MARKET SOLUTIONS AND INEQUALITIES IN SANITATION SERVICES ACCESS IN BRAZILIAN CITIES

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Abstract
Market solutions have become the core of public administration in both developed and underdeveloped countries. The aim of this paper is surveying sanitation services in Brazil in order to discuss how the privatization and other means to transfer public services to private capital hands may reduce the sanitation services access for low-income households. The paper drew out experiences from different areas of Brazilian territory with the view to show the complexities involved in public policies related to sanitation services. The arguments presented in this paper show that the market solutions may not be the best answer to improve sanitation access to low-income households the mismatch of objectives between private capital and public policy. Also, Brazilian experiences show that the inequalities in sanitation services access reflect the lack of accountability. Brazil has legal instruments and institutions to improve its sanitation accountability but there is no social control over those institutions. In conclusion, the way to improve sanitation services to low- income households does not depend on changes in the ownership of utilities or in institutional/legal design, but how to manage the existing instruments in regard to a less unequal system.
Keywords: basic sanitation, spatial inequalities, Brazil, water policy

1. INTRODUCTION

Market solutions have become the core of public administration in both developed and underdeveloped countries. This approach has disseminated beyond macroeconomic policies to achieve all aspects of public management, including regional and urban policy. The provision of public services by private capital is not new. Several urban services have been provided by private companies in developed countries since the 19th century. However, those services were geographically restricted due to high economic risk, as well the limitations with regard to the funding demanded. In a context of welfare policies expansion, the State took the responsibility to provide public services. With the exhaustion of the Keynesian approach, new ways to fund public services have emerged by means of financial market innovations. The commoditization of public services brings several risks to low- income families because the focus of those services is diverted from public needs to investors' needs.

The aim of this paper is surveying the Brazilian sanitation services in order to discuss how the privatization and other ways of transferring public services to private capital hands may reduce sanitation services access by low-income households. The regional disparities in Brazil provide a good example of the

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obstacles to the universalization of sanitation services. For this reason, the paper drew out experiences from different areas of Brazilian territory to show the complexities involved in public policies related to sanitation services.

The methodology of this work involved three steps. The first step was to show how global economic changes explain the current features of the sanitation industry in developed countries. These international experiences serve as background to analyze the current Brazilian situation. The next step concerned presenting some experiences in different areas of Brazilian to show how privatization and other ways to transfer sanitation services to private hands may reduce the access to sanitation services to low-income families. As mentioned before, the Brazilian territory extension and its diversity create huge challenges to the provision of public services to the population. In an attempt to provide an answer to this debate, the final step is to present some thoughts about the possibilities and limitations of the governance model to reduce the inequalities in the sanitation services access.

The paper is divided into four sections, excluding this introduction. The first presents a discussion about the market influence in the design of public management. The second section focuses on selected experiences in different Brazilian social and economic contexts. The following section examines the Brazilian governance framework regarding water and sewage services, highlighting its advances and limits. The key questions are noted in the conclusion.

2. BUILDING SANITATION UTILITIES: THE MARKET APPROACH

The closing of the Fordism-Keynesian era brought huge challenges to the capital accumulation process. Following the regulationist approach (Lipietz, 1985), the reduction of productivity in the 1970s implied an economic slowdown, affecting the growth of profits. In the context of economic crisis, capital is no longer the reason to support the increase of public expenses. Thus, the State had to be adjusted to the new level of funding provided by economy. However, cutting public services is not an easy task in democratic countries. The justification for the new public policy orientation was based on the premise that private management is better than public, because the private sector is less susceptible to corruption and political influences (Rosenau, 2000). Besides, the new era globalization, which implies more competition between companies, requires a flexible and efficient State. Considering the reduction of funding for public expenses, governments had to find new sources of revenue.

