and should not give up its control on prices and distribution.
• It is feared that water prices for consumers will escalate.
• The private sector will not afford risk and will not adhere to laws and regulations.
• The absence of legislations that regulate the relationship between the government and the private sector.

OPTIONS OF WATER SECTOR PRIVATIZATION

World Bank studies indicated that there are many options for the partnership of the private sector in the water sector. These options have been divided into two major groups in terms of restricting ownership to the
Table 3: A comparison among the most important options of privatization Pattern

<table>
<thead>
<tr>
<th>Kind of privatization</th>
<th>Fixed property owner</th>
<th>Capital investment</th>
<th>Trading risks</th>
<th>Contract period (Year)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Service contracts</td>
<td>Public sector</td>
<td>Public sector</td>
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<tr>
<td>Management contracts</td>
<td>Public sector</td>
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<td>3-5</td>
</tr>
<tr>
<td>Lease contracts</td>
<td>Public sector</td>
<td>Public sector</td>
<td>Public sector jointly</td>
<td>5-8</td>
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<tr>
<td>Concession contracts</td>
<td>Public sector</td>
<td>Private sector</td>
<td>Private sector</td>
<td>25-30</td>
</tr>
<tr>
<td>BOT contracts</td>
<td>Private &amp; public sectors</td>
<td>Private sector</td>
<td>Private sector</td>
<td>20-30</td>
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<tr>
<td>Divestiture contracts</td>
<td>Private &amp; public sectors</td>
<td>Private sector</td>
<td>Private sector</td>
<td>Unlimited of Feed in license</td>
</tr>
</tbody>
</table>

Source: (MWI[11])

public sector or being common between the two sectors. Each group includes four options.

Table 3 shows a comparison among the most important options of privatization patterns and the relationship between the private and public sectors as to responsibilities assumed by each option.

There are parties who oppose the current trends to privatize water and sewage sector in Jordan on the grounds that water is a strategic commodity and must be provided to citizens through public institutions. They consider that structural reforms could have been implemented during the period of the public sector domination and the solution for all problems will not be by means of privatizing this sector.

The Ministry of Water & Irrigation should have implemented a reform and restructuring policy without resorting to the private sector, whether local or external. Actually, before implementing the new reform policy, improvement has begun and deterioration stopped. The administration of the Ministry of Water & Irrigation is held accountable for the slack in remedying troubles since it offered justification to those who called for privatization of the sector. It is a mistake of the officials and not the regime. The governments were able to manage this sector, increase productivity and reduce loss of water on the same level as that of the private sector if the officials and administrative leaderships were properly selected and incentives given to the staff.

CONCLUSIONS

The water sector has always been the responsibility of governments and public sector bodies throughout history under the pretext that people need to be provided with water almost free of charge. Prophet, may God pray and greet him, said: “People are partners in three items: water, grass and fire”. That responsibility remained one of the basic tasks of the state until the mid 1980s whereas privatization which was gradually introduced and then fully adopted in this sector. Methods which have been reviewed demonstrate the following:

- Privatizations in general and of the water sector in particular indicate a fundamental change in the political prospective of the state concerned. It is an indirect change from providing jobs for the unemployed and other essential services to citizens free of charge or for very low prices towards creating opportunities for profit making and wealth in favor of those contributing to privatization.
- Privatization constitutes a departure from nationalization policies which have gained ground after independence towards denationalization or privatization. It is a departure from dismissing foreigners who used to be unfair and dominated and robbed resources towards implopping the return of those foreigners for investment, i.e., robbing the wealth willing on the part of such nation. On the other hand, it is a source of consolation that previous colonizers themselves welcome investments in their former colonies, but how much is the difference between the whale and the fish.
- Water problems including water related crimes and corruption in countries around the world are generally the same, but may differ in terms of degree and severity.
- Water market and economy is proceeding along the way of becoming one of the major markets and promising investment opportunities in the entire world over the next thirty years. This is indeed one of the main victories of privatization and globalization spearheaded by the World Bank primarily in favor of British and French companies in the first phase.
- Privatization, though generally viewed by some economists as reducing the economic role of the government, leads to the expansion of control and organization, as viewed by others.
REFERENCES


