Water and the entrepreneurial city: The territorial expansion of public utility companies from Colombia and the Netherlands

Kathryn Furlong

Canada Research Chair in Urban, Water and Utility Governance, Département de géographie, Université de Montréal, Pavillon 520, Côte-Ste-Catherine, Canada

ABSTRACT

Since the mid-1980s, liberalization has motivated numerous water supply reforms. Among these, privatization has received the most attention. Yet, its actual scope has been limited. Beyond privatization, the territorial expansion of municipally owned water corporations into new service areas can be witnessed in countries as diverse as Italy, South Africa, Canada, Colombia and the Netherlands. Generally, the activities of public water corporations are analyzed through the lens of commercialization. This framework is central to understanding recent shifts in water supply. Yet, while it addresses the effects of commercialization on service quality and access, it rarely integrates the influence of shifts in social reproduction and collective consumption in structuring reform. Drawing on theories of urban entrepreneurialism, I attempt to advance a broader analytical framework that is more amenable to integrating the diversity of processes involved, including but not limited to commercialization. At the same time, the territorial expansion of municipally owned water corporations suggests ways to rethink urban entrepreneurialism: it is not only commercial, it is also social, and it is Schumpeterian. To make these points, this article examines the efforts of two public water corporations to go international: EPM of Medellín, Colombia and WMD of Drenthe, the Netherlands.

Introduction

The Empresas Públicas de Medellín (EPM) is a multi-utility corporation owned by the City of Medellín, Colombia. The city is its sole shareholder to which it pays an annual dividend. In 2010, this dividend approached $US 715 million.1 In 2005, EPM’s Board of Directors established La Meta Estratégica Grande y Ambiciosa. Known simply as La Mega, it sets a target of 40% for the portion of EPM’s activity that should be international by 2015. Having struggled to meet this goal, EPM turned to domestic expansion. With respect to water and sanitation, it has created five regional subsidiaries and competed for service contracts in other parts of Colombia. In the Netherlands, public water corporations have also taken an interest in “international water markets”. In the 1980s, they embarked on “twinning” arrangements to share expertise with struggling utilities in other parts of Colombia. In the Netherlands, public water corporations have also taken an interest in “international water markets”. In the 1980s, they embarked on “twinning” arrangements to share expertise with struggling utilities in the South. Today, the Dutch water utilities engage in a variety of projects from twinning to Joint Venture Companies (JVC). In 1999, the Waterleidingmaatschappij Drenthe (Water Company of Drenthe – WMD) set up its first JVC with a locally owned water corporation – or PDAM2 – in Indonesia. Today, there are five in operation.

This drive for territorial expansion is not limited to EPM and WMD. It is common to municipal water corporations from countries as diverse as Italy, Canada, South Africa, Uganda and Brazil (Grossi and Thomasson, 2011; Kuoppakangas, 2013; McDonald and Ruiters, 2012). EPCOR, a multi-utility corporation owned by the City of Edmonton, Canada has water contracts in the United States, British Colombia and Alberta. ACEA of Rome has contracts in Latin America. Rand Water of South Africa has projects elsewhere in Africa. Acting domestically, COPASA of Minas Gerais, Brazil and the National Water and Sewerage Corporation of Uganda have operations contracts in their own countries (Martins de Andrade, 2010: 43). A public corporation is an entity incorporated as a private company with government as the sole shareholder. For water, the government shareholder is usually the municipality or a group of municipalities for which the utility provides services. Public corporations have different names in different countries, here the term Local Public Corporation (LPC) is used (see Smith, 2012).

Through the comparison of two case studies – EPM of Medellín and WMD of Drenthe – this paper seeks to: (1) expand the ways in which the commercial activities of LPCs are analyzed by engaging

1 E-mail address: kathryn.furlong@umontreal.ca
2 Perusahaan Daerah Air Minum or PDAM (TWD, 2009).

http://dx.doi.org/10.1016/j.geoforum.2014.09.008
0016-7185/Crown Copyright © 2014 Published by Elsevier Ltd. All rights reserved.
with the role of social reproduction (and collective consumption) in structuring reform; and (2), in so doing, contribute to the literature on urban entrepreneurialism. First, in terms of social reproduction and collective consumption, research on the growth and expansion of LPCs tends to focus almost exclusively on commercialization (e.g. McDonald and Ruiters, 2005; Schwartz, 2008; Smith, 2004). While important, the territorial expansion of LPCs has many, often overlapping, motivations and effects. It involves commercial projects that are often imbedded in a neoliberal discourse, but the activities are also more nuanced. In the cases studied, there is an explicit engagement in improving the conditions of social reproduction. For example, the JVCs of both EPM and WMD are located in areas deemed unattractive for the private sector, i.e. where population and income are insufficient to guarantee a return on capital. This does not mean that the projects disregard the demands of capital. Rather, new formations of state engagement with social reproduction in relation to capital are emerging (Katz, 2001; Meehan and Strauss, 2015; Mitchell et al., 2003).

Second, in this paper, the lens of urban entrepreneurialism is used to explore how these relationships are being reworked through the territorial expansion of LPCs. The turn to urban entrepreneurialism enables one to engage with commercialization while integrating the importance of shifts in social reproduction in mediating (and being mediated by) what are more than commercial reforms. This is not inherent in the urban entrepreneurialism literature. Thus, social entrepreneurialism and theories that collapse the binary between social reproduction and capitalist production are also mobilized. It is shown that urban entrepreneurialism is not only expressed through inter-urban competition, it is also social and Schumpeterian (involving the pursuit of new market activities). In this market expansion, the state – via water-LPCs – extends its dialectic of social reproduction/capitalist production beyond its traditional territory.

This paper begins with a brief note on methods. Then, in Section ‘Overview’, an overview of utility expansion in the two case studies is provided to contextualize the theoretical discussion that follows. In Section ‘Utility commercialization and the entrepreneurial city’, the urban entrepreneurship literature is discussed, linking it to related shifts in the organization of social reproduction and collective consumption. In Section ‘Two cases of territorial expansion’, a more detailed examination of the cases is provided. Through this discussion, I demonstrate how an urban entrepreneurialism lens can enrich analyses of recent water supply reform, but that ultimately the dynamics of social reproduction and collective consumption need to be considered. To do this, the empirical material is regularly linked back to the theoretical discussion to push it further.

