



The Failure of Public Water Utility Privatization From Araral's Perspective: Implications for Ethiopia's Water Sector

Tefera Assefa¹

¹ Ambo University

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Abstract

Professor Eduardo Araral is both a theorist and a practitioner. He specializes in studying the causes and implications of institutions for collective action and governance. He has written and coauthored several papers and books and presented at various conferences. Some of his notable works include *Global Water Resources: Festschrift in Honor of Asit K. Biswas* (2021), *Water Tariffs and Affordability in Urban Water Supply and Wastewater Systems* (2023), *Water Governance 2.0: A Review and Second Generation Research Agenda* (2013), *Comparative water law, policies, and administration in Asia: Evidence from 17 countries* (2013), *Public provision for urban water: getting prices and governance right*, *Water demand management: a review of literature and comparison in Southeast Asia*, and *Reform of water institutions: a review of evidence and international experiences* are some of the articles he published specifically on water utility service. These contributions provide ample practical evidence and a theoretical foundation for future improvement of the water sector in any setting. Hence, reviewing Araral's perspectives and showing its implication for the Ethiopian water sector would inform policymakers to consider how to reform the sector for the benefit of the public without compromising the fiscal, efficiency, environmental, and social aspects of public water utility reform. The focus of this review article is "The Failure of Water Utilities Privatization: Synthesis of Evidence, Analysis and Implications", which emphasizes the critical analysis of the evidence of fiscal and efficiency hypothesis for privatization to indicate

and justify the failures of public water utilities. However, to make the review more critical, the environmental and social aspects of public water utility reform were also used in this review. This review article is divided into five parts: introduction, hypothesis (fiscal and efficiency), evidence and explanation for the failure of privatization, the limitations of the article, and the implication for the Ethiopian water utility sector.

Tefera Assefa¹

ORCID iD: <https://orcid.org/0000-0002-1066-2812>

1. Introduction

As the author argued, the article made a synthesis and analysis of factors and evidence that challenge the success of the privatization of public water utilities service. As a part of the larger public sector reform in the name of New Public Management (NPM), privatization and deregulation of the public sector in general and public utilities service have been common initiatives since the 1980s and 1990s. The author states, “During much of the 1990s, water utilities worldwide experienced a wave of privatization. The rationale for this, much like the rationale for the wave of privatization of state-owned enterprises and other government services, is largely based on two hypotheses” (p. 221). This argument of the author is supported by abundant literature on public utility management, liberalization, and reform. For instance, McNabb (2005) argued that most European countries and America have begun to privatize publicly owned and deregulate privately owned utilities since the 1980s and 1990s as a part of the NPM movement in public administration. Empirical literature also indicates an increasing trend of privatization in the 1990s. Scholars such as Nestor and Mahboobi (2000) argued that taking the OECD countries’ experience into account, “in the OECD area infrastructure sales have raised close to \$270 billion in the period 1993-98. In 1998, they accounted for almost 70% of OECD receipts. Privatization has resulted in one of the swiftest and most dramatic changes of context for utilities and infrastructure industries.” These indicate how the waves of privatization swept the world economy since the 1990s (Wood, 2004). The privatization trend has been primarily common in countries (UK, US, and OECD countries) that have widely experienced the waves of New Public Management, which constitute a range of reforms aimed at improving efficiency and cost recovery.

One of the prominent reforms of NPM is the privatization of publicly owned enterprises, including public utility services (telecom, electricity, water, road, education, and health service, to list some) (Pfiffner, 2004). The aims behind the variants of NPM, including privatization, constitute the quest for efficiency, effectiveness, and responsiveness (the efficiency hypothesis) and reducing the excessive, inefficient, and overbearing state of public sector agencies (the fiscal hypothesis) (Kilelo, 2015). In this article, the author uses the above two hypotheses or justifications for privatization: the fiscal hypothesis and the efficiency hypothesis. Despite widespread support for the hypothesis by donors, think tanks, and economists as a means of improving service quality, accessibility, and response to the demand and willingness of users, there exists a critical perspective regarding the viability of these arguments. In general, there are contradictory arguments regarding the viability of the privatization of public water utilities. However, the author argued that the existing literature on

the subject is fragmented, as most studies either examine the efficiency argument in its various dimensions or some aspects of the fiscal argument. Therefore, the author aimed to investigate the viability of the contradicting arguments by synthesizing and analyzing evidence to indicate the implications of water utility privatization. Despite the author's failure to indicate a thorough methodological aspect of the article, the author uses an extensive (meta-analysis) and critical review of existing literature to question the viability of the fiscal and efficiency hypothesis of public water utility privatization.