In some aspects, the current pattern of public services management may represent a regression in terms of public access. Swyngedouw et al. (2002) showed that access to sanitation services has increased since the 19th century as a result of State concerns regarding a wide range priorities, such as public

health and environment preservation. The initial actions to increase basic sanitation services were limited to high-income neighborhoods and were usually provided by small private companies; hence, the quality of services differed. In the second half of the 19th century, sanitation services were municipalized in order to expand their geographic coverage and to set a quality standard. After WWII, sanitation services, as well other key public services (electric power, communications etc.), were incorporated by the national government in the context of a Keynesian State-led economic policy. Thus, the concept of sanitation services as a business, rather than a wide-ranging public policy, resembles a return to a time when public services were available only for those who could afford to pay, implying a deliberate policy to increase social inequality.

Despite the increase in competition among companies, countries and places, globalization also brought new business opportunities for capital investments. Privatization and other mechanisms to transfer public assets to private companies have opened new markets in the infrastructure industry. After privatization, British and French water companies became the major players in the global water industry (Dore, 2004). One of the reasons for the British and French companies' business success is related to adoption of the "cherry-picking strategy"; i.e., the practice to move investments from the original areas of concession to other areas or services with more profitability (Graham & Marvin, 1994). In some cases, the original concessions are located in areas with less economic dynamism inland or the tariffs in those places are regulated by the State. In each situation, the rate of profit may be narrowed.

The privatization and concession of public services are not the only opportunities for private capital. Indeed, the increase in water demand associated with the dissemination of environmental concerns has induced new investments to expand water availability, to reduce water waste and to develop new techniques to reuse water (WWAP, 2017). Barlow (2001) provided some examples: (a) Turkey is converting its oil tankers and pipelines to carry the Manavgat river's water to Cyprus, Malta, Libya, Israel, and Greece and; (b) supertankers owned by oil global companies were adapted to deliver water to Japan, Taiwan, and Korea.

The nature became a commodity and environmentalists provide arguments that are used by market defenders. The authors linked to the Ecological Modernization approach assure that accessing natural resources through market mechanisms allows more efficiency and responsibility in consumption of the non-renewable assets. They believe that environmental preservation may be achieved through the adoption of new practices and technologies without changing capitalism principles (Blowers, 1997), which means to transform natural resources in commodities (Swyngedouw, 2006). In opposition, researchers associated with the Political Ecological approach argue that environmental and social changes co-determine each other because they reflect the social process. Thus, the environmental debate should not be restricted to a physical and biological process. The essential point is how to reduce environmental

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damage and share preservation costs among society; i.e., the environmental controversy must not be separated from questions concerning social disparities, gender and race (Swyngedouw et al., 2002)

Building infrastructure is a capital intensive process requiring a large amount of long-term funding and involves high risks. In both developed and underdeveloped countries, utilities are financed by tax revenue, government debt or revenue bonds tied to specific projects. In many cases, countries have specialized institutions (development banks) to provide funding for infrastructure. Underdeveloped countries also count with funding offered by multilateral institutions, such as the World Bank. In view of fiscal constraints, governments have raised interest in channels of funding based on equity systems.

There are two funding channels to support infrastructure investments: debt and equity systems. According to Chong & Poole (2013), debt represents a large portion of infrastructure funding and it is usually made up of loans banks, although some projects may also include bond insurance. Infrastructure Private Equity attracts companies involved in a project, such as construction companies, as well as investors interested in assets with low risks, such as pension funds and insurance companies. State plays a crucial role in a project's success because it provides co-insurance and the regulation framework. The increase of private capital participation in infrastructure funding implies that the users must pay not only operative costs but they also have to attend to investors' profit expectations. This means that privatized water utilities are subjected to the financial market benchmarks.

In summary, three different elements converge to explain the current sanitation access context: (a) building sanitation utilities is a high risk investment and requires significant funding; (b) the fiscal constraints have opened new business opportunities to private capital; and (c) funding sanitation services through a capital market implies more costs and uncertainty due to the volatility of financial markets. This new path to provide sanitation services transfers risks to users and increases access inequalities because its impacts are different according to economic and social contexts.

