We are IntechOpen, the world's leading publisher of Open Access books Built by scientists, for scientists

4,500

119,000

135M

Our authors are among the

154
Countries delivered to

TOP 1%

12.2%

most cited scientists

Contributors from top 500 universities



WEB OF SCIENCE

Selection of our books indexed in the Book Citation Index in Web of Science™ Core Collection (BKCI)

Interested in publishing with us? Contact book.department@intechopen.com

Numbers displayed above are based on latest data collected.

For more information visit www.intechopen.com



Chapter

Adaptive Governance as an Avenue for Delivering Public Purpose in the Wake of Financialization

Corina Shika Kwami and Nick Tyler

Abstract

The demand for infrastructure and utility services is an acute challenge for countries in middle- and low-income countries undergoing high levels of urbanization, demographic shifts, and civil and political reorganization. The demand for utilities occurs alongside a trend toward increased financialization of the local state. A challenge for meeting demand for utility services is the shift toward increased financialization where the delivery of public purpose is challenged. This chapter aims to highlight governing arrangements that aid in understanding how public purpose can be delivered through utilities using the case study of Medellin, Colombia. Through examples of public infrastructure projects and the delivery of water by its utility-company, Empresas Publicas de Medellin, the paper discusses how this company achieved alignment of essential services with public purpose through adaptive governance structures that mitigate adverse effects of financialization and promote the integration of economic, environmental, and social goals. While this case does not propose a transferable model of governance, it highlights arrangements that enable a more mixed, adaptive, and nuanced understanding of how adverse effects associated with total financialization might be abated.

Keywords: cities, public-private partnerships, urban development, public purpose, adaptation, entrepreneurial city, governance, sustainability, adaptation

1. Introduction

The demand for infrastructure and utility services such as water, energy, gas and public transport in low-and-middle income countries is increasing alongside shifting demographics, the effects of climate change as well as economic, fiscal and political volatility. Most imminently, acute and population growth is occurring in urban areas, and more specifically, in secondary cities where populations are growing at a faster rate compared to other cities. The implication of this growth is that there is greater stress on available resources [1]. These shifts are accompanied by increased demand for infrastructure and utilities for which prompts cities in particular to explore opportunities to create new investment instruments using municipal assets as collateral [2]. This process of financialization is the capacity to create and monetise new asset classes. One effect of this shift is the occurrence of 'corporate neoliberalism' which is described by Crouch as an economy where key industries are dominated by small numbers of large corporations due to the privatisation of public industries and outsourcing public services [3]. This paper will explore the governing arrangements,

enabling factors and approaches that a city within this complex, social political milieu underwent as an example of where governance of essential services can aid in delivering public purpose. While the paper does not propose a model for utilities, it highlights governing arrangements that place community engagement, stakeholder management and social infrastructure at the heart of delivery.

There is a subset of cities, also described as entrepreneurial cities, that have been able to convert their wealth into freedom from financial market dependence and/or utilise financialization as leverage for more borrowing [2]. The work on entrepreneurial cities is not exclusively limited to cities that have converted wealth into freedom from financial market independence. Jessop and Sum define an entrepreneurial city in capitalist societies as having three properties related to (1) changing forms of competitiveness, (2) changing strategies to promote interurban competitiveness in both economic and extra-economic fields, and (3) entrepreneurial discourses, narratives and self-images [4]. In public utilities' sectors, the entrepreneurial city has come to be associated with reforms in service delivery with privatisation as the most common reform. There have also been cities that have expanded municipally owned water corporations through corporate models that retain an entrepreneurial and local profile in the domain of the public sector [5]. This perspective, is described as "urban entrepreneurialism," is both a response to gaps in revenues and costs, which then drives commercial development alongside delivering public purpose. One explanation for this is the observation that capital mobility, in some ways, pushes urban governments to compete with other urban areas to attract investment and to minimise risk. In the water sector, this shift in cities coincides with political rhetoric towards public-private partnership and infrastructure investment to support development [6].

Given the trends towards corporate neoliberalism, what aspects of governance mitigate the adverse effects of financialization whilst still encouraging investment that is in alignment with public purpose? This paper emerges from a larger body of working examining adaptive governance in the water sector in Medellin, Colombia. This paper showcases governance features that emerge in a city and share characteristics of an entrepreneurial city where financial gains are aligned with public purpose. The background provides information related to pathways for delivering public goods and where a case study on Medellin could contribute a perspective on delivering public purpose through governance. As this case study emerges from a wider piece of work on governance, the methods' section describes the means by which the data was collected, analysed and justifications. The results include literature synthesis on the Medellin and results of interviews on the system for public service delivery. Using this case study to illustrate how a city approaches, the paper discusses the implications of adaptive governance for aligning economic trends with delivery of public purpose. In order to understand the wider context for delivering public goods, the following Section 1.1 discusses different pathways for delivering public goods.

