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RESEARCH ARTICLE

Reproduction of efficiency through management accounting practices: Socio-economic, environmental, and human consequences of NPM reforms

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Abstract

Using Giddens (1984) structuration theory (ST), in this paper we illustrate how the efficiency-driven approaches adopted by a large state-owned public company in Latin America (Latin American Multiutility Conglomerate [LAMC]) implicitly resulted in triggering a dam disaster with far-reaching socio-economic, environmental, and human consequences. Data for the study were derived through document analysis and conducting unstructured, semi-structured, and email interviews. Our findings show that the internalization of efficiency as a corporate value at LAMC was further rationalized through the adoption of new public management (NPM)-based management accounting practices (MAPs) embedded within the market-led development approach. These MAPs connected agencies and structures in a dialectic way and continued reproducing efficiency through day-to-day operations and by enabling the company to champion itself as a successful NPM adopter. However, throughout this process, the socio-environmental and human costs relating to “the dam project” were overlooked, making the disaster

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inevitable. The paper questions the market-led development approach, and NPM-based MAPs, and calls for further empirical work delineating how MAPs can be implicated in public value creation and promoting publicness in emerging economies. Such work is of paramount importance not only to prevent the “unexpected and unwanted effects of public sector accounting” under NPM and market-led development but also to save the lives and livelihoods of poor and vulnerable community members in emerging economies.

KEYWORDS

efficiency and NPM reforms, emerging economies, management accounting practices, market-led development

1 | INTRODUCTION

The interconnection between management accounting and the notion of efficiency has been discussed in prior research conducted using interpretative approaches (Ahrens & Chapman, 2004; Barrios-Álvarez et al., 2021). Available evidence illustrates how MAPs have been devised to redefine what is efficient and profitable for organizations. In the process, organizations are able to marginalize many other issues impacting on the well-being of citizens, such as safety and maintenance, which are of little value in terms of promoting economic efficiency (Sikka, 2015). At worst, this has led to accounting logics and constructs becoming the machinations of catastrophe, of which the Bhopal tragedy and the Fundao dam disaster serve as examples (Matilal & Adhikari, 2020; Safari et al., 2020). However, rarely have scholars examined how management accounting practices (MAPs), which form part of the new public management (NPM) approach, have been used to operationalize the notion of efficiency in public sector organizations; and how the efficiency-driven approaches adopted by public sector organizations implicitly resulted in triggering a disaster that damaged the livelihoods of poor and vulnerable communities in an emerging economy. This study therefore aims to address these research gaps.

On April 28, 2018, an emergency of great magnitude occurred at a hydroelectric construction site in a Latin American country (LAC), hereafter referred to as “the dam project.” The diversion tunnel of one of the most important dams collapsed, triggering massive flooding in the areas near the dam. The news was widely reported by the global media. For instance, CNN (Velásquez-Loaiza, 2018) reported: “almost 5,000 people from the municipalities influenced by the river were evacuated on Wednesday, according to the National Unit for Disaster Risk Management (UNGRD) and four departments of the country are on alert due to the emergency.” For several months, the communities surrounding the dam had lived in constant fear, anticipating a tragedy but not knowing when it would occur. The emergency continued for several days, and communities waited for the worst to happen. In this regard, Local Newspaper (2018)¹ reported: “surrounding communities reported on the effects they are suffering from the situation. Upstream damming and downstream drought are the two scenarios suffered by the communities within the hydroelectric plant’s area of influence after the plugging of the discharge tunnel due to a geological fault in the area.”

The dam project is still managed by a Latin American Multiutility Conglomerate (LAMC), which operates within the ambit of the LAC’s household service sector. For many years, during the rise of NPM, this company has been championed for adopting a successful organizational model. It is held up as an example to emulate in debates about reforming the public sector in order for LACs to achieve their development goals (Varela, 2011). Since its creation in the 1950s, LAMC has introduced several businesslike practices, including accrual accounting (Aristizábal et al., 1988;

Barrios-Álvarez et al., 2021; López, 2005; Varela, 2011). This took place three decades earlier when these practices were recognized as an innovative element of NPM reforms, even in the context of Western countries, let alone in emerging economies (Ball, 2012; Hopper et al., 2009). However, the notion of LAMC's success being built on efficiency was challenged in the aftermath of this disaster (Jiménez-Villamil, 2019). The socio-economic and environmental consequences of the disaster on the surrounding communities were unprecedented. Many vulnerable community members were displaced and plunged into poverty (Zuleta, 2021). Importantly, technical failures were evident in the dam's collapse, and earlier rectification could have averted the tragedy. The LAMC had manipulated its compliance with the technical requirements that may have mitigated the disaster (Pérez-Gutiérrez, 2019). In some instances, such requirements were blatantly violated (Portilla-Gamboa, 2018). The disaster also raised more general concerns about the way in which market-led notions of development (see, e.g., Hopper et al., 2009) were imposed on emerging economies by international organizations such as the World Bank (WB) and the International Monetary Fund (IMF). Achieving efficiency through the promotion of neoliberal market mechanisms, the reduction of state activities, and the facilitation of NPM reforms are central to these notions (van Helden et al., 2021; Wickramasinghe et al., 2021).

