Organisational design for improved performance of urban water utilities in developing countries

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ABSTRACT

Unclear roles and responsibilities and other factors related to organisational design, have been found to be some of the common barriers to providing good urban water services in developing countries. A comparative study commissioned by the World Bank in 2013 assessed how five well-performing water utilities located in different parts of the world aligned their organisational structures and management systems with their strategies and the operating environment. Lessons therefrom can be adapted for organisational (re)design of water utilities, for their improved performance, subject to enabling factors in the individual organisation's operating environment.

1. Introduction and background

Most urban water service providers in developing countries, many of which are publicly owned water utilities do not provide adequate levels and quality of water services, a situation that severely constrains sustained growth and poverty alleviation in the urban areas (Misra and Kingdom, 2012). A publicly owned utility may be defined as an organisation that is majority-owned and controlled by government, and (i) a government ministry/department; (ii) a statutory body; or a government-owned private company. Common barriers to providing good levels of service are unclear roles and responsibilities, limited autonomy and accountability, low levels of cost recovery, lack of a commercial and customer orientation, and weak professional capacity (Baietti et al., 2006).

In 2015, more than 660 million people in the world were using unimproved water supply sources, about half of which lived in sub-Saharan Africa. Although access to improved drinking water sources is higher in urban areas of least developed countries (86% population coverage, compared to 62% in rural areas in 2015), only 32% of the urban residents have access to piped water supply to their premises, with 30% using other improved water sources such as public taps or standpipes, tube wells or boreholes, protected dug wells, protected springs, and rainwater collection, and the rest (38%) using unimproved water sources (UNICEF and WHO, 2015, 2017).

A study of eleven urban water utilities worldwide carried out by the World Bank in 2005 identified the following key attributes of well-performing public water utilities (Baietti et al., 2006):

- Autonomy. The degree of independence from external interference, exercised by water utility managers in making important decisions;
- External accountability. The water utility's obligation to account for performance results to the government, the owners;
- Internal accountability. The utility's management and staff need to be held accountable for achieving organisational performance targets;
- Customer orientation. A business philosophy that enables a utility to listen to their customers and work to better meet their needs;
- Market orientation. A management philosophy that introduces market-style incentives and promotes greater use of markets for the delivery of water services; and
- Corporate culture. A combination of corporate values, vision, mission, as well as moral, social, and behavioural norms that inspire staff and managers to excel.

All these attributes are related to Organisational Design (OD). OD has been described as the process of developing a strategy, i.e., objective, scope, competitive advantage, and logic; and mapping it onto an organisation, i.e., people, architecture, routines, and culture; so as to maximise performance in a given operating environment (Roberts, 2007). In a ground-breaking study published in 1992, Kaplan and Norton developed the Balanced Scorecard, initially for performance measurement, which was later transformed into a tool for strategic management. The Balanced Scorecard is based on the premise that financial performance lags other dimensions of organisational performance. In other words, exclusive reliance on financial indicators could

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create a situation in which long-term value creation is sacrificed for short-term performance (Kaplan and Norton, 2001a). The Balanced Scorecard can be utilised to align key management processes and systems to the organisational strategy (Kaplan and Norton, 2001b; Kaplan, 2010), i.e., the process of OD.

Although a lot of documented literature exists on OD for organisations in the private sector, there is scanty information on OD for public sector organisations such as public water utilities. This paper examines the process of adapting OD principles to urban water utilities. From the onset, it is important to note that OD is *not* a panacea for sustained organisational performance. OD must be well aligned with other aspects institutional capacity, i.e., key technical and functional capacities, including the organisation's ability to influence its external environment in a positive and strategic manner (UNDP, 2008).

This paper is based on a study commissioned by the World Bank in 2013-14 to carry out rapid assessment to identify typical organisational structures, staffing levels and management systems for well-managed water utilities throughout the world. These findings would be used to inform the design of organisational structures and operating systems for urban water utilities. Increasingly, water utilities in various regions of the world are using benchmarking as part of a system to promote organisational and performance improvement.

Benchmarking can inform decision-makers about the performance of water utilities and help identify areas for improvement. However, benchmarking is not without shortcomings. Organisational performance, similar to institutional capacity, is greatly influenced by factors in the external environment in which an organisation operates (Baser et al., 2008). Furthermore, care must be taken to ensure that those being assessed do not 'game' the system (Berg, 2010). Finally, benchmarking can lead to isomorphic mimicry of presumed good practices on the part of the participating water utilities (Andrews et al., 2012).