A note on methods

This paper adopts a “project” as opposed to a scalar basis for analyses. It does not focus on the city as a scale but on a common project that links different cities (see Robinson, 2011): that of employing LPCs as vehicles for shareholder profit, market expansion, and development cooperation. This follows recent work on urban “experiments” (e.g. Bulkeley and Castán Broto, 2013) as well as critiques of assuming a universal ontology to “scale” and scalar processes (Robinson, 2011; Tsing, 2000). Recent research has questioned scale as a fixed unit of analysis that can be accurately compared across space, arguing that contestation is not over scale, but the “particular areas of social activity and public policy” in which the role of scale will “vary considerably” (MacKinnon, 2010: 23, 29).

In adopting a focus on projects, moreover, the article follows Robinson’s call to refuse developmentalist hierarchies in the study of urban processes (Robinson, 2005). For Robinson, limiting comparison to cities with equivalent levels of development betrays an econocentrism, whereby everything else is either secondary to or determined by economic factors (Robinson, 2011). As such, comparisons of projects that touch cities from the North and the South can reveal “unexpected connections” by engaging with diversity (Pickvance, 1986; Robinson, 2011). This is important in the case of LPC expansion, which seeks to enlist cities with very different levels of economic development in common projects, motivated by both social and commercial goals.

To explore the territorial expansion of water-LPCs, this article focuses on WMD of the Netherlands and EPM of Colombia because both have expanded by creating Joint Venture Companies (JVCs), and because both countries have a long history with water-LPCs. The paper is based on fieldwork conducted in Medellin between 2009 and 2013 and in the Netherlands between 2011 and 2013. The research includes archival work on the history of LPC expansion, a review of newspaper articles over the past fifteen years, and 39 interviews (28 in Colombia and 11 in the Netherlands) with utility management, government officials, as well as environmental, consumer and other related groups.

Overview

Basic drivers of LPC expansion

The territorial expansion of water-LPCs can be traced to the promotion of North–South twinning arrangements and to the liberalization of public utilities in the 1980s. Widespread inequalities in accessing potable water and sanitation were brought to worldwide attention with the declaration of the UN International Drinking Water Supply and Sanitation Decade in 1980. Highlighting the crisis, the UN began promoting North–South twinning arrangements whereby well-functioning utilities from the North would share knowledge with struggling water utilities in the South. As relationships became more formalized, they developed into Water Operator Partnerships (WOPs) (Hall et al., 2009). In the Netherlands, water-LPCs began twinning with utilities in a variety of countries, relationships that eventually transformed into WOPs, operations contracts, and JVCs (Pistorius, 2008).

At the same time, liberalization gained ground. Beginning in the 1980s, it was assumed that the application of commercial management principles and the introduction of private sector “discipline” would improve utility services. Deregulation and reregulation were used to promote private sector participation (PSP), full cost recovery, and independence from local government (Furlong, 2010). Concomitantly, increasing budget restraint was imposed on municipal governments (Harvey, 2005; Jessop, 1997). Together, these reforms encouraged the creation and growth of LPCs across a range of services including water supply (Hoorens et al., 2004; Vallespin and Gianfelici, 2011). While the LPC was widely promoted, the primary purpose was not always to commercialize. Sometimes, cities sought to remove debt from their ledgers in compliance with new EU restrictions (Argento et al., 2010), to skirt certain regulations (Vallespin and Gianfelici, 2011), to generate profits to fund other municipal services (Kuoppakangas, 2013), or to comply with requirements imposed under structural adjustment programs (TWD, 2009).

The nature and mandate of public corporations also shifted during this period. Traditionally, they were state owned and focused on the delivery of “government programs of a commercial character” (Seidman, 1983: 65). With neoliberalization, public corporations adopted a commercial orientation (Wettenhall and Thynne,
EPM was formed in 1955 when the existing water and sewer LPC merged with that responsible for electricity, telecommunications and gas. EPM is consistently among Colombia’s ten largest companies. While its growth accelerated in the mid-1970s, it became “explosive” in the early 1990s. Its net worth increased approximately ten-fold within fifteen years (Bonilla et al., 2013). This growth is coincident with the liberalization of Colombia’s utilities, especially through the Law 142/1994. This law also led to EPM’s conversion from an Empresa de Servicios Públicos (ESP – Public Utilities Company) to an Empresa Industrial y Commercial del Estado (EICE – State Industrial and Commercial Company), which while retaining public ownership is governed by private as opposed to public law (Ríos, 2008).

EPM’s territorial expansion began shortly thereafter and was codified in La Mega in 2005. This growth differed across EPM’s services, with increasing international and domestic investments in – and revenues from – energy and telecommunications, which was separated from EPM in 2006. These investments have translated into increasing debt to both international and domestic lenders, which quadrupled between 2005 and 2010 (Bonilla et al., 2013). These issues certainly influence the types of projects that EPM pursues (and vice versa). On water, however, while the LPC planned to engage in profit generating projects abroad, various challenges particular to water forced EPM to reconsider its ambitions.

Prior to the introduction of La Mega in 2005, EPM formed its first subsidiary for water – Aguas del Oriente – in 1998 in Rio Negro, approximately 50 km from Medellin. For water and sewer, collectively managed as EPM–Aguas, the 40% international activity required by La Mega translated into a specific growth target of US$ 107 million by 2015. The strategy for achieving this involved investing in Build–Operate–Transfer (BOT) projects abroad, developing the associated infrastructure (e.g., a treatment plant) over approximately 25 years and then selling it at a profit. For reasons explored below, no projects of this type were developed. Instead, international activities in water are limited to one international subsidiary, consulting, and WOPs (EPM, 2012a).