2. Fiscal Hypothesis and Evidence

Arguing that most literature emphasizes one hypothesis (either fiscal or efficiency) while ignoring the other, the author provides a broad synthesis of these two strands in the literature, explains the outcomes, and draws out the key conclusions and policy implications.

Since the 1990s, many ideological and economic causes have served as key justifications for expanding the privatization of public utility services. The writers of this essay maintained, as most research has, that both the fiscal hypothesis and the efficiency hypothesis are the twin justifications for expanding privatization of water utility services particularly (as argued by the authors) and public utilities in general. Nestor and Mahboobi (2000) also suggested that the grounds for privatization of public utilities are government financial constraints (fiscal reason) and inadequate public utility performance (efficiency reason). Taking these two goals into account, the authors aimed to show the failures of the privatization of water utility services.

The authors stated that the fiscal assumptions imply that privatization will alleviate governments' burden of investment funding, especially given the budgetary challenges that many developing nations experienced in the 1980s. This notion is supported by various pieces of evidence indicating increased investment in public utilities as a result of the sector's privatization. According to Estache, Gomez-Lobo, and Leipziger (2001), privatization reform in Latin America generated \$236.5 billion between 1990 and 1998. Such increases in investment are viewed as a strategy for resolving the government's budgetary challenges. The efficiency hypothesis, according to the authors, predicts that water utility performance would increase under private ownership since it is 'clearly' more efficient than the public sector. They employ the arguments advanced by Palmer, Cockburn, and Hulls (2003), which demonstrate the inefficiencies of public enterprise in the delivery of public services and its weakness in producing the funding required for service development. Based on this rationale, the author suggested that the engagement of multinational water firms is critical for cost-effectiveness, risk sharing, long-term finance mobilization, and eventually increasing creditor trust in the program's efficient implementation. Furthermore, the author believes that private investment in water service delivery should be leveraged.

For the budgetary hypothesis, the author also presents evidence of several privatization initiatives performed in water service delivery. He draws on Hall and Lobina's (2006) extensive empirical review. He drew four conclusions from their research. They debunk the claim that privatization will relieve governments of the burden of investment finance. However, the author gave evidence of privatization's failing fiscal role in water service delivery and consolidated it into four points. First, they discover that most private contracts, particularly leasing and management contracts, include no private

corporate investment in expansions to disconnected houses. For example, he shows the failure of 17 leases and management contracts in Sub-Saharan Africa to create private-sector investment for disenfranchised poor households. Concession agreement commitments are inevitably changed, abandoned, or missed. For example, around 37% of all private investments in the water and sanitation industry globally have been distressed (or have been canceled or renegotiated), including the biggest concessions, which account for 80% of these commitments. Based on the findings of Guasch, Jean-Jacques, and Stephane (2003)², the author argued that the problem is severe in Latin America and the Caribbean, with 74.4% of water and sanitation concession contracts renegotiated very soon after their award, occurring on average 1.6 years later.

Second, most privatization contracts needed public financing and/or guarantees from government or government-owned development banks for actual on-the-ground investment, notably in connecting disadvantaged/poor households. He cites 11 large Build, Operate, and Transfer (BOT) water projects (see table on p. 222) that needed public financing and/or government guarantees to deliver actual investments. Concessions were subsequently canceled in half of these enterprises, while a third was troubled and challenged.

Third, private water businesses do not always bring in new investment sources and volumes. Hall and Lobina discover that they rely substantially on the same sources as the public sector. For example, most private enterprises rely on sources that governments also have access to, such as donors, commercial and development banks, bonds, and operational surplus. Private investors seldom employed private equity (*the government also uses the equity in the case of public enterprise in which both private and government share some portion of the equity*³). Fourth, multinational corporations' contribution to water investments in developing nations is limited and unlikely to expand. This theory is further backed by a specific example given by Memon and Butler (2003), who noted that multinational corporations are mostly focused on either rich nations or big cities in developing countries. Because profit margins are low and risks are high, many corporations are hesitant to actively expand their networks into underdeveloped nations. According to them, one of the declarations made by the French multinational SUEZ in 2003-2004 said that the company would reduce its exposure in developing nations by one-third. As a result, such concrete reasons corroborate the author's fourth summary. From 1990 to 2001, just 5% of private investment in water utilities was directed toward developing nations.