3. A SURVEY OF SANITATION SERVICES IN BRAZIL

The current design of the Brazilian sanitation system stems from the 1970s and was implemented by the military administration. Before the 1970s reorganization, sanitation coverage was limited and fragmented. Regional companies were created to consolidate and operate the new sanitation systems but city administrations were, by law, the owners of sanitation assets. Then, city administrations were pushed by the military administration to transfer their concessions to regional companies in exchange for federal resources.

In the 1970s, the military administration created the Plano Nacional de Saneamento (PLANASA), a national sanitation plan with the ambitious goal to carry drinking water to 80% of urban households and achieve 50% of wastewater treatment in urban areas. The regional companies were used for several reasons: first, they could share investments in a large geographic basis to reduce financial risks. Secondly, a large geographic coverage allows users to be charged through a cross-subsidization pricing system. Besides, a large scale production may reduce operating costs (Turolla, 2002). The Planasa investments were shared fifty-fifty between the federal and state administrations. Most of Planasa's goals were achieved due to the military government's heavy-handedness and its abundant resources. However, the investments were mainly focused on building instead of improving the operation systems, explaining some of the current deficiencies in those services. The imbalance between building and operating investments is, in part, explained by the funding design; i.e., while the building costs were covered by the federal and state administration, the operating costs were supported by the users.

Public investments in sanitation services were declined during the 1980s and 1990s because of the economic crisis. At same time, the dissemination of an orthodox approach in public administration created an environment conducive to privatization: some regional sanitation companies sold part of their shares in the capital market. However, gaps in sanitation regulation comprised one of the obstacles faced by private capital to expand its investments in Brazil's sanitation industry (Sanches, 2001; Mello,2005). Besides, the small and dispersed cities located inland did not have the economic scale to attract private investments.

Nowadays, Brazil's sanitation services are provided mostly by public or semi-public regional companies. Those regional companies, controlled by Brazilian states, are serving around 70% of the population, while the local companies (usually controlled by city governments) serve about a quarter of the population (Ministério das Cidades, 2014). Thus, there is a large and unexplored field regarding private capital in the Brazilian sanitation industry.

Despite the significant investments made in the past, more than US$ 100 billion in investments is still required to universalize the sanitation services in Brazil (Cavalcanti, 2017). In 2016, the percentage of the population with access to water by the network reached 83.3% and only 57.9% of wastewater was collected by the network. The wastewater treatment achieved 44.9% of produced wastewater and 74.9% of collected wastewater. There is unequal access to the sanitation network between the Brazilian regions. The wastewater collection in the Southeast reaches 83.2% while only 34.7% of households in the Northeast are connected to the network (Ministério das Cidades, 2016).

The Northeast is the poorest region in Brazil but it hosts around a quarter of the population. According to the 2010 Census, the Brazilian average monthly household income per person is US$ 240. However,

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US$ 295 was attained in the Southeast in contrast to the Northeast's US$ 143 (exchange rate = USD 1,00/BRL 3,20). Bento (2011) shows that the average water supply coverage in Fortaleza city is 93%. People who live in some low-income neighborhoods must access water from public fountains, as their ancestors did in the 19th century.

The access to drinking water is even worse in cities located in the Northeast semi arid area. During the dry season, rural villages are supplied by water trucks supervised by army forces to avoid exploitation by local politicians. In addition, the federal government has built thousands of cisterns allowing households to collect rain water. In 2007, an engineering project, called Projeto de Integração do Rio São Francisco (PISF), was initiated to divert water from São Francisco river to supply the Northeast semi arid area. Today, around 90% of that construction is concluded. Although PISF's justification was delivering drinking water, it is still not clear how much water will be used by business activities because part of PISF's investments allows diverted water to industrial and agricultural sites located in humid areas, i.e., outside of the semi arid boundaries.