Our aim in this paper is to critically analyze the application of management accounting and reporting within LAMC, mainly in terms of operationalizing the notion of efficiency. We draw on structuration theory (ST) to reveal how the notion of efficiency became embedded within the mindset of employees at LAMC. In doing so, we shed light on the way that NPM caused this mindset to become more deeply entrenched, thereby providing agency for the achievement of efficiency, which ultimately resulted in humanitarian crises. LAMC was clearly in a rush to complete the dam project. It boasted of its efficiency and economic and financial success in its annual reports. However, the ground-level reality was very different.

The remainder of the paper is structured as follows. In the literature review, we establish a connection between development, NPM reforms, and public sector management accounting in emerging economies. This is followed by a discussion of Giddens' ST and its significance as a sensitizing device, which guides our empirical analysis. The research method is then explained, followed by an analysis of our findings. Discussions and conclusions are presented in the final section, analyzing how the market-led structures and agency underpinned by MAPs continued to be reproduced in LAMC's day-to-day operations, eventually triggering a tragedy with disastrous consequences for the poor and vulnerable communities in the surrounding area.

2 | DEVELOPMENT, NPM, AND EMERGING ECONOMIES: CONTEMPORARY DISCUSSIONS

The notion of "development" is a post-war invention, representing both the social reality and actions taken in countries that have since been referred to as "underdeveloped" (Escobar, 2007). This concept of development was further extended during the 1950s and 1960s considering the economic conditions of powerful countries in the West. As a result, the indicators of development were formalized based on industrial advancements and processes of industrialization emanating from the United States and Europe (Marini, 1994). These indicators were disseminated across other (underdeveloped) countries as well as the West and gradually evolved as a model of development that these marginalized countries were supposed to emulate. However, during the 1960s and 1970s, the notion of development was largely captured and operationalized by international organizations such as the WB and the IMF. These international organizations used it to exert their dominance and pursue their self-interested motives of expanding their investments in all spheres of socio-economic life within marginalized countries (Hopper et al., 2009). Such countries were then referred to using various terms, including "underdeveloped countries," "developing countries," "global south," and more latterly, "emerging economies" (Hopper, 2017; Hopper et al., 2009, 2017; Lassou & Hopper, 2016).

This capturing of the notion of development by international organizations is perhaps more ostensible in the accounting literature (Hopper et al., 2009; Wickramasinghe & Hopper, 2005). Prior accounting work has extensively discussed the changing development discourses of international organizations entailing various public management

and management accounting reforms, the implementation of which was claimed to be of paramount importance in achieving the development goals (Hopper et al., 2009; Jayasinghe & Uddin, 2019; Nyamori et al., 2017; van Helden & Uddin, 2016). In particular, these studies illustrate how, in the post-independence era, emerging economies have been exposed to at least three models of international organization-led public management and management accounting reforms, as part of the strategy for achieving development, namely, state-, market-, and localization-led models, as well as the unintended consequences of these reforms (Jayasinghe & Uddin, 2019; van Helden et al., 2021).

For instance, during the 1970s, the state was envisaged as a key development player, which led to the rise of state-owned enterprises (SOEs) and trade unions, ensuring that state interests remained protected (Hopper et al., 2009). The focus was therefore more on facilitating national planning, budgetary compliance, and expenditure accounting and reporting. Reforms instigated in the developing world after the 1980s were driven by neoliberal NPM, predicting that development can be achieved through the restoration of free markets and the effective mobilization of market mechanisms. Recipients of public services were redefined as “customers” or “clients” to whom services could be effectively and efficiently delivered, rather than as “citizens” (Alford, 2016; Bryson et al., 2014; León-Paime, 2005; Ocampo-Salazar, 2017). The deployment of accounting technologies, such as result-oriented budgeting, performance reporting, and integrated financial management systems facilitated by accrual accounting, was envisaged as important in terms of attaining development goals through improved governance, accountability, and economy (Lassou et al., 2018; van Helden & Uddin, 2016). More recently, studies have shown that the market-led NPM reforms implemented by international organizations have been supplemented with accounting technologies such as participatory budgeting, which emphasize pursuing development at grassroots levels through the facilitation of wider citizen engagement and coproduction (Alawattage & Azure, 2021; Jayasinghe et al., 2021; Lassou et al., 2021). The idea of localized-led development has therefore evolved, embedding notions, such as empowerment, emancipation, and social accountability, and targeting poor and vulnerable communities in emerging countries (van Helden & Uddin, 2016).

Van Helden et al. (2021) pointed out that, although the criticism of participatory budgeting and social accountability embedded within localized-led development has been increasing (Alawattage & Azure, 2021; Kuruppu et al., 2016; Uddin et al., 2011), relatively few accounting studies have explored the consequences of accounting reforms implemented in order to operationalize state- and localized-led development. However, market-led development and its associated NPM-based management accounting technologies have also drawn widespread criticism in the context of emerging economies (Hopper, 2017; Hopper et al., 2017; Nyamori et al., 2017). Although some studies have delineated the social consequences of privatization (Uddin & Hopper, 2003; Wickramasinghe & Hopper, 2005), other studies have illustrated how NPM-based management accounting reforms have led to different forms of unintended consequences (Lassou et al., 2021; Uddin & Tsamenyi, 2005). Extreme examples resulting mainly from facilitating financial accounting reforms include the rise of corruption, political patronage, and neopatrimonialism, primarily in Sub-Saharan Africa (Bakre et al., 2017; Goddard et al., 2016; Hopper et al., 2017; Lassou & Hopper, 2016; Nyamori et al., 2017).

