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Regulating water services for the poor: The case of Amman

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ABSTRACT

Jordanian authorities have achieved a nearly one hundred percent connection rate to municipal water supply services in urban areas. Following this unusual achievement for a lower-income country, a private management contractor was introduced to the capital city Amman, along with a form of economic regulation. However, water rationing due to extreme water scarcity, amplified by high and irregular population growth, disproportionately affects the city's low-income households. This paper investigates the status of water supply service and regulatory arrangements with respect to poor and vulnerable consumers who were targeted in a household survey in June/July 2005. It identifies specific regulatory challenges which were not within the remit of or addressed by the acting quasi-regulator and the water authorities. In its extremes of connection coverage, water scarcity and population, the management of water supply in Amman presages the pro-poor water service challenge of many, even lower income, economies irrespective of the extent to which they may achieve the access targets of the Millennium Development Goals.

1. Introduction

A growing disparity between water resource availability and the demands of a steadily growing population presents a formidable challenge to water service providers in the Hashemite Kingdom of Jordan. The country's limited and vulnerable water resources have steadily declined to a present annual per capita share of approximately 160 m^3 (GTZ and MWI, 2004) for a total population of 5.48 million which is growing at an average annual rate of 2.8% (DOS, 2004). This places the Kingdom in the category of absolute water scarcity, and has rendered water shortages a permanent feature of domestic water supply. Recent reports describe how rainfall during the most recent (2008) rainy season represented only 57% of the long-term average and that by 'declaring that the government is "discussing" the option of increasing the prices for domestic water the Jordanian Minister of Water and Irrigation 'caused havoc in Jordanian society' (EMWIS, 2008).

In recognition of the crucial importance of water for the country's socio-economic development the Government of Jordan (GoJ) set out strategic sector goals in its National Water Strategy (MWI, 1997). The strategy and its associated policy documents are embedded in a wider structural reform programme, which is marked by a shift towards a market-based economy. GoJ recognises that continued economic recovery and future growth depend on a redefinition of the role of government, and private sector participation (PSP) has been increasingly sought to improve efficiency in the public service sectors.

Whilst other utility sectors, notably electricity and telecommunications, have successfully involved private partners, the Jordanian water sector is adopting a more cautious approach towards PSP. Despite the extreme water scarcity, authorities have already been successful in providing a household water connection to almost 100% of the urban population. Moves to introduce economic regulation as a corollary of PSP in urban water services in this lower-middle income country[1] thus add an interesting perspective to the set of ten developing country city cases investigated under the DFID funded research project entitled "Regulating Public and Private Partnerships for the Poor"[2] (Franceys and Gerlach, 2005).

1.1. Conceptual framework

Economic regulation is the art of balancing, on behalf of society as a whole, the many varied, and occasionally conflicting, requirements for sustainable water services for all. Economic regulation is not necessarily an institution but is at heart a process to deliver a more objective and transparent view on the efficient costs and benefits for all segments of a target population relative to the potential revenue and funding streams for water and sanitation. This

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[1] GDP per capita at PPPUS$ rates for 2002 were quoted at $4130 for the country, rising to $5100 for the capital city Amman (Ministry of Planning, 2004).

[2] The research project "Regulating Public and Private Partnerships for the Poor" examines the economic regulation of urban water services in ten metropolitan cities in Africa, Asia and Latin America.

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is to inform better decision-making in an area where a provider, public or private, is trying to achieve social and economic benefits through the monopolistic delivery (and sale?) of goods which have both private and public characteristics. Networked water and sanitation is necessarily monopolistic because of its 'capital intensity' that is the exceptionally high ratio of fixed assets to revenue, but which delivers a lower unit cost than alternative means of transporting water. The process of economic regulation takes the place of competition which might otherwise have delivered targeted service improvement and incentivised cost efficiency through market mechanisms. Economic regulation is also required to facilitate an appropriate degree of economic and social justice for a product which is essential for life but which market mechanisms would struggle to deliver.

Introducing economic regulation of water services, most often as a result of new private sector involvement, is therefore potentially an effective mechanism to institutionalise a commitment to universal service and consumer protection whilst also promoting incentives for efficiency and effectiveness. The extent to which benefits for vulnerable members of society can be realised depends on regulators recognising and addressing the realities faced by the poor, often a step beyond their initial remit.

The growing literature on infrastructure regulation in developing economies continues to focus on evaluating regulatory performance in the context of service privatization or commercialization. Most academic work so far has concentrated on the telecommunications and power sectors. The comparatively sparse literature on water services regulation in low and middle-income countries tends to focus on private sector involvement, and there in particular on a number of high profile regulatory failures (e.g. Mitlin, 2002; Nickson and Vargas, 2002; Nickson and Franceys, 2003). Laffont (2005) provides the first comprehensive adaptation of the theoretical framework provided by the new regulatory economics to account for the institutional characteristics of developing economies, strongly encouraging further empirical research into regulation in the LMIC context. Parker et al. (2005) also find inadequate existing knowledge, identifying a need for further research from their review of the development literature.