As a result, according to Hall and Lobina (2006)⁴, only over 600,000 homes (or 3 million people) in Sub-Saharan Africa, South Asia, and East Asia have received sustainable water supply as a result of private sector investments in 15 years⁵. This amounts to around 900 people per day since 1997, which is far below the optimum pace of 270,000 people per day required to accomplish the MDG objective of halving the proportion of people without sustainable access to drinking water and sanitation. In addition to the private sector's underinvestment in water infrastructure, donors withheld funding. For example, from 1997 and 2002, donor funding fell by 47% to \$7 billion. Briceno-Garmendia, Estache, and Shafik (2004) ascribe this to overly high assumptions about private sector participation in infrastructure finance, particularly in developing countries in which water and sanitation infrastructure is lagging behind any other public utilities.

3. The Efficiency Hypothesis and Evidence

Another rationale for favoring the privatization of water utility services is the efficiency hypothesis. A plethora of literature also supports privatization, stating that the private sector is more efficient than the public sector. The premise is that private sector delivery will enhance the performance of public water utilities. This argument is based on public choice theories of government conduct, which regard citizens as rational agents in selecting the most efficient service. Poor public water utility performance in underdeveloped nations can be ascribed to four basic motivation issues connected with public service.

First, governments in developing nations frequently give in to populist demands to keep prices low, even when these subsidies may not assist the poor. Second, as argued by Shirley & Nellis (1991)⁶, Because the owner is also the regulator, public firms confront conflicts of interest, and as a result, performance contracts cannot be credibly enforced. Third, public companies confront skewed organizational incentives as a result of a lack of credibility, poor competition, agency problems, rigidities, and performance measurement issues (Weimer & Vining, 1998)⁷. Fourth, because they confront soft budget limits and hence are not subject to market discipline, state-owned firms are shielded from capital markets.

The author suggests and provides abundant information regarding the inefficiency that plagues public water utilities in developing nations. Numerous studies undertaken in Asia, Latin America, and Africa have found that public water utilities operate poorly. As a result of the confluence of poor performance of public utilities, fiscal pressures faced by developing countries, donor pressure, arguments about the superior efficiency of privatized water supply, and public choice arguments of perverse incentives in the public sector, many developing countries have enlisted the private sector to provide and finance goods previously provided by the public sector. Much of the prior policy discussions in infrastructure and services have been based on the notion that establishing private sector operation is an end goal in and of itself (Hall & Lobina, 2006). Indeed, between 1990 and 2001, developing nations received about \$755 billion in investment in 2500 infrastructure projects (Harris, 2003)⁸.

In terms of efficiency or other performance indicators, there is no fundamental difference between public and private operators, according to a growing body of evidence. Citing Willner and Parker (2002), the author noted that a review of a sizable number of research on the issue of private vs. public efficiency in both developed, emerging, and transition nations does not allow for a consistent conclusion to be formed. They discover that there is evidence of stronger public sector efficiency, more private sector efficiency, or no difference in some circumstances. They conclude that, in light of the empirical data, a shift in an organization's ownership from public to private is not always necessary to improve performance.

Briefly put, the literature he used suggests that there have been conflicting results. The performance of publicly owned and privately operated water utilities is said to be equally efficient. The data in other public utility services, contrary to what has been claimed by some academics, shows that there is no appreciable distinction between public and private operators in terms of efficiency. However, some academics asserted that commercial water service supply is more expensive and levies more costs than public service provision. For instance, according to Memon & Butler (2003), although both public-private partnerships and private operators offer water services, the prices charged by the public

operators are around 12% less expensive. The average home water charge has climbed by 20% in England and Wales since the water sector was privatized in 1989. Memon and Bulter (2003) determined that privatization of water utilities puts an extra financial burden on impoverished households in addition to the empirical evidence that the author cites.