1.1 Pathways for delivering public goods

Delivery of public services has taken various forms ranging from state-level provision to various forms of privatisation. From the mid-twentieth century, public-private partnerships (PPP) between a city, regional and/or national government and private entities, facilitated by a multilateral organisation such as the World Bank, marked a shift towards involving the private sector in delivering public goods. The shift often required measures to encourage privatisation, and subsequent financialization of the sector through a form of a public-private partnership between the state and a private provider [7, 19]. The importance of public purpose has arisen alongside this trend particularly, in identifying ways to meet

public needs. This pathway has been described as a form of smart urbanism and smart citizenship whereby community participation, commons, and ideals beyond the market account for the right to the city, entitlements, or in order to avoid reversion to pragmatic, instrumental and paternalistic discourses [8]. There one argument that places an importance of context in relation to urban processes and the role of politics in delivering essential services. This originates from an extensive review of 23 case studies which explores how local authorities, SME's, corporations, utility providers and civil society are engaged in creating smart cities and the ways in which urban services are being optimised for public good through information and communication technologies [9].

Understanding the role of the private sector in the wider governance of cities is a critical component of designing a governance system that delivers the kind of output end-users need and want with respect to essential services. In the smart city discourse, this is explored further in an exercise to map stakeholders and vendors from the private sector stakeholders in a smart city showing that to deliver aims in alignment with public purpose, inclusion of the following is critical: openness in the meaning of open participatory communities, balanced approach in terms of the social and technology components, trust in terms of transparency of services and integration [10].

While the PPP is arguably the most common model for public services delivery, the partnership model has a variety of different forms and demonstrate several pathways for delivering public goods. Crouch argues that in the process of privatisation and outsourcing of public services, there has been less competition, political intervention by firms and increased inequality which is in direct contrast to neoliberalism's claims. He coins this term as 'corporate neoliberalism' [3]. While the private sector has had increasing visibility in the delivery of public services, Mazzucato explores in detail the role of the state in delivering public purpose through investment in infrastructure, technology, research and development through patient capital, which in turn enables private sector participation. This model examines the close relationship between the public and private sector of the US and UK historically and articulates pathways for how this might be achieved [48].

2 Methods

In reviewing different cases, there is a predominance in the literature on the failure of public-private partnerships (PPP) related to the governance of public utilities. The literature review identifies PPPs as the dominant theme likely as it is where financialization through reforms over the last three decades have originated,

¹ The aim of the wider study from which this chapter is drawn, was to identify a case for further depth where the governing arrangements enabled delivery of public purpose despite wider trends towards financialization. Water was selected as a sector to explore given the debates on water as a human right and its characterization as a public good. Cases reviewed having these different models of service delivery in the water sector in cities such as Cochabamba, Bolivia and Porto Alegre, Brazil as well as other larger cities in Latin America [11], Europe, South Asia, Middle East and Africa [12] that have taken steps to reform the delivery of water through public reform, privatization and/or an evolution towards mixed models of delivery. Other cities reviewed include those such as Istanbul [13], Mumbai [14] and Johannesburg [15] which have experimented with mixed models. Review of these cases highlighted a multi-country study investigation comparing cities 'governance' challenges in the provision of public services in cities of different scales such as Jakarta, Dhaka, Johannesburg, Sao Paulo, Mexico City, Riyadh, Istanbul and Singapore and the ways in which governance enabled or inhibited successful provision [16]. Further in depth case studies included scholarship on Bangalore [17], South Africa [15], the Netherlands WMD [6] and a review of different examples in Sub-Saharan Africa [18].

and thus dominate the governance discussion [7]. There are reviews that show where system change for the performance of water utilities has led to system failure [20, 21] and also where there have been successes. Where management models can go further is in incorporating public purpose within the governing arrangements using the utility as a means, albeit public or private, in the design and delivery. Therefore, in selecting a case study, there is a preference for a case that provides substantial evidence for an approach to governance with strong evidence for putting public purpose at the forefront of service delivery.

The well-documented social urbanism model in governance in Medellin [22, 23] provided evidence suggesting the model for water services that places community engagement, stakeholder engagement and social infrastructure. The opportunity to explore this further through stakeholder engagement positioned the Medellin case study as a strong candidate for exploring how this city could employ financialization in the delivery of public purpose.

The method for analysis built on existing literature and uses data from semistructured interviews to identify themes shared by stakeholders within the water system to compare with existing frameworks on adaptive governance [38, 39] using Ostrom's perspective on social-ecological systems [46] and Pahl-wostl's understanding of resource governance regimes [47]. Semi-structured interviews related to how stakeholders perceive the system, challenges and opportunities in order to develop an understanding of the system. A qualitative approach with a constructivist epistemological paradigm was employed to account for a diversity of perspectives from stakeholders. Thematic content analysis was chosen because of its demonstrated use for investigating questions where existing data is limited, however, providing a systematic approach for comparison of results with existing theory [37]. This approach is associated with content analysis as a suitable approach for model generation and based on experience in the literature that an open approach to coding using thematic content analysis facilitates theory emerging from the data (grounded theory) [40-42]. This is also useful in having a broad view of themes that can be compared with existing frameworks facilitated when a theory-based approach to coding is applied [31, 40, 43, 44].