Given the challenges of internationalization, by 2008 EPM had already turned its focus to domestic expansion. Staff explained that La Mega will be reached, but through domestic as opposed to international growth. Currently, EPM–Aguas has six water subsidiaries, five of which are regional JVCs located in underserviced areas of the departments of Antioquia and Atlántico. The shareholders are the local municipalities, the department, and EPM, as the majority shareholder. So far, none of these subsidiaries has generated dividends for EPM. They are seen as long-term, even quasi-permanent, projects. Investment is to be recuperated over up to 40 years. The final subsidiary, Aguas Nacionales, was created to manage projects from technological development to management contracts. At present, it comprises the company Aguas del Atrato, which was created at the request of the Colombian government to help resolve long-term water supply problems in the City of Quibdó. An organogram of EPM and its subsidiaries is presented in Fig. 1. They are mapped in Fig. 2 with other key features of the projects and their locations. These are discussed in Section ‘Thinking about urban entrepreneurship – social and commercial’.

Utility commercialization and the entrepreneurial city

Urban entrepreneurialism has rarely been used to analyze changes in the organization and management of water utilities under neoliberalization. Instead, the related lenses of commercialization, marketization and privatization have dominated (e.g., Bel and Fageda, 2008; Boag and McDonald, 2010; Schwartz, 2008). While such studies have been instrumental, the strict focus on commercialization and marketization risks confining the drivers, constraints and motivations of reform to the economic, and thus overlooking how they are intertwined with the social. By engaging with urban entrepreneurialism as well as theories of social reproduction and collective consumption, I seek to offer preliminary steps toward an analysis of ongoing transitions in water supply that can account for the nuanced relationship between commercialization and the state’s shifting engagement with social reproduction and collective consumption.

Urban entrepreneurialism emerged in the 1970s as a local and regional government strategy to cope with increasing gaps between revenues and costs. Cities, particularly in the US, faced...
important cuts to inter-governmental transfers, making them more dependent on commercial development to fund local services (Harvey, 1989; Leitner, 1990). This, combined with capital mobility, compelled urban governments to compete in creating the supposedly ideal conditions for capital investment (Harvey, 2005). Cities – often supported by states – reduced development charges, corporate taxes, planning restrictions, as well as environment and labor protection in order to promote themselves as less costly and "restrictive" sites for private development (Hall and Hubbard, 1998; Harvey, 1989; Sager, 2011).

Cochrane summarizes the phenomenon as a dramatic shift in urban governance, from a concern with service provision to a focus on economic development (Cochrane, 2007: 85). Still, cities are not powerless in the face of these policies nor are they uniform in their response. While authors like Harvey (1989) saw cities as essentially hemmed-in by capital mobility and national fiscal policy, others gave more weight to local pressures in driving entrepreneurialism and to local conditions in shaping its nature and degree (Leitner, 1990). For Leitner, while national and international policy circumscribe local action, it cannot simply be "read off from broader structural developments" (Leitner, 1990: 153). This is in fact the basic argument of "actually existing neoliberalism", that the effects of reform are altered at the local scale where the social impacts are most readily felt and thus resisted (Brenner and Theodore, 2002; Leitner et al., 2007).

What does this have to do with water supply? Many of the policies credited with driving urban entrepreneurialism are akin to those that encouraged the commercialization of water supply. Urban entrepreneurialism was fueled by critiques of local government that focused on its "failure" to generate economic development (Cochrane, 2007: 85). In response, urban policy was reformulated to "fit with a wider national political rhetoric of economic regeneration, public–private partnership, and infrastructural investment to support development" (Cochrane, 2007: 90). These tropes – government failure, private sector participation, and crumbling infrastructure – also drove neoliberal water supply reforms (Furlong, 2010).

Thus, similar pressures may generate different manifestations of entrepreneurialism, not only between different municipalities, but also for different services. In 1979, Goodman called local government officials "the last entrepreneurs" because they (and not the private sector) now assumed the risk for private ventures (Goodman, 1979). For water supply, the introduction of private sector participation (PSP) likewise depended on public (and not

---

11 For Jessop, the "entrepreneurial city" and "competition state" are coincident phenomena whereby government is reduced to "promoting the competitiveness of their respective economic spaces" (Jessop, 1997: 28).
private) investment (Budds and McGranahan, 2003), what Ruckert calls “accumulation by subsidization” (Ruckert, 2007: 101). Subsequent efforts to share risk between government and the private sector served to curb the latter’s interest in the water “business” (Bakker, 2004; Furlong, 2012). The expectation that private operators would take responsibility for social reproduction in terms of service extension, water quality, and source water protection, generally translated into perceptions of increased risk and reduced profitability – and therefore diminished interest – on the part of the private sector (Bakker, 2004; Budds and McGranahan, 2003).

What recent LPC activity indicates is that urban entrepreneurial risk can be taken for public and not simply for private accumulation (the shareholders being municipalities). Moreover, it can be “entrepreneurial” in the Schumpeterian sense of the term, i.e. seeking to create surplus through innovation by developing “new combinations” via new markets, goods, processes, and organizations (Schumpeter, 1983). For Jessop and Sun, there are two forms of urban entrepreneurialism of which inter-urban competition to attract investment is but one. Another is Schumpeterian; it works to build “linkages to the wider economy” to make itself a player therein (Jessop and Sum, 2000: 2293). The rise in the number and size of LPCs for a variety of utility services (Hoorens et al., 2004), and their efforts to increase dividends and to engage in “new markets” (Clifton et al., 2007) reflects this second form of urban entrepreneurialism. Rather than competing with nearby localities, cities and states engage in international “markets” (via their LPCs) for the sale of utility services and associated products.

These two types of entrepreneurialism are related through shifting relationships to social reproduction. Leitner finds that resistance to entrepreneurialism qua inter-urban competition results from the inability to reconcile the conflicting demands of ensuring profit on private investment, universalized community

---

**Fig. 2.** Map of EPM and its water subsidiaries © Marc Girard (2014). Sources: Aguas de Malambo (2013), Aguas de Occidente (2013), DANE (2005) and EPM (2012b).
Fig. 3. Partial organogram of WMD, focusing on its Indonesian subsidiaries.