In their review of public sector management accounting in emerging economies, van Helden and Uddin (2016) stated that NPM-based management accounting reforms have proved to be unsuitable for emerging economies, not only due to their technical complexities and the limited capacity of these countries to cope with them, but also due to the failure of international organizations to comprehend the complex local contexts involved, in particular the cultural-political circumstances of emerging economies. LACs are no exception, as studies have shown how the complex sociopolitical and economic contexts that characterize these countries have led to certain components of neoliberal public financial management reforms being implemented, whereas others are neglected, leading to the emergence of a hybrid and underperforming public sector (de Aquino & Batley, 2022; Neu et al., 2009; Neu & Ocampo, 2007). A number of critical studies conducted in emerging economy contexts have therefore alleged that NPM has eroded values typically associated with the public sector by imposing businesslike practices and further damaging the process of democratic control (Hopper, 2017; Nyamori et al., 2017). Many of these studies have also demonstrated how the growing influence of neoliberalism supported by NPM has resulted in the state becoming a protector of big businesses and a market promoter, further commodifying and, in some cases, worsening, public service delivery (Barrios-Álvarez et al., 2021; Varela, 2008a; Wickramasinghe et al., 2021).

Hopper (2017) argued that achieving development goals through these internationally prescribed reforms therefore appears to be unrealistic. More recently, scholars have started discussing the need to rethink the development discourses, as well as the management accounting reforms imposed on emerging economies (Adhikari & Jayasinghe, 2022; Grossi et al., 2023). It has therefore been suggested that the notion of development should be regarded more as an analytical concept applicable to issues of social significance, for instance, addressing climate change, building financial resilience, operationalizing co-production, and promoting the digitalization of public service delivery (Adhikari & Jayasinghe, 2022; Grossi et al., 2023), rather than a context-specific phenomenon. It has also been argued that rethinking development may widen the scope of public sector accounting research in emerging economies, thereby capturing diversity, promoting theoretical pluralism, and making public sector accounting reforms relevant to the functioning of modern democracy and in regard to crisis management, including the COVID-19 pandemic (Adhikari et al., 2023).

Interestingly, such concerns about reinventing the notion of development coincide with a rise in discussions on “publicness” in Western contexts (see, e.g., Bracci et al., 2021; Grossi et al., 2023; Steccolini, 2019). Although NPM has been praised in such discussions for creating a space for public sector accounting research to proliferate, criticisms have also been leveled against NPM for insulating public sector accounting research from other disciplines and societal issues, thereby weakening its interdisciplinarity, theorization, and policy implications. Steccolini (2019) specifically highlighted the notion of “publicness,” which, according to the author, may enable public sector accounting scholars not only to explore “if and how accounting accounts for, but also impacts on, issues of wider social relevance” (pp. 255–256). In a similar vein, Grossi and Argento (2022) suggested that, beyond rationalizing NPM, research should focus more on the humanizing role of public sector accounting. Further pleas have been made in recent studies for researchers to embrace more public value-oriented perspectives when facilitating management accounting reforms (see, e.g., Salemans & Budding, 2023).

This being said, our aim in this paper is not to focus on the reconceptualization of development, although our findings may suggest that the current climate is tipping in favor of challenging the existing conceptualization of market-led development and the associated public sector management accounting reforms in emerging economies. We build on prior work (Hopper et al., 2009; Jayasinghe & Uddin, 2019; van Helden & Uddin, 2016) delineating the unintended consequences of such public sector management accounting reforms, in which the emphasis is on promoting efficiency and effectiveness in delivering public services. Although the unintended consequences, such as decoupling, corruption, and patronage, have been already outlined in previous work (Hopper, 2017; Lassou et al., 2021), in this paper, we show how the focus on efficiency, as prescribed by NPM, could have deleterious consequences for the livelihoods of poor and vulnerable communities in emerging economy contexts. The pursuit and achievement of efficiency and profitability may enable companies to champion themselves as successful implementers of NPM, as in the case of LAMC, but it also allows them to disregard many other issues that add no value to their financial statements. The marginalization of such issues may, however, result in devastating social and humanitarian consequences—the collapse of the LAMC dam being just one example.

Such wider consequences of market-led development and NPM reforms have rarely been explored in the existing public sector accounting literature. Furthermore, with few exceptions (see, e.g., Barrios-Álvarez et al., 2021), rarely have studies demonstrated how the notion of efficiency can become a corporate value of public sector organizations and the way in which the adoption of MAPs can lead to the reproduction of the notion of efficiency, facilitating the interplay between structure and agency. These are the research gaps that we aim to address in this study, drawing on ideas from ST. ST offers us a lens through which to better understand the social process in operation at LAMC, driven by market-led development and its accompanying MAPs as well as the establishment of an efficiency-driven mindset among its employees.