Sample composition and sizing combined (1) saturation, (2) purposeful sampling, and (3) snowball sampling. To recruit interviewees, contacts with the utility provider, Empresas Publicas de Medellin, the universities (UNM and UCL) and Penca de Sabila, a civil society organisation working closely in water and environmental issues more broadly, provided the first channels for recruiting interviewees. The final sample includes 30+ representatives from municipal authorities, metropolitan area authorities, university experts, utility provider (EPM), members of the different civil society organisations and water user associations. Of these participants, approximately 1/3 of the perspectives were from EPM. This was due to the large scale of the organisational diversity in departments working on issues related to water: water and wastewater, sanitation, infrastructure, planning, payments, regulation, energy-water, finance and business development.

The interview guide was developed in partnership with the national university in Colombia based on Pahl-Wostl's definition of resource governance and refined through a series of pilot interviews. Interviews were coordinated between the researcher and the interviewee and conducted in line with UCL Ethics (Project 814/001). The level of engagement before the meeting ranged from very limited to several informal introductions and conversations leading up to an interview.

A two-pronged approach to coding was conducted to ensure that contextual themes were not ruled out by data exclusively [45]. A data-driven approach was used at first to identify themes or ideas that may be overlooked with the purpose of having a breadth of context for the study as a whole. For data-driven codes, this

proved consistent with the theory of letting the data speak for itself particularly as there may be features of the system of adaptive governance in Medellin that depart from what the theory predicts [37, 40].

This was an iterative process of more than 25+ drafts of the codebook, then shared with supervisors (2), local partners (2), possible coders (5) and several others. The intent of the codebook evolved from merely reproducing the definitions of the codes of interest to a user-friendly and concise code that could be used to read through the interviews and identify relevant themes. The researcher coded the data-set twice, amending the codebook for improved internal consistency.

Secondary coders were identified and given the codebook. They were encouraged to send any questions ahead of coding to verify the codes and confirm understanding of the task. This varied from informal conversations to an email exchange, where the secondary coder wrote how they interpreted the codebook in plain English. After a coding a sub-sample of the excerpts given, the coders could ask additional questions before continuing to code the sample. Coded excerpts were then compared with the results of the researcher.

To apply an approximate measure for reliability in coding, several examples were consulted [37]. The measure that was best suited to test this was the percentage agreement on presence: percentage of occasions where the researcher and the second coder found information in common.

After coding the interviews using the codebook and comparing results with the other researchers, analysing the coded material was conducted using the percentage agreement on presence. A threshold of 70% for inter-rater reliability was agreed as the standard.

Percentage agreement on presence = 2 (number of occasions Coder A + number of occasions Coder B)/(number of occasions Coder A+ number of occasions Coder B).

Three secondary coders were included to code a percentage of the interviews and yielded the following percentages on agreement [37].

Coder A: .82 Coder B: .77 Coder C: .77

3. Results

3.1 Contextual findings from the literature for the city of Medellin, Colombia

The following section presents the results of the literature review and the results of the semi-structured interviews related to the governing arrangements. The literature review is meant to highlight contextual factors (geographic, political, social and governance) for understanding how public purpose is delivered through the governance of utilities in the city despite trends towards financialization.

Medellin is the second largest city in Colombia and for centuries was an industrial hub for the country. The city is located in the Aburra Valley and is the capital of the Department of Antioquia. It currently has a population of 2.4 million, and 3.7 in the metropolitan area, which includes 10 municipalities. The city itself has 16 sections, known as communes or comunas which is the smallest administrative units shown in **Figure 1**. While Medellin is well-known in recent years for its innovation in social and public architecture [22, 24], Medellin boasts a long history of innovative infrastructure, utility development and planning.

Alongside profound events in politics and social transformation in response to demographic changes within the city during the twentieth century, public institutions developed a tradition of including citizens in the process of urban planning,

using the provision of public services, such as water, as a means to engage in wider articulation of public purpose. This was facilitated by a system of urban governance that begins in the modern period in the 1940s by Sociedad de Mejoras Publicas (SMP), a private organisation, which drove urban planning and development in Medellin. This organisation had a strong influence over the public and private sectors: a relationship that was highly integrated according to Botero Herrera (1996). Through reforms, this entity evolved to become EPM, Medellin's first legally independent utility and single city-owned multi-utility corporation [28]. The entity is public however the boards have a commercial licence to explore the ways in which to improve service reliability and extend infrastructure without government driving decision-making. At the same time, there were/are several programs implemented with city government and utility management which fought business and guilds to pursue programs aimed at wider, long-term public goals [28].