The academic literature has been slow in responding to these calls for in-depth analysis. In the water sector, donor-driven research on pro-poor contracting reflected the recognition of the fact that the efficiency gains potentially realized through privatization do not automatically deliver benefits for the urban poor (WSP and PPIAF, 2002; Stallard and Ehrhardt, 2004), and the practitioner-based regulation literature followed suit. Smith (2000) emphasises that an effective pro-poor regulatory strategy must prioritize service expansion and cost minimization in order to remain sensitive to the affordability concerns of the poorest. Recent guidance for policymakers and regulators by Trémolet and Hunt (2006) summarizes the accumulated knowledge, focusing on practical aspects of regulatory design. The broad consensus is that the key to meeting the challenge lies in matching customer needs and preferences with relevant and accessible services.

Academic research has explored the implications of universal service aspirations in LMICs in terms of financing the necessary network expansions (Clarke and Wallsten, 2002; Estache et al., 2004). The findings highlight the central role of adequate pricing policies to leverage the required investment. Many authors critically examine the links between regulation, tariff design options, prevailing subsidy mechanisms and their impact on access and poverty (Boland and Whittington, 2000; Weitz and Franceys, 2002; Chisari et al., 2003; McIntosh, 2003). By contrast, the existing literature offers little insight into the relationship between regulation and alternative providers, and has only begun to analyze the effectiveness of regulation in incorporating the voice of poor consumers in the design of pro-poor responses to the access challenge.

1.2. Fieldwork

This paper examines how regulatory issues of an economic and social nature are handled in the context of urban Jordan by critically examining the case of the Greater Municipality of Greater Amman and the (national) quasi-regulatory agency, Programme Management Unit (PMU). The findings presented are based on the analysis of fieldwork carried out in Amman between summer 2004 and summer 2005. Semi-structured interviews with key stakeholders in the water sector representing various levels of government, the then private operator LEMA, international development agencies and civil society were complemented by a survey of households in selected poor neighbourhoods and small-scale surveying of private water tanker operations. Surveys were scheduled to coincide with the summer rationing programme in 2005 to capture the full impact of water rationing on low-income families.

The household survey was intended to capture a variety of low-income settings within the boundaries of the Greater Amman service area. Following identification of the poorest administrative areas of Amman (Amman downtown, Sahab, Marka, Mowaker, Umm Pasaten, Wadi Seer, El-Jama'a),[3] 10 neighbourhoods were selected to achieve a mix of areas in the lower income Eastern and Southern regions and refugee camps.

A questionnaire comprising a mix of open and closed questions (total number 39) was designed to investigate basic characteristics of the household, municipal water service and water use, the household's response to water rationing in terms of coping strategies accessed (storage facilities, private vendors and water conservation measures) and customers' perceptions regarding the quality of service and necessary/desired improvements.

Ten interviews were conducted in each of: Sweileh Jabal Shanki, Wadi Al-Seer, Jabal Al-Hussein, Al-Kwasmaih (Al-Quwaysimah), Al-Ashrafyah, Al-Wahdat, Al-Nasr, Al-Manarrah, Marka Shamalieh, Marka Janobyah by an independent local socio-economic researcher. Complex statistical evaluation methods were not applied to the resulting data as the research required only indicative results for which the percentages described below proved adequate. A level of response saturation was also noted within each group of ten households, justifying this approach within a limited budget.

2. Contract administration: moving towards regulation in a PSP context

2.1. Introduction: Greater Amman municipality

Amman, the capital city of Jordan and focus of this case study, grew from no more than an agricultural village in the early 1900s to a metropolitan centre which today accommodates close to half of the Jordanian population. The "city of the seven hills" has seen a dramatic expansion as a result of sudden population influxes which overshadowed natural growth and urbanisation. Thousands of refugees, displaced persons and returnees affected by the continuing conflict in the Middle East were attracted by Jordan's strategic position in the region and account for almost one quarter of total population growth in the Kingdom. The greatest influxes were experienced as a result of the Arab-Israeli wars in 1948 and 1967, the 1991 Gulf War and the invasion of Iraq in 2003. In 1987, Amman City merged with smaller neighbouring towns and villages to form the Municipality of Greater Amman, which today spreads over more than 20 hills, covering 7579 km^2 (DOS, 2004).

[3] The source of this information cannot be disclosed as it is considered "highly confidential". The difficulties experienced by the Jordanian field researcher in obtaining this information may serve as an illustration of the complex relationship between the administration and the lower-income population.