4. Explanation for failure

Based on a review of the extensive literature on the performance of privatization of public water utilities in various settings, the author explains the sector's failure by using the conclusion provided by Shirley (2006), who emphasizes how urban water utilities should be privatized and operated, calling for the urban water utility to be operated like a business, priced like a business, and subject to government regulation and a tested subsidy. What is missed in developing countries' policy reformers and why they are following the advice of conventional economists is a poor understanding of general premises that water is essential to life (based on strong belief that water should be delivered or controlled by government, water politics is more intense than reform of any utilities), local in supply, mysterious in information or information asymmetry (investor's information problems will be reflected in the design of the contract, and its vulnerability to renegotiation) and dull in innovation (low dynamic gain). According to the author, these are the explanations for the failure of water utility privatization. Other scholars also indicate the general market failure in the general public utilities service because of the unique and inherent characteristics of the services. Kessides et al. (2009) argued that policy reformers, to alleviate irreconcilable dilemmas in public utility privatization, need to consider a balance between economic efficiency and social equity. This is because public utilities (including water) are characterized by high economies of scale, huge sunk cost, and essentiality to the mass public, making it difficult for competition, the barrier to new entry, and politically sensitive, respectively. Therefore, any privatization reform that fails to consider these unique characteristics public utilities would face, as argued by Kessides et al. (2009, p. 8), "public disenchantment with the reform process and a real danger of policy reversal".

5. Major Findings and Conclusion

Based on the evidence gathered by the author through a thorough assessment of secondary sources, the author identifies two key findings to demonstrate the legitimacy of the fiscal and efficiency hypothesis of the 1990s water utility privatization waves. Based on facts, he initially concluded that privatization of water utilities did not reduce the government's budgetary burden and that private funding is unlikely to play a significant role in meeting water and sanitation standards. Water investments received just 5% of total private investment in all infrastructure projects in emerging nations. Second, several case studies and econometric testing show that privatization's efficiency claims are dubious, and there is agreement among important proponents and donors of privatization, such as the IMF and World Bank, which has resulted in a shift in the emphasis of their water funding program. Other literature supports the above two conclusions of water utility privatization failure.

The above findings have significant consequences for total public water utility provision, leading to the need for

reassessment of the roles of the government and private sectors in public water utility service. Local governments and politicians that make decisions about water service delivery must see water as an economic benefit and underline that successful economic recovery implies good water politics. This inference is significant since, during the 1990s, local governments have assumed growing responsibilities in water service delivery, supported by increased decentralization initiatives. However, for local politicians to make legitimate pledges to their electorates, they must be provided with a choice of financial options. In summary, local politicians should be able to offer better water supply in exchange for long-term cost recovery. Some of the mechanism for this includes (see page 227):

- National governments must offer water financing windows for water investments in the form of matching grants or competitive block grants (as indicated in the Philippines and India).
- Despite the difficulties associated with the first generation of water utility privatization, domestic private enterprises play vital roles. Domestic private enterprises in delivering local public water utilities into complicated local demand and difficulties.
- Community-based approaches to urban water supply, particularly in slum areas, is an effective model of service delivery, particularly for urban poor (this needs organized urban poor communities).
- Finally, improving the governance of existing public water utilities should be a key focus of water supply reform, as 90% of all water delivered through networks in developing countries is provided by these utilities.

The author also highlights four policy consequences of the growing importance of domestic corporations. The first is the need to reconsider the role of fiscal policy instruments, such as tax breaks and performance-based sovereign guarantees, in encouraging domestic firms to invest in water utilities. Second, as more domestic enterprises succeed in operating local utilities, the next obvious step would be to experiment with water franchising models to increase outreach and coverage outside of large cities. This is significant since the majority of unnerved households reside in smaller cities. Third, in addition to developing domestic water franchising models, there is a need to strengthen water regulatory capacity at the national and local government levels. Finally, as the first wave of water utility privatization showed, many concessions became troubled, contested, or were eventually terminated. This experience emphasizes the significance of having a better grasp of the institutional economics of urban water delivery, especially when designing contracts and regulatory tools.