In this paper, we limit our coverage to the findings from the comparative study of five water utilities in Africa, Europe and South East Asia regarded as "effective" in terms OD. We exclude from our assessment the actual process of benchmarking or project status. The paper is structured as follows: the next section presents the methods used in the comparative study; Section 3 provides a brief discussion of the key concepts related to OD; Section 4 reports the results; and Section 5 presents the summary and conclusion.

2. Methods

To begin, we carried out a literature review on OD concepts. We confined our comparative study to urban water utilities that provide services to populations between 500,000 and 2 million. We then reviewed the World Bank's International Benchmarking Network for Water and Sanitation Utilities (IBNET) 2010 database, and identified seven well-performing water utilities from developed and developing countries, with which we have previously had established contacts, for ease of obtaining the necessary information and data. Evaluation of performance was based on IBNET Apgar scores concerning: (i) water supply coverage, (ii) sewerage coverage (where applicable), (iii) level of non-revenue water, (iv) collection period, (vi) operating cost coverage ratio, and (vi) affordability of water and wastewater services (The World Bank, 2014) We contacted suitable key informants from the identified water utilities in developing countries and developed countries, which had a 2010 Apgar score of at least 7 and 10, respectively. Two water utilities from developing countries and four from developed countries agreed to participate in the study.

We designed a standard data collection form and pre-tested it with one participating company in mid-2013 but using a different key informant. The questionnaire had sections on strategic orientation and scope of service delivery; organisational structure/staffing; key organisational resources; the planning process; human resources management/development; technical process management; commercial process management; financial and asset management; and performance

management. In the autumn of 2013, an improved version of the questionnaire was sent to the water utilities that had agreed to participate. Research design and data collection methods conformed to the International Federation of Social Workers' (IFSW) Ethics in Social Work, Statement of Principles (2004) [refer to http://ethics.iit.edu/ecodes/node/3934, accessed on 14th July 2013]. Where necessary, emails, phone calls, or personal visits were used to clarify issues and fill any data gaps. We received duly filled questionnaires from five out of six targeted organisations. Data were analysed and reported using matrices and graphs.

3. Organisational design concepts

3.1. What is an organisation?

There are small variations in the way organisations are defined in the literature, but all of the definitions have one commonality: that an organisation is purposeful. Most scholars (e.g. North, 1990; Huczynski and Buchanan, 2007; Katz, 1966) define an organisation as a group of individuals bound by some common purpose to achieve set objectives. However, an organisation, '… in its simplest form … is *a person* or group of people intentionally organized to accomplish an overall, common goal or set of goals' (McNamara, 2015). McNamara's definition recognises that the critical factor of an organisation is the existence of intentionally established goals, regardless of the number of people making up the organisation.

Some authors add the aspect of 'control' to the definition of an organisation. For instance, Huczynski and Buchanan (2007, p.6) define an organisation as a '… social arrangement for achieving *controlled performance* in pursuit of collective goals'. Hence, organisations consist of a group of individuals working together to achieve a specified goal(s), with the engagement being coordinated in a controlled manner. This definition also implies that individuals working on their own do not constitute an organisation – there is need to have a structure, which will enable individuals to work together towards a common goal. Furthermore, the element of controlled performance points to the need to have systems and procedures to ensure that the common goals are achieved. Another important aspect of an organisation is that it does not exist in a vacuum, but engages with an external environment – it should interact with customers, suppliers, competitors, and other elements of the external environment (Connor et al., 2012; Daft, 2007). All these aspects that are captured in the definition of an organisation point to the need for OD (Connor et al., 2012).

3.2. What is organisational design (OD)?

Traditionally, OD was narrowly defined as the process of creating an organisational chart. In the contemporary times, OD is conceptualised as being much wider - an organisational chart is only one of the manifestations of the organisational design process (McGee and Molloy, 2003). According to Daft and Lewin (1993), organisational design is concerned with the organisation's formal architecture, culture, strategy and employment relations. OD has been defined as the practice of consciously aligning an organisation's structure, processes, management systems and culture with a well-articulated strategy (McGee and Molloy, 2003). Through OD, managers can achieve coordinated effort in the organisation, by predetermining the structure of the task and authority relationships: the purposive and goal-oriented structure is consistent with the definition of an organisation which pursues collective goals, in a well-coordinated and controlled manner (Huczynski and Buchanan, 2007).

The starting point of OD is the *strategy*. An organisational *strategy* may be defined as the articulation of the organisation's vision, mission and core competences. A mission statement is a description of why the water utility exists, and a vision statement is where the organisation wants to be, and how it wants to be seen by the external publics.