The governance of public services as a means to deliver wider public purpose emerged during the 1950s, with the Medellin Master Plan, which was developed to manage urban development and promote legislation that would impact infrastructure for housing, transport and infrastructure for utilities [28]. Planning for the city was done in an integrated manner by the municipality and with EPM. Several programs involved city-dwellers in the planning and provision of public services including Habilitacion Viviendas, literally meaning "Fitting Out Dwellings" spearheaded integration of new settlements in the city through a series of regulatory processes to obtain legality with utility connections as the point of contact between user and duty-bearer (the state) [28]. Connection to public services such as water was one of several ways these plans had an impact on the city's planning activities. Changing migration patterns related to the conflict, internal issues in Medellin and worsening political and economic conditions during the 1970s intensified the need for engagement between users and city-planning activities [25]. In the 1990s, following a rapidly changing regulatory environment, EPM commercialised, while remaining still the property of the municipality which has raised questions about the future of the company and its objectives of delivering public purpose. While this is a vibrant and active debate, the governance and the role it has played historically

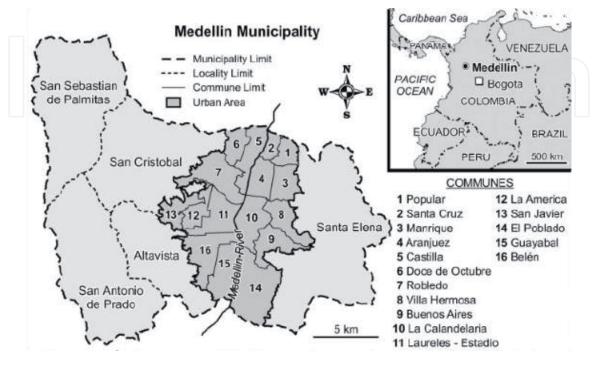


Figure 1. *Medellin municipality, including socio-economic tiers (Furlong* [26]).

orients the discussion towards understanding how EPM is delivering public purpose in the wake of these changes, rather than if/how public purpose can be delivered.

3.2 The transformation and "the Medellin" miracle

Descriptions of the transformation that brought the city through decades of conflict include the role of civil society, the multi-utility EPM and public architecture which highlights the role mayors of Medellin who were committed to a vision of public purpose. Success has also been linked to a succession of leaders, namely the city mayors Luis Perez (2001–2003), Sergio Fajardo (2004–2007) and Alonzo Salazar (2008–2011), all highly qualified with a vision of public purpose for the city beyond traditional politics [30, 32, 33]. Programs shared similarities with the concept of social urbanism which focused public investment in the city's more deprived areas through high-quality infrastructure and striking architecture [22].

Medellin's transformation garnered international and national recognition. Described as the "Medellin Miracle" particularly in the areas of social urbanism and mobility, there are several features in the Medellin context associated with its "perceived success" which are part of the landscape of an integrated and adaptive society [20]. Success in Medellin from a social perspective is associated with a range of factors: cultural aspects of the entrepreneurial class (Antioquian people with a strong work ethic, Catholic, close-knit community) associated with a strong business elite and a sense of duty, decentralised governance structure of Colombia, public trust, regional pride, high returns on human development, disciplined business culture and well-educated elite that serve in the public sector [31, 34].

Municipal programs have played a significant role in integrating and normalising informal sectors during the transformation of the early 2000s and beyond [22]. These programs emerged in response to barriers such as social inequality, spatial segregation, under/unemployment, social exclusion, weak state control, insufficient provision of essential services and housing density. These programs also existed alongside strong paramilitary and police presence in surrounding areas. This pressure to respond created a dichotomy of investment in social programs to "improve people" and "excessive policing" to "control undesirables" [29].

3.3 Governance context for Medellin in the wider Colombian political landscape

There are several features of the governance context in Medellin and Colombia more broadly that should be taken into account. Firstly, Medellin is situated within a national decentralised regime for Colombia, which places responsibility at a national level for policy-setting and decision-making and the duty to implement situated within the remit of the regional and local governing authorities. Secondly, the national Constitution in 1994 and subsequent reforms in public services [35] placed specific regulations about entities that could provide public services (public, private and community-based entities) [27]. This law had several implications, namely that sectors cannot cross-subsidise one another after the 1990s reforms. Thirdly, there is evidence of the role of the multi-utility, EPM, and its implementation of the law as a public service provider at a city level which is where this paper will focus on.

With this context of governance in mind, implementation of monitoring and evaluation activities in Medellin is overseen at a local and metropolitan level by the municipality and Area Metropolitano de Valle de Aburra, the metropolitan authority for 10 municipalities including Medellin. EPM is the primary service provider that covers a wide metropolitan area for service delivery. EPM provides potable water services in 10 municipalities in the Aburra Valley: Medellin, Bello, Envigado, Itagui, La Estrella, Sabaneta, Copacabana, Girardota, Caldas and Barbosa [36].