Fig. 4. Map of WMD activities in Indonesia © Marc Girard (2014). Sources: Statistics Indonesia (2010), WMD (2013) and www.waterfund.nl/
services, and social order. The incommensurability of these responsibilities creates pressure for and against urban entrepreneurial policy (Leitner, 1990: 156). It can be said that its commercial goals conflict with expectations for it to secure the conditions of social reproduction and collective consumption. Entrepreneurialism as territorial expansion effectively transfers apparent risks to service quality to other locales where the city is not responsible for reconciling the plethora of competing demands enumerated by Leitner. Moreover, where the economic risks of LPC expansion result in unforeseen costs to the owning municipality (and its residents), responsibility can be deflected onto the LPC as a theoretically independent entity. For Savoie, averting responsibility is a key reason why local governments establish LPCs and other arm's length bodies (Savoie, 1995: 113).

Irrespective of how responsibility is assigned, the effects are real and lived locally. As such, territorial expansion must not be confused with “deterrioritization”. As Brenner argues with respect to globalization, focusing on deterrioritization misses Lefèvre's insight that capital, while mobile, remains dependent on territorialized entities at multiple scales, including state institutions (Brenner, 1999). This is why capital mobility requires fixity – such as infrastructure (Harvey, 1985). Infrastructure, however, is central not only to capital accumulation but also to social reproduction. Capital mobility, while needing infrastructure, likewise abandons it; thus, leaving it to deteriorate (Swyngedouw, 1992), weakening its ability to serve its social function (Moss, 2003).

Although the urban entrepreneurialism literature often treats social reproduction and consumption as subordinate to commercial goals, the approach is increasingly challenged. Cochran, for example, warns against “present[ing] the shift to a ‘growth agenda’ as inevitable”. Even in its entrepreneurial form, “urban policy…can be understood as social policy” since there are choices being made that have implications beyond “efficiency” and growth (Cochran, 2007: 103). Ward and Jonas, moreover, argue that the competitive cities literature has limited its own explanatory power by neglecting “geographies of collective consumption” including service provision, infrastructure, social-welfare and environmental protection (Ward and Jonas, 2004: 2121). This may be of increasing importance as the social characteristics of cities are seen as outpacing their economic features in defining their “competitiveness” (Jessop and Sum, 2000: 2310–2311). In this way, promoting a city’s “symbolic economy” or “greenness” to attract tourists and residents has become an important mode of urban entrepreneurialism (Cronin and Hetherington, 2008; While et al., 2004). This underscores Castell's point that the politics of collective consumption are entwined with the state’s role in securing the conditions for capital production (Castells, 1972).

Like other forms of urban entrepreneurialism, the drivers of and constraints on LPC expansion are both social and commercial. This point can be clarified by contrasting theories of social and commercial entrepreneurialism. However, caution is warranted: social entrepreneurial theory is relatively nascent (Smith and Stevens, 2010) and neglects the complexity of social reproduction in sustaining capitalist production. Instead, it places them on a continuum, failing to recognize that they exist in a web of exchanges that incorporate market and nonmarket activity “in an absolutely essential and inextricable embrace” (Mitchell et al., 2003: 423).

Authors concerned with social entrepreneurship see a continuum between social and commercial entrepreneurship that moves closer to either end of the spectrum according to the relative preponderance of particular goals and practices. At its core is the relative importance of creating “social value” versus “shareholder profit” (Dees, 1997; Sullivan Mort et al., 2003). While most entrepreneurship will involve some combination of social and commercial objectives, “even at the extremes” (Austin et al., 2006: 3), their relative balance will influence the geography and the exercise of an organization’s activities. The more an organization focuses on creating social value, the more its geographical focus differs from that of a commercial enterprise. Social entrepreneurship engages in locations that commercial entrepreneurs are conditioned to avoid, i.e. those characterized by unstable regulatory environments, a “clientele” without the means to pay, poor infrastructure, and “market failure” (Austin et al., 2006; Di Domenico et al., 2010). This is consistent with broader theories of entrepreneurialism. For Schumpeter, the entrepreneur and the (fictional) homo economicus are distinct; the entrepreneur is not governed by economic rationality, but by the pursuit of innovation (Shackley and Frank, 2011). Here, “innovation” – the other key element of social entrepreneurship (Nicholls and Cho, 2006) – refers to the mobilization of resources to serve “basic, long-standing needs more effectively through innovative approaches” as opposed to product breakthroughs (Austin et al., 2006: 5). To understand this type of nonmarket innovation, authors have turned to the building of social as opposed to economic networks for explanation, drawing on the concept of bricolage (e.g. Di Domenico et al., 2010). Bricolage complicates institutional theories of resource management by showing how “institutions” are continuously formed and reformed through social relationships, in interaction with local context and a variety of actors linked, directly and indirectly, to formal networks (Cleaver, 2002, 2012). For Hindle this makes a “deep understanding” of “community context” essential (Hindle, 2010).

Even a cursory examination of the activities of EPM and WMD demonstrates that there is more going on than commercial entrepreneurship. Many of their activities more closely resemble those associated with social entrepreneurship. The question that remains is: how can this be understood in a way that integrates rather than bifurcates capitalist production and social reproduction? Many authors have cogently argued that the state’s role in social reproduction and collective consumption is of a piece with its role in ensuring the necessary conditions for capital and profit (Castells, 1972; Cockburn, 1977; Mitchell et al., 2003). For Castells, the state’s level of engagement with the provision of the associated services (welfare, housing, transportation, etc.) is constantly shifting as it seeks to ensure the requisite social reproduction for the creation new spaces of private accumulation (Castells, 1972).

This instability in the state’s commitment as the guarantor of social reproduction and collective consumption can be seen in both the uneven access to services and their decline over the neoliberal period. For Katz, the retreat from social reproduction should be understood as a state-backed reworking of the relationship between capital production and social reproduction (Katz, 2001). The lived results of these reforms are captured in the concept of “life’s work”, whereby the activities and sites of capitalist production and social reproduction have become blurred, simultaneous and overlapping – no longer can one claim a geographical separation between the factory and the home (Mitchell et al., 2003). Yet, they are also spatially separated in new ways. For migrant workers engaged in the mesh of production and reproduction abroad, the site of social reproduction is made unreachable not only by distance but by various government regulations (Mountz, 2003; Pratt, 2003). To understand these changes, the authors argue that we need to change the way we view the state and how it rules and creates new spaces of “rule and ruling” (Mitchell et al., 2003: 433). In the case of LPCs, governments – via utilities – are not strictly disengaging from social reproduction, but engaging in new sites of social reproduction both to open new spaces for private (and public) profit and to support social reproduction at home.