Even in the North region, where the Amazon rainforest is located, the percentage of urban water provision and wastewater collection are 67.7% and 13.4%, respectively. The percentage of wastewater treatment is only 75% in Manaus city, which is the biggest city located in the Amazon State. Some villages located in deep forest have no safe drinking water because it is collected in sites contaminated by wastewater, in the absence of any wastewater collection system (Giatti, 2012; Gorayeb et al., 2010).

TABLE 1 - WATER PROVISION AND WASTEWATER TREATMENT IN 2016

Brazilian regions	Units connected to network				Percentage of treated wastewater	
	Percentage of water provision		Percentage of wastewater collection		Wastewater produced	Wastewater collected
	Total	Urban	Total	Urban		
Brazil	83,3	93,0	51,9	59,7	44,9	74,9
North	55.5	67,7	10,5	13,4	18,3	81,0
Northeast	73.6	89,3	26,8	34,7	36,2	79,7
Southeast	91.2	96,1	78,6	83,2	48,8	69,0
South	89,4	98,4	42,5	49,0	43,9	92,9
Midwest	89,7	97,7	51,5	56,7	52,6	92,1

Source: Ministério das Cidades (2016)/Sistema Nacional de Informações de Saneamento – SNIS

It is clear that the best sanitation indicators presented by the Southeast region, in comparison to other Brazilian regions, are related to its economic development. However, the inequality of sanitation access among cities and neighborhoods remains, even in the Southeast region. The experience of Rio de Janeiro and São Paulo metropolitan areas, which are the largest located in the Southeast region, may help to clarify the complexity of the challenges faced by public administration.

The Guandu River is responsible for providing drinking water to around 85% of population living in Rio de Janeiro Metropolitan Area (RJMA). Despite the fact that Rio de Janeiro city (RJC) presents the best sanitation indicators, several slum areas and peripheral neighborhoods show poor quality and access to sanitation services. The situation is not so different in some satellite cities, such as Queimados, Paracambi and Duque de Caxias, where the average households connected to water network amount to less then 70% (Brito, 2010).

The Guandu system was originally designed for only Rio de Janeiro city but over the years it has been adjusted to support a large portion of the metropolitan area. However, the mismatch between investments and population growth is implied in the lack of sanitation services that mostly affects low income neighborhoods. Due to budget restrictions, several intermediate storage and distribution systems were not completed. As a result, water is delivered to peripheral neighborhoods directly from the main supply lines. For this reason, the water pressure is usually too high in some neighborhoods and too low in others, resulting in many interruptions and low service efficiency. To make matters worse, the insufficient sanitation services in low-income neighborhoods provide a stimulus for water theft. Several communities take their water through clandestine deviations, creating more damage in the water network and reinforcing system costs and deficiency. The average water loss in RJMA is around 30% but may reach higher percentages in some peripheral cities. According to Brito (2010), the water losses make up 83% of water production in Japery city. In Duque de Caxias city, a low-income community takes water from pipelines used to supply a petrochemical complex, which means that they may be drinking contaminated water (Brito et al., 2015).

The water supply system in Rio de Janeiro is operated by Compania Estadual de Água e Esgoto (Cedae), which is controlled by Rio de Janeiro State administration. It does means that the priorities and strategies adopted by Cedae were defined exclusively by the State administration. São Paulo state presents a different situation. The ownership of the biggest sanitation company, called Sabesp (Companhia de Saneamento básico do Estado de São Paulo), is shared between São Paulo State administration and private investors. The São Paulo government is the controlling shareholder, which means that the São Paulo State governor has enough power to influence Sabesp decisions but he must negotiate with his private partners.

In São Paulo, the imbalance of sanitation services among neighborhoods became clear during the summer of 2014, when a severe drought hit the state and particularly the São Paulo Metropolitan Region (SPMA). In view of the water restrictions, the Sabesp administrators decided to reduce the water pressure in the network system to minimize water loss. As a result, several neighborhoods were affected; most of them low-income communities located in SPMA peripheral areas. Sabesp also adopted a rationing program that affected mostly low-income households (Garcia & Sorano, 2015). The population living in

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middle and high-income neighborhoods did not suffer the effects from the water supply restrictions and most of them were aware of the drought only through newspaper reports.