The 3 main governance approaches that reflect a view of having public purpose at the centre of water utility delivery are: the composition of a multi-stakeholder board, profit transfers for social projects in the city and corporate governance that dictate the interaction between the city and the company, EPM. The following section will present synthesis of these governance approaches utilised by EPM and present perceptions of the interviewees through quotes from stakeholders in the water sector. The quotes are examples where stakeholders have helped to shed light on governance approaches. They are perceptions held by the speaker and are triangulated with other speakers' perspectives and literature where relevant. The Discussion will present these findings in light of trends towards financialization, highlighting features that resonate with the entrepreneurial city delivering public purpose.

3.3.1 Governance approaches

EPM's board composition is an example where an integrated group of actors from different stakeholders are included within an entity that has a level of independence in its governance.

"The board of EPM is: the mayor, who is the president, with 3 representatives from the municipality, then we have one from the regional governments, from Antioquia, represents the governor, then you have 5 citizens, that represent different sectors, but two of them are "locals" that are elected by elected by local councils and they have control, responsibility (23:31), and need to provide information to the citizens, but the power of the mayor of Medellin is really important because it is 100% legal owner. And EPM is a group that provides services in Bogota, Bucaramanga, Cali, everywhere in Colombia, in most of Colombia." - ID21, metropolitan area (urban environmental authority).

This finding was verified in the General Agreement on Corporate Governance (**Figure 2**) and offers an example of how a governance design at a leadership level can ensure diversity of stakeholders in a decision-making seat of authority. This includes the mayor who is the president, 3 municipal representatives, 1 regional representative, 5 representatives from industrial sectors (2 of whom must be private citizens).

The balance may be primarily due to the governance of the company itself, which requires this balance of powers in institutional agreements. Although the extent to which this system could favour the interests of the elite is neither supported nor ruled out by evidence, nonetheless this agreement affords a continuity, despite elections every 4 years.

Another governance feature that shows where the financial success lies – of an entity, as a public company that operates much like a multinational private entity – namely in an agreement between the city and company that ensures 30% of profits transferred from the company to the city annually to fund social projects. This also includes an agreement that the city has sovereignty over decisions of how the city uses the 30% of the annual profits transferred from the company. One stakeholder describes this saying:

"So EPM is 100% property of the citizens of Medellin, 100% property of the municipality and its profits, a percentage, about 30% of its benefits, goes to the mayor for social investment. So it supports the capacity of the city to solve problems. Not only to provide but also to develop social services and development. That is really important and special and particular to Medellin." - (Municipal authority, ID21).



Figure 2.Corporate governance of EPM (examples from agreement between the City and the company) supplementary material from ID1, (EPM, 2016).

This quote is included as an example of how the two actors are arranged in efforts to deliver social goods in the city. Contextually, this quote is taken from a conversation related to the role of EPM and the municipality during and after the transformation which included social innovation efforts by the city and EPM.

3.3.2 Corporate governance and institutional agreements

There are other examples where institutional agreements between different actors enable the institutions to maintain independence and sovereignty while also working together in an integrated manner. For example, the public service company is technically the property of the municipality but exercises a degree of independence in its business affairs regardless of the political party in power. This means there is autonomy in how the company can conduct its business. However, at the same time, a percentage of profits are transferred annually to the municipality for social projects where the city oversees the spend with guidelines on how to deliver goods for the public. This form of transfer indicates a balance between independence and sovereignty as well as evidence for working together in an integrated manner.

This balance is not one governing arrangement exclusively, but a series of different corporate governance guidelines that govern the company.

This includes governance codes to ensure that the municipality does not interact with the company except through the board, does not intervene in EPM's contracting processes or other aspects of its financial planning and management. The agreement for example stipulates that the City agrees to "appoint no less than 5 independent directors."

The Discussion will discuss these findings and what the governance model for the Medellin case demonstrates, highlighting features that resonate with the entrepreneurial city.

4. Discussion

Each of these governance arrangements seems to raise questions on the boundary between public and private and to what extent public purpose is achieved where the public and private aspects of delivery intersect. The blurring of the lines between public services and privatisation is consistent with a pattern of entrepreneurial states Mazzucato argues have historically had as a characteristic of delivering infrastructure, technology, research and development for long-term public goods [48]. While not a causal relationship from this analysis, there is evidence to suggest an association between this type of system and an adaptive arrangement of actors that can adapt based on needs within the system. The multi-stakeholder board of EPM achieves this by including representation from public, private and non-governmental interests alike, who in having decision-making power at the level of the board can negotiate the provision of services in the city, ensuring that the public purpose that the company was established to fulfil is in balance with its commercial aims. Similarly, the earmarked 30% profit which is transferred annually from the company to the city reflects a closeness between public and private entities yet with arrangements for how the funds are spent in order to deliver public good. This is one example of several governance arrangements set out by the code of corporate governance which includes autonomy for EPM in terms of budget and administrative purposes. The code also safeguards EPM from political interference such as contracting processes, financial planning and processes as well as appointing independent directors.