12 Many studies have demonstrated the continued influence of municipal government on utilities following their corporatization (e.g. Kuoppakangas, 2013; Schwartz, 2008).
Two cases of territorial expansion

In the paragraphs below, I compare the expansion projects of EPM and WMD in terms of their motivations, the facilitators and constraints imposed at different scales, and ultimately how the projects mix social and commercial goals. Through these discussions, I seek to understand how an urban entrepreneurial approach that is sensitive to social reproduction might help to enrich our understanding of LPC expansion and the broader neoliberalization of water supply.

Why grow?

In interviews, management at EPM and the Dutch LPCs, including WMD, emphasized that their traditional “markets” are “saturated”. If they are to grow, it must be outside of their traditional service area. Yet, the saturation to which they refer differs in scale and in scope. For EPM, market saturation refers to Medellín and its greater urban area, the Valle de Aburrá. Utility management argues that, within this area, it is impossible to grow except “vegetatively” through the connection of new users. In the case of WMD and other Dutch utilities, it is the water supply markets of the Netherlands and surrounding countries that are “saturated”. LPC management sees no way to grow domestically or in adjacent EU countries where high-quality, universal water services are the norm.

But why should “market saturation” be a concern for a water-LPC entrusted with the social and economic development of its service area? EPM management describes shareholder (i.e. municipal) pressure to increase its dividend. EPM’s dividend has increased nearly 20-times since its reform in the mid-1990s (Fig. 5), chiefly through its activities on energy. By local statute, the dividend is capped at 30% of profit and must be invested in local social programs. Since the mid-1990s, EPM has made additional “extraordinary” transfers such that the dividend averaged 45% of profit from 1994 to 2008. In 2007, “extraordinary” transfers were legalized by municipal agreement “such that neither [EPM’s] viability nor its growth are put at risk” (Alcadía de Medellín, 2007). Here, capitalist production is enmeshed with public dividends and social reproduction at “home”: Medellín’s spending on social projects has increased by 129% since 2007, with 40% of its revenues coming from EPM (Muñoz, 2013).

EPM management is also driven to increase the LPC’s size and status. Interviewees from EPM explained their focus on growth as a natural element of their corporate identity – somos empresa – and as part of their responsibility to improve the standard of living in underserviced parts of Antioquia, their home Department. Indeed, their regional JVCs are not located in lucrative areas and will require long-term investment before any dividend can be expected. Other than those adjacent to Medellín, the JVCs are located in areas with an average level of unmet basic needs (NBI) greater than 25% (Fig. 2). Aguas del Oriente, established in 1998 and with an NBI of only 10%, does not yet return a dividend. Although it is considered to have reached the same standard of service as in Medellín, surplus is reinvested in the water utility. Commercial concerns are more explicit (but not necessarily dominant) when EPM acts outside of Antioquia. It sees its contributions to WOPs (Fig. 1), for example, as a way of creating opportunities for future commercial contracts.

EPM’s external projects have both commercial and social goals. These can overlap and serve to increase the reputation of the LPC, and that of the city – serving to further the “social” reproduction of both. For Leitner, local drivers of entrepreneurialism include “the interests of the [local] state and its managers to maintain or increase fiscal resources, advance individual career interests, maximize agency resources, and enhance the institutional power of the local state in general” (Leitner, 1990: 156). In Medellín, EPM is a major employer, with 6034 direct employees and more than 14,000 across its subsidiaries (EPM, 2012b), it is a major source of local revenue, and an important provider of cultural services, such as the Bibliotheca EPM (Fig. 6). Like the development agencies discussed by Leitner, EPM occupies a prominent position in the local political landscape. The person whom mayoral candidates

---

13 Acuerdo 69, 1997.
15 Interview, EPM New Water Projects Division, June 2010.
will appoint as Director General of EPM is considered by some to be as important as the candidate in local elections.  

For the Dutch LPCs, including WMD, “market saturation” means stagnation. Utility managers explain that all major water management problems in the Netherlands are controlled and well understood\(^{16}\); their work is one of maintaining the status quo. Consequently, they have difficulty attracting young employees. Faced with an aging workforce, their external projects create a sense of progress, present new challenges and learning opportunities, and help them to attract young people as a result (see also Martin de Andrade, 2010). In this way, expanding beyond their territory is a way of creating sustainability and renewal in the water sector at home – of ensuring its own social reproduction in a way that is similar to, yet different from, EPM. According to Leitner “securing jobs” and “providing services” are two pressures faced by municipalities that inform urban entrepreneurialism. For the Dutch LPCs, these two pressures overlap.

Pressures for dividends are not a factor in the decisions of the Dutch LPCs to pursue projects in the South. Respondents repeatedly stated that it would be unacceptable to their shareholders (ultimately Dutch citizens) for them to profit from such projects. WMD has even learned that it must be careful about how it recovers its investments (see below). This difference with EPM, which emphasizes a profit motive (although unachieved on water), supports arguments that local factors and differences between cities engender differences in their entrepreneurial endeavors. Other more “subtle” differences also exist. WMD’s geographical focus results from the Netherlands’ colonial relationship with Indonesia, which was critical in establishing the uneven geography of water supply that persists in Indonesia today (Kooy and Bakker, 2008). Following independence, immigration from Indonesia’s Maluku province concentrated in Drenthe. This provided both the impetus and the contacts needed to start the first project in Ambon.