3 | STRUCTURATION THEORY

The ideas of ST are drawn on in the study as sensitizing devices (Adhikari & Jayasinghe, 2017; Barrios-Álvarez et al., 2021; Busco, 2009; Englund et al., 2020). Extant accounting work has applied ST in similar way to offer a deeper under-

standing of the way in which management accounting is implicated in everyday organizational life in varied social settings (Englund & Gerdin, 2008; Englund et al., 2011; Lawrence et al., 1997; Macintosh & Scapens, 1990; Roberts, 2014). Building on these works, the use of ST has enabled us to engender a nascent understanding of the wider neoliberal market-led social structures facilitated through management accounting at LAMC, and the perceptions of different agents about these structures and their agency (Coad et al., 2016; Stones, 2005).

When Giddens (1984) first proposed ST as a sociological perspective, he sought to overcome the dualism among individual–society, agency–structure, and micro–macro social spaces. The main axis of ST analysis is social practices and the diverse possibilities that lead to the establishment of social relationships in all aspects of social life (Giddens, 1984). Thus, ST stands a way of reconceptualizing the production, reproduction, and transformation of social life. The underlying ideas of ST recognize that social practices are embedded across diverse sets of space and time-configured social systems. Within these social systems, there are rules and resources that are constantly reproduced by agents through their social practices. These rules and resources condition (but do not determine) how social action should be directed (Giddens, 1984). Giddens (1984) mentioned two types of resources embedded within these structures: authoritative and allocative resources. Both rules and resources are reproduced in the functioning of social institutions.

Following Giddens (1984), social practices must be analyzed as constructs that are part of the way that society is constituted and social institutions articulated. Social institutions are the ones that put rules and resources into circulation, given that an ontological tie exists between them and social interaction systems. Motivations manifested in individuals are channeled through different forms of institution that guarantee structural reproduction, and, at the same time, the social actions of agency perpetuate, reinterpret, and at times even challenge the social structures. This is what Giddens (1984) referred to as the “duality of structure.”

For Giddens (1984), there are two key elements to understanding how rules and resources operate: agency and structure. The conception of agency within ST is connected to the idea of intentional and purposive actions. This connection between agency and intentional actions is conceived of as a basic condition through which to facilitate social interactions in which agency reproduces signification, domination, and legitimation through various forms of institution. Giddens (1984) stated that agency within interactive scenarios contributes to the reproduction of routinized social practices through space–time binding, drawing on structural proprieties. Social structures can therefore also limit an agent’s capability to exercise power or simply inhibit them from making a difference in their social life. This conditioning is expressed in the reproduction of social life through the daily routines of agents, whereby they apply social knowledge and follow consensual norms without constantly questioning them. However, it is worth mentioning that deliberate or intentional acts by agents do not necessarily imply that individuals manage to control all the consequences of their actions (Giddens, 1984). They regularly tend to encounter unforeseen circumstances, which can trigger unintended consequences and make the absolute control of an agent’s intended actions redundant. Giddens (1984, 1993) used the term “reflexivity” when conceptualizing agency, which implies that agents have some level of self-understanding of their own actions, and they are also capable of understanding the actions of others and engaging in the negotiation of meanings.

When discussing the “duality of structure,” Giddens (1984) offered three broad and abstract dimensions of social structures: signification (practices of communication through interpretative schemes), domination (practices of power through facilities), and legitimation (practices of sanction or reward to conduct regarding norms). Macintosh and Scapens (1990) stated that these dimensions are inextricably interlinked and that MAPs are implicated in these structures within organizations. For instance, the structures of domination provide a basis for holding others accountable, and MAPs offer mechanisms for accountability to function within organizations. Members of organizations make sense of their actions and agency by drawing on meanings embedded in MAPs and thus ensuring legitimacy (Macintosh & Scapens, 1990). Extant management accounting literature on the public sector has also applied these analytical categories to show the social and institutional significance of management accounting and its reproduction as a social practice (Englund & Gerdin, 2008). For instance, Lawrence et al. (1997) analyzed the institutionalized modes of interaction before and after the health sector reforms initiated in New Zealand in 1993, demonstrating the role played by

accounting systems in enabling and constraining such interactions and reform initiatives. The way in which MAPs helped to embed measurement culture within everyday social practice in an Italian privatized company is evident in the work of Busco et al. (2000). In their study of the Royal Tobacco Factory (RTF) in Sevilla (Spain), Carmona et al. (2002) illustrated how accounting practices function as a space–time ordering device to connect spatial practices and reinforce the surveillance of managers over employees. In a similar vein, studies have discussed the rationalization of privatization initiatives through MAPs in settings within the United Kingdom (Conrad, 2005) and Italy (Busco et al., 2000).

In the context of emerging economies, Uddin and Tsamenyi (2005) revealed how complex power relationships and structures have led to budgeting remaining politicized, delayed, directionless, and ineffective in a Ghanaian state enterprise. Similarly, in their study of a privatized electricity distribution company in Brazil, de Araújo and Cullen (2012) demonstrated the changes that occurred in the use of budget and management accounting to generate information for rational decision-making and improving performance. More recently, Barrios-Álvarez et al. (2021) discussed the embedding of profitability in the corporate values of a Colombian state-owned conglomerate, which enabled the company to function as a private enterprise. In this paper, we contribute to the existing debate on ST, in particular regarding the duality of structure, illustrating the role that management accounting played in operationalizing the core ideas of market-led development at LAMC. Although the interconnection between management accounting and neoliberal governance has been discussed in prior work (Alawattage & Wickramasinghe, 2022; Wickramasinghe et al., 2021), rarely have any studies empirically delineated the structuration process between efficiency and MAPs in the public sector within emerging economies and the championing of market-based NPM reforms.