In 2016, when the São Paulo State government officially declared the end of water rationing, several neighborhoods were still suffering from sixteen to twenty hours of water supply interruptions, daily (Zylberkan & Lobel, 2016). An inquiry commission was appointed by the Council of São Paulo City to ascertain the causes. The conclusion was that Sabesp's investments were less than required to ensure a regular water supply. Also, according to the commission, São Paulo city had around 30% water loss due to damage in its water network (Câmara Municipal de São Paulo, 2015). Neto (2015) argues that water rationing may be avoided, or at least minimized, if Sabesp increased its investments in water production. Figueiras (2014) believe that Sabesp administrators drove investments to expand the water connections instead of increasing water production or improving maintenance systems, as that was the best way to increase company profits. In other words, one the causes to explain the water interruptions occurred in SPMA was a mismatch between efforts to reduce water losses and to increase water connections. Neto (2015) argues that "[…] since the 1990s, Sabesp has replaced public health by profits and citizens by stockholders under São Paulo government protection, which is the controller stockholder. São Paulo State government would be more interested in its 51% of Sabesp dividends". Sabesp administrators argue that investments have been made and around 80% of its profits have returned to São Paulo State (Barrucho, 2014).

Finally, the commissioners appointed by the Council of São Paulo city mentioned that the Arsesp (Agência Reguladora de Água e Energia do Estado de São Paulo), which is the water regulatory authority in São Paulo, allowed Sabesp to raise water tariffs in compensation for its reduced profit that occurred due to water rationing. If the commissioners from Council of São Paulo city and experts were right - i.e., if the lack of investments was at least partially responsible through the adoption of the water rationing program - there is no reason why any financial compensation should be paid to Sabesp. After all, people do not bought water during the 2014 water crisis because Sabesp did not provide enough water. Should the stockholders not pay for company decisions?

This short presentation regarding the sanitation services shows a myriad of situations may be found in Brazil. However, obstacles faced by low income households are presented in all situations mentioned above. So, the question is how to change this scenario? Is participatory governance the answer?

4. PARTICIPATORY GOVERNANCE AND WATER REGULATION IN BRAZIL

The national economic and political changes in the 20th century were reflected in the core of Brazilian water regulation. In 1907, the Código de Águas (water code) defined responsibilities and rights among

different levels of government. The first step to design a coordinated water regulation system occurred in 1948, when the Comissão do Vale do São Francisco ¬ CVSF (São Francisco valley commission) was created. Until the 1980s, the water policy was focused mainly on attending to the demands of economic development. The fast industrial and urban growth required many facilities that were designed, built and operated by different federal government departments. This lack of coordination was responsible for disputes among federal departments and levels of government, resulting in a contradictory regulation body.

In the second half of the 1980s, the information available with regard to water bodies was increased substantially, thanks to the efforts made by electrical power companies and governmental agencies. The availability of better information concerning water bodies certainly helped the government to rethink the water regulations but more important was the end of the military administration in 1985, opening the way to include social and environmental principles in the water legal framework. In addition, new channels of social society representation were created by the reform of water regulation (Borsoi & Torres, 1997). The cornerstone of water policy was set by the 1988 Constitutional reform but the legal body detailing was defined in 1997 by the Política Nacional de Recursos Hídricos – PNRH (national policy of water resources), instituted by the Federal Law 9433 (FL9433).

The PNRH is based in the following principles: i) water is a public domain good; ii) water is a limited resource and has economic value; iii) in shortage periods, water- use priorities are human consumption, as well as that of small animals used to support the family food; iv) the multiple use of water has to prevail in water management; v) the hydrological basin is the basic level of water policy and management and; vi) public agencies, users and local communities must be part of the water management system. Also, the FL9433 defined a set of institutions in all levels of government as described in Table 2.