**Influences beyond the LPCs**

While important, municipalities and LPCs are not autonomous in their strategies for territorial expansion. For Cochrane, local autonomy must not be “exaggerated” as entrepreneurialism fits a “state level response”, whereby cities replace private firms as national champions in international competition (Cochrane, 2007: 99). For such Schumpeterian entrepreneurial activity, moreover, cities and their agents are dependent on multi-scalar networks (Jesop and Sum, 2000: 2293). This is likewise true of the politics of social reproduction. While many services may be delivered locally, the politics of access and exclusion must be seen in a context of state relationships to capital under globalization (Cockburn, 1977; Katz, 2001). These assertions are applicable to LPCs. Their mix of social and commercial entrepreneurial activity is guided by state policy, involves networks of actors, and can be constrained by a variety of factors that are often missed without a nuanced view of commercial entrepreneurialism.

The importance of state guidance and networks is particularly evident in the Dutch case where the government has taken on water as a cornerstone of its economic and international development policies – extending state engagement in social reproduction to support capitalist development beyond its own borders. State influence over LPC expansion is animated by contradictions between the desire to promote Dutch water expertise as a vehicle for economic growth, and the desire to limit the risks taken by LPCs in these pursuits. Under the 2009 Water Act, the government limited LPC investment in external projects to development assistance and to 1% of annual revenue. Most interviewees and newspaper reports interpreted this as a response to the aggressive commercial growth of a single water-LPC, Evides of South Holland (e.g. Engelenburg, 2013). This theory is supported by the assignment of tariff oversight to the Netherlands Authority for Consumers and Markets (ACM). From 2013, the ACM reviews domestic water pricing and ensures that there is no cross-subsidization of commercial activities with drinking water tariffs, in accordance with the 2009 Water Act.\(^{19}\)

As opposed to LPC investment, projects mostly depend on government funding. This is consistent with Schumpeter’s distinction between entrepreneurs and capitalists, emphasizing that entrepreneurs rarely finance projects (Shockley and Frank, 2011). In the case of WMD’s four new Indonesian JVCs, the Dutch government allocated €7.5 million in soft loans through the Directorate-General for International Cooperation (DGIS) and set up the Foundation for East-Indonesian Water Projects (SWOI) through which to transfer the funds to WMD’s subsidiary BV Tirta Drenthe (Fig. 3). WMD contributed €1.5 million in the form of a soft loan and €2 million as risk capital (Pistorius, 2008).\(^{20}\) This money was to be spent on...
infrastructure within the first five years, at which time the projects were to become self-financing (SWOI, 2012). In 2011, the Dutch Embassy in Indonesia guaranteed a further €3.5 million (SWOI, 2012).

For other international water projects, the Dutch Government typically allocates funding to various Ministries, agencies, and NGOs.21 Organizations apply for funding on a project basis, often collaboratively (cf. Baud et al., 2010). WMD’s work with Water Fund Holland (WFH), a partnership with four other Dutch water-LPCs, is an example (Figs. 3 and 4). Thus, following, Jessop and Sum (2000), the territorial expansion of WMD, and the Dutch LPCs in general, involves cooperation between the LPCs, various scales of government, NGOs, and other organizations. This is in contrast to the early urban entrepreneurialism literature, which sees cities (or regions) as competing against each other in response to their abandonment by the state.

The dependence on broad coalitions and the involvement of the state also influences the nature of the projects. In 2013, the Dutch government approved changes to development cooperation that place a greater focus on trade and investment (Government of the Netherlands, 2013). For water, this shift began in 2011 with its designation as one of ten national “top sectors”. This is meant to encourage LPCs to partner with private companies to develop international projects (Trappenburg, 2011), and to seek further opportunities in middle and high-income countries (Gleijm et al., 2013). For projects in the South, this means that the water LPCs, while not generating a profit, should use the projects to open doors for the Dutch private sector in the associated countries (Engelenburg, 2013). Here, social reproduction is a vehicle for future private accumulation.

Shifting representations of water as “economic diplomacy” as opposed to “development cooperation” matter for urban entrepreneurialism that is oriented toward social reproduction. Engaging in entrepreneurialism is a discursive exercise, involving the “constitution of economic paradigms, identities and modes of calculation that justify claims about an ‘imagined community of entrepreneurial interest’” sharing a particular expertise (Jessop and Sum, 2000: 2291). In the Netherlands, PLC expansion fits into a national identification of water management expertise, as expressed in the adage: “God made the world, but the Dutch made Holland”. Respondents often cited the country’s special expertise in water, from treatment technologies to flood control, to underscore their responsibility to share their knowledge and contribute to the wider development of the Dutch economy. In the EPM case, an entrepreneurial identity associated with Antioquia and especially Medellín helps to justify EPM’s activities to the population of Medellín, while sometimes engendering a degree of suspicion in other parts of Colombia (Alvarez, 2005).

An entrepreneurial discourse is also mobilized around the Dutch LPCs. In 1999, the Dutch Ministry of Housing, Spatial Planning and the Environment published a book promoting the LPC as an alternative to PSP under the title Private Business, Public Owners (see Blokland et al., 1999). Similarly, in an interview, a WMD manager described the Indonesian JVCs as public–private partnerships, noting that although WMD has public owners and is not “capitalist”, it operates as “private business”. As in the pro-privatization literature, “private business” is taken as synonymous with financial sustainability, efficiency, and cost recovery. In 2011, the government set up the “PPP facility” for water through the Ministry for Economic Affairs to promote “public–private partnerships”, where the LPCs are meant to be the “private” partner.

This discourse, which negates the public status and mandate of the LPCs, is common across public corporations from a variety of countries; publicness is renounced despite the obvious influences of public shareholders and goals upon the corporations (Anastassopoulos et al., 1985). Such enterprise discourses serve to construct particular realities, eventually constraining the scope for action (Leflaive, 2011). The question remains as to what purpose such rhetoric serves. For Castells, the state’s engagement in social reproduction is always with a view to creating new opportunities for private accumulation (Castells, 1972). Thus, social housing is provided to those able to pay a monthly (albeit reduced) rent. This type of constraint can also be seen in the LPC projects. Still, the effect of approaching social reproduction through the lens of commercial entrepreneurship is a neglect – on the part of the LPCs – of the important ways in which their activities differ from those of private enterprise, resulting in project outcomes sometimes made tenuous by a lack local support. Even if social entrepreneurialism is bound up with commercial goals, it is unlikely to be achieved by the same means.