In general, the author's conclusion of the failed privatization of public water utility is consistent with other writers' conclusions, which stress the failure of NPM in assuring efficiency and decreasing costs of public agencies in service delivery. In this sense, Drechsler and Randma-Liiv (2014) stated that, even by today's standards of corporate efficiency, NPM cannot be considered effective. For many years, we have known that there is no empirical evidence that NPM changes increased productivity or maximized welfare. Atreya and Armstrong (2002) also indicate the failure of NPM reform efforts in numerous countries such as Australia and Canada. The relative failure of NPM reform may also be seen in pioneering nations like New Zealand. This is particularly critical in developing countries that challenge the NPM commitment to privatization because of the administrative capacity of the government (Mongkol, 2011).

6. Limitation

The author aimed to analyze some evidence for the failure of privatization of public water utilities from an efficiency and fiscal point of view. However, the author overlooks the environmental and social aspects of public water utilities and emphasizes the economic and financial aspects of public water utilities. In this regard, Ries (2016 and 2015, p. 2-1) states that “urban water utilities play an important role in the country’s energy-water nexus, a relationship directly relevant to the economic, environmental, and social health of urban areas.” Therefore, considering the failure of the public water utility and its reform only from the standpoint of economic efficiency and financial viability makes the assessment narrow and incomplete. Most literature on water public utility reform of the 1980s and 1990s was aimed at the two hypotheses, which failed not only because of its failure in terms of fiscal and efficiency points of view.

To have a complete view of the failure of privatization of public water utilities, it needs to be seen from the perspectives of the environmental and societal implications that it has, because it is extracted from the environment and returned to it as wastewater that has enormous impacts on the environment itself and society at large (Ries, 2015). This is why some researchers are now resorting to holistic approaches to the assessment of water utility service performance. For instance, D’Inverno, Carosi, and Romano (2020), in their research conducted to evaluate the performance of Italian water utilities, argued that the evaluation of water utilities needs to go beyond their economic recovery and financial solvency.

D’Inverno, Carosi, and Romano (2020) state that the essential priority of water utilities should be the sustainable use of water resources and pay special attention to social demands so that the evaluation of their performance should go beyond profitability and financial stability. In doing so, they employ a worldwide composite indicator capable of uniquely evaluating water utility performance, covering financial and economic indices as well as environmental sustainability and service quality criteria, with mode of ownership being one of their indicators. As the emphasis here is on failed privatization, the authors concluded that there is no distinction in the performance of water utilities in Italy in terms of modes of ownership. Despite supporting the author’s finding that privatization failed and could not be the only cure for ill-performing public water utilities, there is still a doubt that privatization of public water utilities had failed because of its inability to become financially and economically viable. Regarding this, Kessides et al. (2009, p. 8) rightly state that “no public policy can be justified on purely economic grounds if the polity regards its results as unjust”. Therefore, there is a need to rethink which mode of ownership and model of management of public water utilities works best from holistic perspectives in a specific context and at a specific time.

7. Implication for Ethiopia

Much of the literature in Ethiopia focuses on public sector delivery in most cases. In Ethiopia’s public water service, the prevalent view suggests inefficiency in terms of fiscal and economic hypothesis, environmental sustainability, and service quality. In the country, private participation in public water utilities is extremely limited, with an emphasis on infrastructure development rather than direct service delivery to frontline customers. Teshome et al. (2012, p. 22), in their study on governance and service delivery of water and road in Addis Ababa and Hawasa cities, conclude that “it was observed that

production of water has benefited more from partnership than distribution and delivery since these functions are almost under the monopoly of the water supply agencies in the respective cities.” This suggests that private actors in the delivery of public water utilities in cities are severely constrained. The majority of the time, the frontline private distribution is provided informally by homes (selling per jerry-can). Non-market failure of public water utility supply is frequent in most regions of Ethiopia, indicating the public sector’s poor capacity to offer quality, accessible, and appropriate water service to the population. To address such restricted capacity, many non-governmental organizations (NGOs) are working on various stages of water infrastructure building in Ethiopia. They work with water agencies and local governments to provide underprivileged individuals with access to safe drinking water. They pay for the construction and installation of public fountains in low-income areas. (*ibid*).