4 | RESEARCH METHODOLOGY

We commenced our data collection by analyzing LAMC's financial and sustainability reports, starting from 1955 and continuing up to 2020. This enabled us to generate insights into the financial and environmental performance of this organization, its MAPs, and the ways in which the organization promoted efficiency in its day-to-day operations. Given that the dam collapsed in 2018, we were particularly concerned with the statements made just before and after the disaster, with a view to identifying the factors that contributed to the disaster, as well as the manner in which the consequences of the disaster were referred to in the company's statements. We also analyzed press releases issued by different organizations and government agencies as part of extending our understanding of the contexts and views held by different stakeholders about the causes and consequences of the disaster. This was supplemented by analyzing both national newspaper articles and international media sources (such as CNN) that covered the news about the collapse of the dam, including responses by LAMC and other stakeholders, and discussing the social and humanitarian consequences of the disaster.

In addition, a total of 52 interviews (10 unstructured, 21 semi-structured, and 21 email interviews) were conducted with managers, staff members and ex-managers of LAMC, members of multilateral banks, and community leaders. One of these community leaders was part of the social movement that filed a lawsuit against LAMC claiming reparations for those affected by the dam's collapse. All interviews (semi-structured and unstructured) were recorded after the participants had been assured that their anonymity would be maintained and that their statements would be used only for research purposes. Before the commencement of the interviews, the interviewees were provided with a brief introduction to the research, and a rapport was developed with them. They were made aware of the fact that their participation was voluntary, and that they were entitled to withdraw their participation at any time they wished without providing any reasons.

Both the unstructured and semi-structured interviews lasted about 70 min, on average, were conducted in Spanish and later transcribed. The transcribed version was sent to the interviewees to ensure that the key ideas were not deviated from or lost during the process of transcription. When facilitating the semi-structured and email interviews, we asked the interviewees several questions relating to the internalization of the notion of efficiency in their day-to-day practice, the adoption of different MAPs as proposed within market-led development, the agency of managers and

staff members in executing efficiency, and their interpretation of the disaster that occurred, particularly its causes and consequences. This also enabled us to capture the divergent meanings regarding LAMC's corporate values and management model, as well as the social and environmental costs that were disregarded when constructing and operating the dam project. The unstructured interviews allowed us to explore many of the unheard voices relating to the dam project. For instance, we noted that a number of technical decisions had been taken in an attempt to save costs, which, directly and indirectly, served as a catalyst to fuelling the disaster, with adverse consequences for the well-being of community members.

The interview recordings and secondary data were analyzed by the three Latin American co-authors. Guided by the qualitative data analysis process (see, e.g., Miles et al., 2020) and the ideas associated with ST, several steps were followed. First, a manual thematic analysis was carried out using an a priori (provisional) coding approach. The provisional codes were based on the interview guide, the accounting literature discussing development and market-based NPM reforms, and the key aspects of ST (e.g., structure, agency, duality, the reproduction of social action, and the social structures of signification, domination, and legitimation) drawn on in the paper. Second, the co-authors involved in facilitating the interviews and collecting data from secondary sources transcribed the data, thus ensuring accuracy and consistency. Relevant quotes from interviews were selected at this stage and translated into English, following a meeting with the other co-authors. These quotes were largely informed by ST and reflected, among other aspects, the organizational transformations within LAMC and the internalization of the notion of efficiency; the established structures based on MAPs and the agency of its managers and staff members in executing efficiency; and the interpretations of the disaster that emerged (together with its causes and consequences). Third, the data gathered from all sources were organized and structured by the three Latin American co-authors, reflecting on the evidence derived from the interview recordings and secondary sources. Fourth, following the iterative procedures (Miles et al., 2020), the provisional codes were revisited, unrelated codes were deleted, and new codes that emerged in the data analysis process were added. The emerging codes reflected the interplay between market-led development and NPM and MAPs, connected via ST. This provided us with a better understanding of the social processes through which market-led development was embedded within the situated MAPs at LAMC. These emerging codes also cast light on how the managers, accountants, and other staff members at LAMC internally embedded the notion of efficiency as a corporate value, while operating under state control. The idea of efficiency as an abstract notion was subsumed in the MAPs, thereby triggering the agency of managers and staff members and facilitating day-to-day operations at LAMC. Particular attention was paid to ensuring the reliability of the coding process, and this led to a discussion of the coding rules and procedures among the co-authors, which involved revisiting the initial and emerging codes and finalizing them for further categorization.

In this way, our data analysis resulted in generating themes embedding issues, such as efficiency, profitability, social objectives, and unintended consequences, each relating to and supplementing the other. The application of ST dynamized the analysis, thereby offering a wider understanding of the studied phenomena, embedding these issues, and interrelating different analytical categories. Finally, based on these categories, the following broad themes were developed via which to present our findings: "efficiency at LAMC through MAP under NPM reforms"; how "doing more with less" resulted in "doing less with more"; representation of the dam project in annual statements; and "efficiency vs. social consequences."