A variety of issues that can affect the entrepreneurial projects are missed when their mixed social and commercial character is not recognized. These include dissonance between the water discourses of the home and host countries, the condition of the local infrastructure, the strength of local institutions, and the relationships between the various groups involved in and affected by the project. For example, while the “business” discourse may be encouraged in the Netherlands, it can pose problems abroad. When NGOs state that WMD is public in the Netherlands but operates as if it were private in Indonesia, they are making a critique (e.g. Amrta, 2006). With respect to physical and institutional infrastructure, in a report on WMD’s experiences in Indonesia, researchers underscored that the projects faced important setbacks due to insufficient regulatory oversight in Indonesia as well as a lack of preparation for the technical and socio-political realities on the ground (TWD, 2009: 7–8).

EPM has difficulty expanding internationally for similar reasons. Staff emphasize the difficulty of finding the right combination of factors abroad. This means a strong regulatory environment (to protect their investment) and poor water services (i.e. a need for their expertise). According to respondents, poor institutional infrastructure renders investing in physical infrastructure too uncertain for recovering their investment, for successfully improving services, and for protecting their reputation.24 Similarly, in the Dutch case, the LPCs are reluctant to engage where local political support or the engagement of local staff are weak; they fear “wasting time with projects which will not deliver good results” and thereby risking their reputation (Martins de Andrade, 2010: 92).

Consequently, EPM decided that the safest bet was on poorly serviced areas in Colombia with whom they share a strong regulatory environment. Yet, even within Colombia, expansion presents challenges. Having bid for supply contracts, EPM found that corruption in many municipalities renders operations contracts unsound even domestically.25 As one respondent noted, “water is the most complicated business in Colombia, and it even more complicated outside of Colombia”.26 To circumvent these issues, EPM opted to engage where they can gain control of the local utility. The central government has encouraged this by creating a legal framework for regional JVCs (Decreto 1248 de 2004). Like WMD’s JVCs, these have met with criticism from local partners. One reason is the perception of EPM as a corporate extension of Medellín’s economic power (Bonilla, 2014).

---

21 In 2012, the Ministry of International Affairs (MBZ) announced that funding for water and development would increase from €156 to €254 million from 2011–2015 (Knappen, 2012: 1).

22 Interview Dutch Ministry of Foreign Affairs (MBZ), June 2013.

23 Interview MBZ, June 2013.

24 Interviews, EPM, several departments, June 2010 and May 2011.


26 Interview, EPM, general management, June 2010.
Thinking about urban entrepreneurship – social and commercial?

The geographical focus of EPM’s and WMD’s expansion complicates the association of their activities strictly with commercial entrepreneurialism. For water supply, it is widely accepted that rural and low-income urban areas in the South are unattractive for private sector involvement (Budds and McGranahan, 2003). Bakker places the minimum population for a commercially successful water supply project at 500,000 (Bakker, 2003). Researchers and heads of companies like Vivendi agree that the financial risk is too high for the private sector to invest in underserved areas (Budds and McGranahan, 2003). Thus, contrary to private sector experience, both EPM and WMD expressly focus their activities where infrastructure is deficient, economies of scale are poor, and the ability to pay is nominal. “Cherry-picking” does not describe their expansion.

Recalling Austin et al. (2006), social entrepreneurship differs from commercial entrepreneurship in its geographic focus. It targets areas that would normally be shunned by commercial entrepreneurs. For EPM, despite their commercial rhetoric, their sites of expansion – and investment – are in areas of low population and often high incidences of poverty (Fig. 2). EPM management and staff express a sense of responsibility to improve services and standards of living in underserved parts of Antioquia. WMD’s projects follow a similar geography (Fig. 4). In an interview with WMD, the respondent noted “Manado for us is rather big, 500,000 inhabitants in the town.” That is, they are usually well below Bakker’s commercial threshold.

However, while focused on social reproduction, the LPCs are also engaged in commercial exchange. WMD is concerned with recovering its investment (the “not for profit, not for loss” model) – a type of entrepreneurialism identified by Schumpeter as “faisant ni bénéfice ni perte” (Schumpeter, 1983: 46) – and EPM with making a profit (eventually). This should limit the geographies in which they can engage. Indeed, both WMD and EPM are preoccupied by the strength of a given regulatory environment and by corruption. Yet, rather than avoiding areas that lack the institutional capacity to protect their investment (and reputation), the LPCs have focused on control and time.

Control is meant to enable them to achieve the desired results in terms of service improvements, service extension, and rate collection. It is to be achieved by setting up JVCs in which they are the majority shareholders, in the hopes of making them immune to shifts in local political priorities. In terms of project duration, EPM does not anticipate recovering its investment in the regional JVCs for up to four decades. EPM argues that the fact that they are “there to stay” distinguishes them from private operators who are under pressure to recover investment (and turn a profit) within a given contract period. Moreover, initial investment comes from government grants. Of the approximately SUS 100 million in planned investment in Aguas de Urabá, about 21% was in the form of government grants (see EPM, 2009).

The LPCs’ focus on project control and long-term involvement betrays thinking that is biased by ideas of commercial entrepreneurialism. In this view, project outcomes rest with the “entrepreneur” and its capacity to achieve the desired goals in a given set of circumstances. An engagement with social entrepreneurialism, however, tells us that diverse relationships, broad collaboration and even “bricolage” are central to meeting goals in complex political, economic and regulatory conditions (e.g. Smith and Stevens, 2010).

This is borne out by EPM’s own experience. In a recent study of Aguas de Occidente, EPM’s JVC in western Antioquia (Figs. 1 and 2), Bonilla concludes that despite significant technical improvements, the project remains vulnerable (Bonilla, 2014). It is technically, but not socially sustainable. From 2007 to 2012, they reached 95% coverage on water, 83% on sewer (up 11%), and decreased leakage by 16% (Aguas de Occidente, 2013; Restrepo, 2009). Yet, a survey conducted with residents and interviews with municipal staff revealed a consistently negative view of EPM. Respondents complained that government support for water and sanitation is now controlled by EPM (via Aguas de Occidente), leaving the municipalities excluded from the project. While EPM typically focuses on building local trust by demonstrating rapid improvements in service quality, Bonilla’s interviews show that a project’s sustainability ultimately requires a willingness to engage the variety of groups affected by the shift in governance (Bonilla, 2014). In some of the other JVCs, the challenges have been both technical and social.