The independent nature of governance EPM, in terms of business growth with constraints on earmarked funds for local social projects suggests that this autonomy-within-limits approach ensures that the city can convert its wealth into freedom, whilst ensuring that there are ways in which the market can serve public purpose. Whilst not explored in this research, policy evidence has suggested that because the market and political social context of Medellin is thriving and, on the rise, coupled with the success of EPM's services, that companies like EPM are able to access international loans for expanding infrastructure. While not established as causal, this does suggest that there may be an association between market, public and social stability and increased investment. There are questions around the boundaries of adaptive governance and how far this can be stretched within a system, with further questions about transparency, accountability and conflicts of interest, yet this example allows us to explore further questions from a starting point where the intersection of public and private is a norm.

What goes beyond seemingly mitigating the adverse effects of financialization and encouraging investment, is an ongoing dialogue by the company and the city on how to deliver public purpose. Recall that EPM as a company was founded with the purpose of engaging in planning of the city and ensuring uniform, stable and resilient access to utilities. As the city evolved, there were different demands that the company and city had to respond to. For example, when there was a surge in population growth, EPM and the city collaborated extensively on housing and land-use reform. When public and social cohesion was destroyed, EPM and the remaining civil society worked together to help rebuild the social fabric. And currently, as there is pressure to ensure that the success of the company is in parallel with success in the city. There is widespread debate on what this success in the twenty-first century would mean for the future of Medellin as an entrepreneurial city or as it is described as an 'innovative city.' Perhaps, though the very nature of its innovation and entrepreneurship is in its capacity to have an ongoing dialogue with all parties involved about what that would look like.

5. Conclusion

In reflecting upon the experience of Medellin, the governance of public services is characterised as adaptive and designed in ways that can facilitate delivery of public purpose through utilities despite a trend towards financialization in the public services worldwide. While not the end goal, the composition of the multistakeholder board, 30% transferred profits annually for social transformation projects and the code of corporate governance serve governing arrangements in place to facilitate a dialogue between the public and private aspects of the system, with a broad base of stakeholders that operate within and across these boundaries.

The strengths of this type of investigation are that it allows for exploring in depth, the contextual background in which these innovative governing arrangements are situated. This type of model also shows the limitations in discerning where boundaries between public and private sector lie in delivery of long-term public goods. While these findings are context specific and not identified as causal, transferability is something that would require further analysis. There are also questions around the boundaries of adaptive governance and how far this can be stretched within a system, with follow on questions about transparency, accountability and conflicts of interest. While this case does not explore these aspects beyond the governance design, this case provides a starting point for future work where the intersection of public and private is a norm.

With these constraints in mind, however, there is scope to position the Medellin example to spur dialogue on how adaptive governance could be explored further in efforts to deliver public purpose in the wake of financialization, and further, how governance might promote processes for achieving aims that go beyond public and private boundaries. Looking beyond Medellin, possible next steps would be to identify synergies with other seemingly entrepreneurial cities and explore more fully under what conditions these features thrive.

Acknowledgements

Special thanks and support to colleagues Ivan Sarmiento and Peter Brand at the National University in Medellin, Colombia. Julio Davila from the University College London Development Planning Unit. Special thanks to stakeholders from various institutions that provided insights for the interviews including environmental organisations, utilities, urban, metropolitan and regional authorities, civil society, community-based and academic institutions. This research emerges from a PhD studentship funded by the Transforming the Engineering of Cities Grant by the Engineering Physical Research Council (EP/J017698/1). The views expressed are from the authors only and do not represent a stance from the Council.

Conflict of Interest

No competing interests from any author.

Author Contributions

Dr. Corina Shika Kwami oversaw the planning, obtaining ethical clearance, data collection, analysis of the data and writing of the paper. As it was part of a wider study for a doctorate, Dr. Nick Tyler supervised the work and provided comments at various stages of the written work.

IntechOpen



Corina Shika Kwami and Nick Tyler* Department of Civil, Environmental and Geomatic Engineering, University College London, London, United Kingdom

*Address all correspondence to: n.tyler@ucl.ac.uk

IntechOpen

© 2019 The Author(s). Licensee IntechOpen. This chapter is distributed under the terms of the Creative Commons Attribution License (http://creativecommons.org/licenses/by/3.0), which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited. CC BY