5 | EMPIRICAL ANALYSIS

5.1 | Efficiency at LAMC: management accounting practices and NPM reforms

Following the WB's recommendations in the early 1990s, LACs implemented a development model inspired by NPM, which also became evident in emerging economies within other continents (de Araújo & Cullen, 2012; Hopper et al., 2009; van Helden & Uddin, 2016). This model was codified in a new Constitution formulated in 1991 in the LAC

where LAMC's headquarters are located. The LAMC took advantage of this new regulatory framework and acquired shares in other public utilities offered in Central America, Colombia, Chile, Mexico, and Panama. By 2000, the company was already reckoned to be one of the largest public conglomerates in Latin America (Varela, 2011). It was also well positioned to adopt the NPM-led development model. For instance, NPM-propagated mechanisms for improving performance and accountability at the organizational level (such as accountability centers) had already been introduced by LAMC as part of its efficiency drive, long before these were implemented by public sector entities in many Western countries. The School of Mines in Macondo,² multilateral banks, and LAMC's existing technostructure,³ all significantly influenced the way that the notion of efficiency was structured within LAMC (Aristizábal et al., 1988; Barrios-Álvarez et al., 2021; López, 2005; Varela, 2011).

The business model adopted at LAMC since 1955 was intended to promote efficiency through the deployment of various MAPs. This model consisted of at least three distinct features: (1) managing the autonomy of the company by distancing it from politics; (2) incorporating a long-term financial planning approach based on MAPs; and (3) institutionalizing a solid technostructure (Aristizábal et al., 1988; Barrios-Álvarez et al., 2021; López, 2005; Varela, 2011). Technical rationality therefore prevailed at LAMC, and this protected its administrative autonomy, a rationale strongly influenced by the School of Mines in Macondo (Gonzalez, 2014; Mayor, 1989). The practical knowledge developed by students from this school was business-oriented, focusing on issues such as transforming money into capital through cost rationalization, and the forecasting of profits and markets (Gonzalez, 2014). The notion of efficiency, legitimized through this school, was regarded as "the virtue or power to produce the greatest functional and economic effect at the same time" (A. López, 2011, p. 136).

Since its creation, LAMC has used MAPs to achieve output/input control of organizational resources. In fact, in the 1950s, a separate management accounting system was introduced for each business unit (electricity, water, and telecommunication) in order to maintain their financial autonomy (Aristizábal et al., 1988). This separation of business units enabled LAMC to account for and report all the assets, liabilities, equities, revenues, and expenses of each unit as part of the process of ensuring their efficiency. As a result, efficiency became a benchmark against which to determine and measure its performance. A measure that was introduced to facilitate a comparison between "inputs" and "outputs" resulted in the establishment of the first efficiency ratio. This ratio was referred to as "operating efficiency" and was continually reported in the company's financial statements from 1956 to 1961 (LAMC, 1961). During the 1970s and 1980s, a greater emphasis was placed on accounting and budgeting integration following the adoption of accrual principles within budgeting practices. Financial planning was carried out on an annual basis, and MAPs were used to record the accumulated capital. LAMC's goal was not only to control spending but also to increase the revenues generated by each business unit. A new organizational arrangement that evolved within LAMC during the 1990s was largely inspired by the sweeping NPM reforms that took place across public entities in the LAC where the LAMC's headquarters are based. Under this arrangement, LAMC's strategic business units (SBUs) were demarcated and further strengthened through the introduction of activity-based costing (ABC). These changes implied that LAMC's efficiency indicators extended beyond the simple calculation of input/output ratios to cover expenses and revenues. The emerging notion of efficiency included new management indicators underpinned by ABC, which were integrated into the balanced scorecard. For instance, one of LAMC's key strategic targets was to reach earnings before interest, taxes, depreciation, and amortization (EBITDA) of at least US\$5,500 million by 2022 (LAMC, 2012).

As previously mentioned, the notion of efficiency in LAMC, embedded in and operationalized through MAPs, was shaped by its technostructure. It was also through this technostructure that the notion was transmitted from one generation to another and internalized as a corporate value. As a corporate value, efficiency was further emphasized and strengthened through the rigorous control of resources on a day-to-day basis, in strict adherence to the MAPs. In addition, the technostructure played an important role in the process of acquiring and integrating new companies into the LAMC business model. In analyzing the way in which the financial indicators have been developed and monitored in LAMC using MAPs, the articulation of the structures of significance, domination, and legitimation (Giddens, 1984) is evident. For instance, the strategic objective of the company was to increase profitability, which could be understood to mean that a public company must be transformed into a successful business (Lawrence et al., 1997).

The achievement of an EBITDA goal, which has continually remained a strategic objective of the company, relates to the legitimization structure that sanctions or rewards social practices specifically devised to reach that goal. Similarly, during their pre-cost structure phase, projects continue to be approved or declined based on the extent to which they can demonstrate their financial self-sustainability. The structure of domination is therefore apparent, as the company has consistently strived to ensure through MAPs, that the financial indicators imposed by multilateral banks during the loan agreements have been met.

The foregoing discussion illustrates how the implementation of NPM reforms has further reinforced the businesslike practices of LAMC and the internalized ethos of pursuing efficiency and profitability. The continual search for efficiency led LAMC to disregard and manipulate many other aspects of their operations, which eventually triggered unintended consequences, thereby adversely affecting the lives and livelihoods of marginalized community members.