TABLE 2 - WATER REGULATION FRAMEWORK

Level of government	Institutions	Responsibilities
Federal	*CNRH - Conselho Nacional de Recursos Hídricos* (council of national water resources)	Defines the principles of water regulatory policy
	ANA - Agência Nacional de Águas (federal regulatory authority)	Responsible by water rights control involving federal water bodies and disputes among states
	MMA - Ministério do Meio Ambiente (federal environmental department)	Defines strategies. regulations and programs/projects
State	State water regulatory authorities and water commissions	Responsible by water rights control involving state water bodies
Local	Basin commissions	Makes basin plan and mediates conflicts among users

Source: adapted from FL9433 (Brasil, 1997)

States usually have control over their natural resources, except where federal lands prevail. In state lands, a water policy is defined by state authorities according to the boundaries set by federal law. Water rights

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and charges are defined by the state regulatory agency. The regulatory agencies may (or may not) follow decisions made by basin commissions. Although all states must follow the PNRH, differences regarding assignments and the composition of state water authorities provide some flexibility to state governments to define their own water regulations (Abers, 2010, apud Abruccio & Oliveira, 2013). The admission of basin commissions as official institutions of the water regulation system at a national level was the most important improvement brought by PNRH because it paved the way to increase civil society's input in the decision-making process.

Abrucio and Oliveira (2013) argue that the FL9433 was an act of acknowledgment and systematization of the earlier experiences recorded in Brazilian states. The pioneering initiatives to design an articulated water framework were made by São Paulo state in the 1970s. In 1976, an agreement between the Ministério das Minas e Energia (mining and enery federal department) and São Paulo state administration created the Comitê do Alto Tietê – CAT (Tietê river basin commission). Until 1983, the CAT was responsible for planning and regulating the water services provided to São Paulo metropolitan area. The CAT attributions included decisions about dam operations, flood control and quality drinking water supervision. The CAT was created under military administration, which explains its considerable power concerning water policy decisions. In the 1980s, when the State administration returned to civilian hands, the CAT's power decreased. Today, the new CAT is exclusively conducted by the São Paulo State government. New models of water regulation emerged in other Brazilian states during the 1980s. In 1987, discussions about the river basin came up in an academic forum organized by the Associação Brasileira de Recursos Hídricos. In the same year, the Espírito Santo state government create a city consortium to manage water questions, while in 1988, the state of Rio de Grande do Sul created the Sinos and Gravataí basin commission (Porto & Porto, 2008).

The basin commissions were the first step to increase the social society organizations' decision-making power, although their influence is still limited and most of them are contaminated by private interests. According to the FL9433, the basin commissions are qualified to: i) mediate (in the first instance) water use conflicts; ii) approve basin planning; iii) set up water charge methodologies; and iv) define sharing rules regarding the use of facilities and other expenses. The basin commissions are composed of representatives from the federal government, municipalities, state government, users, native communities and civil society organizations. The FL9433 defines civil society organizations as: i) city consortiums, ii) local, regional or sector associations, iii) technical or research organizations; and iv) related basin NGO.

The basin commissions' main task is to serve as a forum to create consensus among groups with different interests. The basin commissions are the best way to increase the decision-making power of minorities

and low-income families. However, several barriers most be overcome to increase the political power of those groups. Their influence is limited and they are usually subjected to opportunistic alliances made by political and economic groups.

A recent experience may clarify the limits and possibilities opened by basin commissions. In discussions about PISF priorities, by commissioners of São Francisco Basin commission (SFBC), representatives from Articulação para o Semi Árido – ASA defended that the water provided by PISF should be used for human consumption, rather than for industrial or agricultural activities. The ASA is one the most influential NGOs working in favor of small growers and low-income families from the Brazilian Northeast. The ASA aggregates several NGOs, syndicates and other social groups with different ideological approaches. The ASA representatives were unsuccessful in their negotiations and left the SFBC to avoid being used as a tool to legitimize opposing interests to low-income families (Empinotti, 2011). However, they were able to negotiate federal resources to build thousands of cisterns to collect rain water in rural villages in a program called Programa Um Milhão de Cisternas – P1MC. Until 2013, more than four hundred thousand cisterns were built under the P1MC program in semi-arid areas of the Brazilian Northeast region.