WMD’s experiences in Indonesia have much in common with those of EPM. First, following its initial experiences in Indonesia, WMD and the DGIS, which funds the projects, decided that longer projects were necessary to achieve the desired outcomes in infrastructure, water loss control, and new connections. Consequently, the four most recent JVC agreements are for 15 years (Fig. 3). After 15 years, the local partners have the option to purchase WMD’s shares. According to WMD management, this decision rests completely with the local partners; WMD is prepared to stay or withdraw, as requested.27 Like EPM, WMD also came to the conclusion that they needed project control to achieve the desired results – as well as to secure loans that would not be granted to their local partners.

However, as with EPM, time and control are proving insufficient to achieve the desired service improvements. A key reason appears to be an inattention to their relationships with key actors. Indeed, too much control can discourage the development of good working relationships and technical success in turn.28 An evaluation of the WMD projects found that WMD’s control over the JVCs actually caused problems because it fostered disengagement on the part of the local partners and diminished their sense of ownership. The intention was for WMD to significantly improve infrastructure in the first 5-years, and then to progressively return control to the local partners. Not “having an equal relationship with your partner” from the outset, however, is now understood to have hindered infrastructure improvements. From 2007 to 2012, the projects led to modest improvements in coverage (about 10% of their target) and leakage (NRW) for some JVCs, and decreases for others (Fig. 4). They also resulted in important increases in water rates (Fig. 4).

An example of the above issues is WMD’s reliance on its subsidiary Inowa Prima Consult PT for technical consulting (Fig. 3). Inowa is 100% controlled by WMD and was set up as the sole provider of technical services to the JVCs. JVC partners were critical of not having a choice of consultant as well as the cost of Inowa’s services and its impact on their increasing debt to WMD. This caused strain in the relationships between WMD with its local partners. However, Inowa was just one example of a generalized problem whereby the partners experienced a lack of control over decision-making combined with a responsibility for the debt incurred as result of those decisions.

In response, WMD has worked to reduce the economic burden of its investments on the JVCs. It converted part of its investment to grants and it reduced the interest on the remaining portion. The interest on loans is now determined by the Foundation for East-Indonesian Water Projects (SWOI). In 2011, it was set at 3.5% (SWOI, 2012). Moreover, like EPM, WMD has come to the conclusion that cost recovery is inappropriate early in a project. Raising prices in very low-income areas to fund service improvements is now seen as flawed. In response to WMD’s challenges,
the Ministry of Foreign Affairs (MBZ) concludes that the JVCs need to engage with a broad range of partners, including NGOs and communities, to improve results and that success depends on an awareness of the local cultural and political context. This reflects recent research in Indonesia, which finds that a variety of actors including users face deterrents vis-à-vis water supply extension resulting in “governance failure” (Bakker et al., 2008); engaging in social reproduction cannot be reduced to commercial forms of entrepreneurialism.

Conclusions

Public corporations are faced with increasingly mixed mandates. While government owners push public corporations, including water-LPCs, to serve both social and commercial functions, the two roles often prove difficult to reconcile (Rousseau, 2013; Vallespin and Gianfelici, 2011). This tension is often left unexplored in the literature that treats LPC reforms through a primarily commercial lens. A focus on commercialization is important, especially in the context of ongoing neoliberalization (see Bakker, 2013). Yet, it often overlooks the ways in which social reproduction and collective consumption condition reforms. They are not simply subject to reform; they are factors in reform. How this works may be mediated by the distinct political ecologies of water, but the point remains of relevance to other services.

By taking an approach to urban entrepreneurialism that engages with social reproduction and consumption, it is argued that a richer understanding of the contradictions inherent in using water supply as a vehicle for economic growth can be achieved. At the same time, an engagement with water supply suggests a broader way of approaching urban entrepreneurialism. This includes an engagement with issues of social reproduction (in mediating commercial reforms) as well as with Schumpeterian forms of entrepreneurialism, as suggested by Jessop and Sum (2000). This insight may be of increasing relevance for studies of urban entrepreneurialism where researchers find a growing emphasis on elements of collective consumption in “selling” cities.

For EPM, WMD and the governments that support their initiatives, in failing to understand their projects beyond a commercial lens, models of growth are applied that often clash with local realities, in failing to understand their projects beyond a commercial perspective, in failing to understand their projects beyond a commercial lens, models of growth are applied that often clash with local realities. How this works may be mediated by the distinct political ecologies of water, but the point remains of relevance to other services.

By taking an approach to urban entrepreneurialism that engages with social reproduction and consumption, it is argued that a richer understanding of the contradictions inherent in using water supply as a vehicle for economic growth can be achieved. At the same time, an engagement with water supply suggests a broader way of approaching urban entrepreneurialism. This includes an engagement with issues of social reproduction (in mediating commercial reforms) as well as with Schumpeterian forms of entrepreneurialism, as suggested by Jessop and Sum (2000). This insight may be of increasing relevance for studies of urban entrepreneurialism where researchers find a growing emphasis on elements of collective consumption in “selling” cities.

Acknowledgements

I would like to thank Catalina Bonilla Agudelo and Sebastian Caranza for their work on the EPM database, as well as Marc Girard and Nathalie Désilets for their work on the images. I would also like to thank the Ministry of Foreign Affairs (MBZ) concludes that the JVCs need to engage with a broad range of partners, including NGOs and communities, to improve results and that success depends on an awareness of the local cultural and political context. This reflects recent research in Indonesia, which finds that a variety of actors including users face deterrents vis-à-vis water supply extension resulting in “governance failure” (Bakker et al., 2008); engaging in social reproduction cannot be reduced to commercial forms of entrepreneurialism.

References