In Ethiopia, private engagement is also significant in the supply of public water facilities. Private businesses, for example, are important partners in the supply of water and road services. Local and foreign private companies are constructing boreholes, distribution lines, and reservoirs in Addis Ababa. They carry out such operations through official contracts negotiated and signed with government bodies. In Hawassa, only local private players are involved, mostly in civil works for the installation of water supply lines. At Hawasa, some attempt was made to privatize (through contracting out) meter reading and bill collection with small and medium enterprises, which was discontinued because of its ineffectiveness. The involvement of small-scale private plumbers in maintenance is another component of private sector participation in the water supply efforts of the two cities (Teshome et al., 2012).

According to both hypotheses (fiscal and efficiency), Ethiopia’s public water utility has significant issues since both the public and private sectors suffer severe capacity constraints. In this context, capacity encompasses low financial capacity, low efficiency in infrastructure development and maintenance, and a lack of coordination among stakeholders (Federal Democratic Republic of Ethiopia, Ministry of Water, Irrigation, and Electricity (FDRE-MOIE), 2015). According to a study done in Addis Ababa by Woldemariam (2009), even if respondents are prepared to pay more for enhanced water service delivery, the first connection price must be paid in small installments based on their income level. He also advises that an innovative finance and cost recovery strategy be created to give affordable access to a reliable and clean water supply. Such a finding highlights the question of fiscal and efficiency hypotheses, which demand effective private sector engagement in the service of public water utility in cost-efficient methods.

Despite the necessity of water utility service, public sector providers are characterized by poor financial capacity to provide efficient public water utility (FDRE-MOIE, 2015; Teshome et al., 2012; Woldemariam, 2009). As a result of such poor financial capacity, the majority of Ethiopian towns’ water supply systems are becoming more difficult for water utilities to access, both in terms of quality and quantity, according to Ebsa Fufa (2021). As a result of Ethiopia’s fast population growth and urbanization, water consumption is increasing drastically without a balanced expansion of public agency delivery capability and the lack of the private sector in the supply of public water utility to frontline consumers. In this context, Abetu, Beyene, and Befekadu (2019) found out that the present water supply and distribution system in Assossa town is not sustainable.

The aforementioned practical issues with public water utilities stem from the nature of public utilities and the government’s

desire to offer such facilities in a monopolistic way. However, public utilities need the engagement of numerous players to offer the best possible service to the community. This is consistent with Hall and Lobina's (2006) conclusion that the public sector provides 95% of water utility services and that funds for investments in water and sanitation have been raised through traditional public financing mechanisms such as public borrowing, taxation, and user fees, resulting in poor quality and unresponsive public water utilities in developing countries. Furthermore, Frade (2019) found several constraints that impede the optimal supply of urban and rural water utilities and sanitation in Ethiopia. Some of these bottlenecks include a lack of capacity, a lack of private sector participation in program and policy implementation, a low absorptive capacity of the sector to utilize the assigned budget (for example, in 2016/17, the federal government utilized only 30% of its budget while the region utilized only 59%), financial gaps, and a lack of coordination.

Generally, in order to solve the above bottlenecks and make public water utility service accessible, affordable, and sustainable, there is a need for private sector participation in the public water utility service delivery system in Ethiopia. Particularly, to improve the absorptive capacity of the sector in utilizing the assigned budget for the benefit of the public, balanced participation from the private sector is required. However, the modes and extent of participation of the private sector should not compromise the interests of public users. The substantial aspect of public water utility delivery and its regulation should be in the hands of the government. Moreover, decisions and policy actions regarding modes of ownership and systems of delivery of water utility service should not be made on the basis of economic hypotheses alone; social, political, and environmental aspects should also be taken into account.

Footnotes

¹ Lecturer of Public Policy at Ambo University, Woliso Campus and PhD student at Addis Ababa University, Center for Federalism and Governance Studies.

² Original work is also seen. Additionally, see also Guasch, J. L., Laffont, J. J., & Straub (2008). The authors reported that 76% of water concessions in Latin America were renegotiated and this took place on average only 1.6 years after the signing of the contract.

³ Italics in the bracket added

⁴ The author uses these sources. For this review, the source is used (

⁵ Hall and Lobina (2006, p. 37)

⁶ cited by the author

⁷ cited by the author

⁸ Cited by the author

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