References

- [1] Roberts BH. Managing Systems of Secondary Cities: Policy Responses in International Development. Cities Alliance, London, UK; 2014. 233 p
- [2] Weber R. Selling city futures: The financialization of urban redevelopment policy. Economic Geography. 2010;86(3):251-274
- [3] Crouch C. 9. The paradoxes of privatisation and public services outsourcing. The Political Quarterly. 2016;86:156-171
- [4] Jessop B, Sum N-L. An Entrepreneurial City in action: Hong Kong's emerging strategies in and for (inter)urban competition. Urban Studies. 2000;**37**(12):2287-2313. DOI: 10.1080/00420980020002814
- [5] Guerrero TA, Furlong K, Arias J. Complicating neoliberalization and decentralization: The non-linear experience of Colombian water supply, 1909-2012. International Journal of Water Resources Development. 2015;32 (August):1-17. DOI: 10.1080/07900627.2015.1026434
- [6] Furlong K. Water and the entrepreneurial city: The territorial expansion of public utility companies from Colombia and the Netherlands. Geoforum. 2015;58:195-207. Available from: http://linkinghub.elsevier.com/retrieve/pii/S0016718514002024
- [7] Philippe M. Public-private partnerships for urban water utilities: A review of experiences in developing countries. Trends and Policy Options; World Bank. Washington, DC; 2009:8. Available from: https://openknowledge.worldbank.org/handle/10986/2703 License: CC BY 3.0 IGO
- [8] Cardullo P, Kitchin R. Smart urbanism and smart citizenship: The neoliberal logic of 'citizen-focused'

- smart cities in Europe. Environment and Planning C: Politics and Space. 5 August 2019;37:813-830. DOI: 10.1177/0263774X18806508
- [9] Karvonen A, Federico Cugurullo FC, editors. Inside Smart Cities Place, Politics and Urban Innovation. 1st ed. London, UK: Routledge; 2018. 304 p
- [10] Lytras MD, Anna V, Sarirete A. Clustering smart city services: Perceptions, expectations, responses. Sustainability. 2019;**11**(6): pp 1-19
- [11] Lobina E, Hall D. Water Privatisation and Restructuring in Latin America. Greenwich, UK: Public Services International Research Unit (PSIRU); 2018. Vol. 442007. Available from: http://www.psiru.org/ reports/2007-09-W-Latam.doc
- [12] Bakker KJ. From public to private to ... Mutual? Restructuring water supply governance in England and Wales. Geoforum. 2003;34:292-302
- [13] Altinbilek D. Water management in Istanbul. International Journal of Water Resources Development. 2006;22(2):241-253. DOI: 10.1080/07900620600709563
- [14] Nallathiga R. Reforming water sector governance and institutions for improving efficiency: The case of Mumbai. International Journal of Regulation and Governance. 2006;**6**:99-133
- [15] Smith L. Neither public nor private: Unpacking the Johannesburg water corporatization model. Social Policy. 2006;27:1-62. Available from: http://unrisd.org/unrisd/website/document.nsf/ab82a6805797760f80256b4f005da1ab/79f48a7bdd5ca384c12571d100257095/\$FILE/LaSmth.pdf
- [16] Varis O, Biswas AK, Tortajada C, Lundqvist J. Megacities and water

- management. International Journal of Water Resources Development. 2006;22(2):377-394
- [17] Connors G. When utilities muddle through: Pro-poor governance in Bangalore's public water sector. Environment and Urbanization. 2005;17(1):201-218
- [18] Schwartz K. The new public management: The future for reforms in the African water supply and sanitation sector? Utilities Policy. 2008;**16**:49-58
- [19] Bakker K. Archipielagos and networks: Urbanization and privatization in the south. The Geographical Journal. 2003;**169**(4):328-341
- [20] Baietti A, Kingdom W, van Ginneken M. Characteristics of wellperforming public water utilities. Water Supply Sanit Work Notes. 2006;**1**. Available from: www.worldbank.org/ watsan
- [21] Noll R, Shirley MM, Cowan S. Reforming Urban Water Systems in Developing Countries. Econ Policy Reform Second Stage. Stanford, California USA: Stanford Institute for Economic Policy Research; 2000. pp. 243-289
- [22] Davila J, Brand P. Urban Mobility and Poverty, Lessons from Medellin and Soacha, Colombia. Development Planning Unit, UCL and Universidad Nacional de Colombia. London, UK; 2013
- [23] Turok I. The seventh world urban forum in Medellin: Lessons for city transformation. Local Economy. 2014;**29**(6-7):575-578. DOI: 10.1177/0269094214547011
- [24] Brand P, Davila J. Mobility innovation at the urban margins: Medellin Metrocables. City. 2011;15(May):37-41. Available from: http://discovery.ucl.ac.uk/1325728/