The basin commissions have no power to define regulations but they are capable of influencing key questions, such as the basin master plans, water rights or charge methodologies (Abruccio & Oliveira, 2013). However, Molle (2009) argues that sharing water access, costs and benefits is a social process; i.e., it is shaped by the balance of power among social groups. The changes in institutional design provide the way to re-balance the political power among groups but the institutions are not a solution in itself: its design only reflects the social disputes.

5. CONCLUSIONS

The international experience reveals that privatization may reduce low-income households' access to sanitation services through a mismatch of interests between the stockholders and general public. Also, the market solutions do not reinforce an inclusive sanitation policy approach due to the following reasons: i) by considering natural resources as commodities, the market transforms citizens into consumers, which means that those resources are no longer understood as a population right; ii) transferring responsibility for the utilities operation from State to private hands blocks initiatives of integration among sanitation and other public services and, iii) Hall (2015) argues that the sanitation services accountability is limited when it is operated by the private sector.

In Brazil, most sanitation services are still operated by the State. A few mid-sized cities have concession agreements regarding sanitation services with private companies. The most important experience in respect of private participation in sanitation services in Brazil is offered by Sabesp, which is responsible

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for providing drinking water to 27.9 million people and sewage services to 21.4 million people. As mentioned before, the São Paulo State government is the controlling shareholder but the board of directors has to respond to the other 49% of shareholders too. The lack of water provision to low-income neighborhoods in São Paulo during the 2015 drought reinforced the conclusions drawn from international experience. Besides, Sabesp's capital was not opened recently. Sabesp's stocks have been negotiated in the New York Stock Exchange for more than fifteen years. Between 2002 and 2017, Sabesp's stocks rose 896% while the Dow Jones Index increased 110% during the same period.

It is important to consider that São Paulo State is an attractive area for private capital, in contrast to the Northeast region and other inland areas. This means that private investment tends to go in the direction of the profitable areas while the low-income regions still depend on public investment. However, the dissemination of concessions to private companies may reduce the opportunity to design a sanitation policy at a national level and to apply cross-subsidization practices in order to fund low-income areas. In view of the current pressures to reduce public expenses, the risk of lack of investment in low-income areas is very high. The Brazilian territorial diversity implies that, in several areas, the market is not interested.

The inequality concerning sanitation services access by low-income families reflects the lack of accountability with regard to public utilities, too. Historical and social conditioning have allowed that interested groups gain control over public assets. Moisés et al. (2010) argue that the legal instruments and institutions to improve accountability already exist in Brazil. The federal law 11445 (Brasil, 2007) determined that state administrations must create commissions to allow social control in sanitation services. However, there is no social control over the regulatory agencies, according Campos (2013). Therefore, the key question is not related to institutional or legal design but how to manage the existing instruments in direction to a less unequal system; i.e., lack of social empowerment and mobilization seem to be the main barriers blocking more equal access to sanitation services in Brazil.

The governance approach may be a way to an inclusive model of sanitation policy but it is not a magical solution. The governance concepts are used by authors from different ideological positions. An inclusive approach related to sanitation services should be connected to actions in order to raise low income families' decision-making power. Besides, an effective sanitation policy requires integration with other public services, such as heath and education, in order to reduce costs and increase the quality of these services. In other words, governance should not be understood as a bureaucratic tool but as a path to rethink the relationship between citizens and governments. Finally, there is no doubt that sanitation

services under State control have serious imperfections but that market solutions may create more barriers to improve the social control of public utilities.

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