- [25] Hylton F. Medellín: The peace of the pacifiers. NACLA Report on the Americas. 2008;41(1):1-6
- [26] Furlong K. The dialectics of equity: Consumer citizenship and the extension of water supply in Medellín, Colombia. Annals of the Association of American Geographers. 2013;103(5):1176-1192. DOI: 10.1080/00045608.2013.782599
- [27] Furlong K, Acevedo T, Arias J, Patiño C. 2018. Rethinking water corporatisation: A 'negotiation space' for public and private interests, Colombia. Water Alternatives, Montpellier, France. (1910-2000);**11**(1):187-208
- [28] Lopez M. Paisajes hidricos urbanso en disputa: agua, poder y fragmentacion urbana en Medellin, Colombia [Internet]. Confiar, Corporacion ecologica penca de Sabila; 2016. Available from: https://openlibrary.org/books/OL26234923M/Paisajes_hídricos_urbanos_en_disputa_agua_poder_y_fragmentación_urbana_en_Medellín_Colombia
- [29] Tubb D. Narratives of citizenship in Medellín, Colombia. Citizenship Studies. 2013;17(5):627-640. DOI: 10.1080/13621025.2013.818380
- [30] Fukuyama Francis CS. Half a miracle: Medellin's rebirth is nothing short of astonishing but have the drug lords really been vanquished? Foreign Policy. 2011;(1):26-28. Available from: http://web.a.ebscohost.com/ehost/detail/detail?vid=56&sid=a212bad69461-428b-ad17-92a37687fcf4%40sessio nmgr4006&hid=4214&bdata=Jmxhbm c9ZXMmc2l0ZT1laG9zdC1saXZl#AN=60849592&db=a9h
- [31] Hameiri S. The trouble with miracles. 2007;**19**(2):409-441. Available form: https://www.economist.com/the-americas/2014/06/07/the-trouble-with-miracles

- [32] Mendieta E. Medellín and Bogotá: The global cities of the other globalization. City. 2011;**15**(2):167-180
- [33] Ashoka. The Transformation of Medellín, and the Surprising Company behind it. Forbes, New Jersey; 2014. pp. 1-3. Available from: http://www.forbes.com/sites/ashoka/2014/01/27/thetransformation-of-medellin-and-thesurprising-company-behind-it/
- [34] Drummond H, Dizgun J, Keeling DJ. Medellín: A City reborn? Focus on Geography. 2012;55(4):146-154
- [35] Secretaria. Ley 142 de 1994 Nivel Nacional El regimen de los servicios publicos domiciliarios [Internet]. 1994. Available from: http://www.alcaldiabogota.gov.co/sisjur/normas/Norma1.jsp?i=2752
- [36] Revuelta San Martin L. El impacto de las actividades antropicas que se desarrollan en las cuencas abastecedoras sobre la prestacion del servicio de acueducto (EPM) Embalse La. [Internet]. Medellin, Colombia; 2017. Available from: http://slideplayer.es/slide/10168749/
- [37] Boyatzis RE. In: Boyatzis RE, editor. Transforming Qualitative Information: Thematic Analysis and Code Development. Thousand Oaks, CA; London: Sage; 1998. 184 p
- [38] Pahl-Wostl C. The implications of complexity for integrated resources management. Environmental Modelling and Software. 2007;22(5):561-569
- [39] Rijke J, Brown R, Zevenbergen C, Ashley R, Farrelly M, Morison P, et al. Fit-for-purpose governance: A framework to make adaptive governance operational. Environmental Science & Policy. 2012;22:73-84. DOI: 10.1016/j. envsci.2012.06.010

- [40] Glaser BG, Strauss AL. The Discovery of Grounded Theory: Strategies for Qualitative Research. Vol. 1. New York, USA: Routledge. 1967. 271p. Available from: http://www.amazon.com/dp/0202302601
- [41] Creswell JW. Qualitative Inquiry and Research Design: Choosing among Five Approaches. 2nd ed. Newbury Park, California: Sage Publishing; 2007. 424 p
- [42] Lincoln YS, Guba EG. Ethics:
 The failure of positivist science. In:
 Lincoln YS, Denzin NK, editors.
 Turning Points in Qualitative Research:
 Tying Knots in a Handkerchief. Walnut
 Creek, CA: Altamira Press; 2003.
 pp. 219-237
- [43] Denzin NK, Lincoln YS. Editors. The SAGE Handbook of Qualitative Research. Third Edit. Thousand Oaks: Sage Publications, Inc; 2005 1232 p
- [44] Hsieh H-F. Three approaches to qualitative content analysis. Qualitative Health Research. 2005;**15**(9):1277-1288. DOI: 10.1177/1049732305276687
- [45] Braun V, Clarke V. Thematic analysis. Qualitative Research Methods in Mental Health and Psychotherapy. 2012;5(4):53-76. Available from: http://discovery.ucl.ac.uk/91396/
- [46] Ostrom E. General framework for Analyzing sustainability of social-ecological systems. Science. 2009;325:35-38
- [47] Pahl-Wostl C. A conceptual framework for analysing adaptive capacity and multi-level learning processes in resource governance regimes. Global Environmental Change. 2009;**19**(3):354-365
- [48] Mazzucato M. The Entrepreneurial State: Debunking Public Vs. Private Sector Myths. Vol. 1. London: Anthem Press; 2015