5.2 | Did “doing more with less” finally lead to “doing less with more?”

5.2.1 | Internalization of “profitability” and “efficiency” as corporate values

What happened in relation to the dam project has caused LAMC’s large-scale project management and its championing of efficiency to be questioned. From the outset, LAMC’s strategic goal has been to increase profitability. Changes introduced over a period of several decades were therefore focused on achieving efficiency and transforming its businesses into successful benchmarks. All of LAMC’s projects and business ventures were expected to meet the performance benchmarks set for them. The LAMC managers were required not only to seek out the mechanisms by which to generate and increase profits but also to minimize the use of inputs and resources. In doing so, LAMC has successfully developed an image as a profitable SOE and legitimized the idea of being financially self-sustainable.

Managing and achieving their financial goals, as outlined in the company’s strategy, has therefore become a key priority among LAMC employees. It can be argued that the company’s financial orientation may have forced employees and managers to compromise on the achievement of their social goals. However, this seems unlikely given that most employees and managers, especially those at the senior levels of management, tend to believe that social goals could only be achieved if the company is in a financially viable position. The vision that only through being profitable would the company be able to address social issues and promote community welfare has continually dominated the mindset of high-level managers, as the following statement from the CEO illustrates:

We want to build competitive and sustainable territories because we believe that the success of a company must go hand in hand with community well-being. We are convinced that everything acquires a special meaning when we learn to look at the environment and act accordingly. (LAMC, 2012, p. 1)

Mentions were made during our interviews that the incongruities in these goals have not been regarded as an issue at the senior management level. A belief has prevailed that the company has been successful in terms of balancing its profitability goals with its societal responsibilities. The following statements by the company’s vice presidents shed light on these internalized beliefs:

We, in our strategic postulates, seek a balance between economic or financial and social or environmental aspects. What we have learned at this time is that the first requirement of being sustainable is to be profitable. (Vice-president3)

LAMC is rigorous in the analysis of the social and environmental impacts of its projects. They offer us projects in Central America and Chile, but we know that they affect indigenous communities or cause significant environmental damage. Although they are profitable, we decided that LAMC’s reputation cannot be lost by earning a few dollars from a business that does not fit its philosophy. (Vice-president6)

We do start from the principle that all investments must be profitable, but we do not neglect the balance between social, environmental, and financial aspects. (Vice-president5)

During our interviews, it was noted that many of the interviewees had internalized the view that the “rigorous control of resources” through accounting and budgeting would not only drive them toward success but also enable them to fulfill their social responsibilities more effectively. As a result, their agency has often been executed with profit-driven motives. For instance, an ex-member of the Board of Directors offered the following remarks on the factors contributing to LAMC’s success:

When LAMC buys aqueducts from municipalities, it could be seen as an altruistic act, but LAMC also does it to make money. It knows how to channel and purify water and find leaks. So LAMC has a very large field of action. (Ex-member of the Board of Directors1)

The previous excerpt shows how the provision of public services by LAMC has been set up in a way that prioritizes profit. The fact that LAMC should be financially sustainable over time and engender profits both in the short and long terms through promoting efficiency has been deeply embedded both in the structure and agency of managers and other members of staff. For many staff members, this internalization of efficiency continued throughout the period during which they worked for the company and was reproduced in their day-to-day practices. However, some of the staff members who had worked at middle-management level expressed critical views and continued to critically reflect on some of LAMC’s practices after they retired from the company. For instance, during our interviews, some of the company’s retired officers expressed views that emphasized the importance of balancing societal needs with the company’s profitability. Commenting on what they thought should be the ideal strategy for the company to adopt, a former director stated:

The objective of a public company is not to make money, but to build quality of life and to build social sustainability, and clearly it has to earn money for those things. Profits are a result of running a socially responsible business, not a goal. (Ex-manager1)

The same interviewee then added:

I feel that the trend is that the legitimacy of the organisation is decreasing because administrators were devoted to maximising efficiency, measured only in terms of money. (Ex-manager1)

Although such views are paradoxical, they have had little influence on altering the mindset of existing staff members and the modus operandi at LAMC. It is striking that the structure of signification (Giddens, 1984), via which the company is regarded as a successful business, has clearly been internalized by managers and other staff members. The agency of a large proportion of managers and staff members has therefore been self-driven toward achieving efficiency, and this agency has been reproduced through various MAPs adopted across time and space.

5.2.2 | Profitability through management accounting

In practice, LAMC tends to select projects based on the extent to which they are aligned with its strategic objectives and the benefits they could engender. MAPs have played a significant role in maintaining LAMC as an efficient and profitable business. Such practices have guided the company in its project formulation, execution, and decision-making processes, ensuring that only projects that are efficient and profitable are carried out. A former member of the Board of Directors explained:

The accounting systems connect almost all of LAMC's operations. You can predict sales by multiplying how many kilowatts you expect to sell at such a price, and then you work out the profit. The budget is linked to accounting because accounting produces historical records and then LAMC projects them. (Ex-member of the Board of Directors)

The interviewees also stated that all LAMC projects, including infrastructure development projects, are required to provide accounts of their estimated costs and assets prior to their approval. Therefore, project managers often work together with the finance team to ensure that project plans comply with the prescribed financial and accounting requirements. A director who was involved in managing one of the company's units stated:

LAMC has always been extremely careful with its accounting practices so that daily activities are permeated by these practices. In my particular case, I strictly follow the requirements of the finance and accounting areas. (Director5)

Each project is scrutinized based on the budget and pre-accounts prepared by responsibility centers, and claims have been made that this has enabled the managers and accountants to closely monitor the resources used in the projects and other control entities. Accounting and budgeting are largely interconnected in their day-to-day operations; the following statement by a management accountant illustrates this point:

... Every economic fact runs parallel as in two layers: recognising the impact on the budget and the impact on accounting... The budget is very detailed in order to present to the board of directors indicators of how much energy we agree to generate, transport, and sell, and how many cubic meters of water we agree to treat and sell. It enables a very detailed follow-up of each one of those components. (Manager1)

The same interviewee added:

For example, in accounting, [electricity] generation is regarded as a service, you see the balance sheet, income statement, how much goes to the cost system, and you find the cost per plant with the possibility of generating an operating margin. (Manager1)

Overall, the interviewees emphasized the usefulness of accounting information, which has enabled the CEO and vice presidents of LAMC to monitor the costs of their SBUs. Detailed cost information prepared by the company has elevated the importance of accounting within day-to-day management, thereby making it an authoritative resource (Giddens, 1984). The SBUs have been able to control and monitor employee activities easily, using cost accounting and by imposing performance indicators. Furthermore, the implementation of various cost techniques has enabled managers and accountants to generate greater awareness of resource management and cost control, while seeking to deliver profitable public services. Following Giddens (1984), it is possible to argue that the managers and accountants have continued to reflect some level of self-understanding of what is expected from them and consciousness of the importance of rationalizing their actions through MAPs. The emphasis on achieving efficiency has therefore persisted unconsciously, paving the way for the adoption of NPM-based MAPs.

5.2.3 | Balancing profitability and societal goals—a paradox

The efficiency-driven mindset of managers and accountants at LAMC raised substantial concerns after the collapse of the dam project. In fact, a paradox was clearly evident from the early days, in the way that the company's day-to-day

operations have been facilitated. As well as pursuing profitability, its status as a public entity also meant that LAMC was also expected to contribute to social objectives by ensuring that citizens had easy access to services and achieving societal goals. Prior to the NPM reforms, the dominant ideology was that all citizens should have access to utility services regardless of their capacity to pay, as part of the right to live with dignity (de Araújo & Cullen, 2012). This was guaranteed by the state by making direct subsidies available to those on low incomes. However, during the 1990s, this changed when a new provision was enacted for utility companies delivering services to the public, which required them to function as private enterprises, generating profit and ensuring that they were capable of accumulating and reproducing the required capital (Varela, 2008a, 2008b). It led to utility companies prioritizing their profitability and sustainability above their social functions. Moreover, subsidies offered to low-income groups were withdrawn, and eventually, the public services became economic commodities, allowing the market to set prices (León-Paime, 2005).

Prior to the enactment of this provision, only a few LAMC service users on low incomes had failed to pay their utility bills. However, the abolition of direct subsidies in 2000 resulted in more than 80,000 low-income users being unable to pay their bills, and consequently, they were unplugged from utility services (Varela, 2011). A community leader remarked:

Since 2012, LAMC has started to refer to “disconnected users” as “delinquent debtors” when they cannot pay their bills. This is a complex semantic burden because it makes the user responsible for accessing services. (Community leader 1)

It was mentioned during our interviews that LAMC had started to treat the service users as clients, who have a personal responsibility to meet the material conditions that would enable them to access the utility services. This contributed to an erosion of trust in government, as one interviewee confirmed: “... the social function of the state is not just to *build the infrastructure to offer the services but also to guarantee that people can pay their bills*” (Community leader 1).

Boehm (2005) pointed out that utility companies manipulated the regulations and intervened in the tariff-setting process through political lobbying. Consequently, the prices set were not reflective of the actual costs, and greater efficiencies obtained through cost reductions were not transferred to customers through lower tariffs. This contributed to preventing free-market competition in the utility sector, as one ex-manager explained:

LAMC may charge lower electricity tariffs because the model allows it. However, LAMC formed a cartel with other utility companies in the country so that they could collect more money. (Ex-manager 1)

The constant search for profits by LAMC contradicts the objectives of a public organization and reflects the company's adherence to the notion of market-led development (Hopper et al., 2009). However, the company's vision of promoting community well-being through profit generation and the claims that it has made in terms of balancing profitability and societal goals have been challenged by activists and other knowledgeable citizens. For instance, during our interviews, a community leader pointed out how the dam project has stifled the community's economy and resulted in the forced displacement of local people, as their main economic activity, *barequeo* (artisanal mining), disappeared. Community sustainability has, therefore, been confined to the company's accounting statements and press releases rather than put into action. A key focus of the company has been achieving the execution of the projects at all costs, as the following statement from the community leader serves to illustrate:

... It's true that LAMC hired many people from the region, but many people who were not hired started to farm illicit crops and others became involved with illegal armed groups. Those groups even recruited children. For me, this is not sustainable development because they caused serious harms to communities, and they want to hide this. (Community Leader 2)

A second community leader added:

If LAMC is a highly profitable business, why don't they invest those resources in guaranteeing universal access to services for all members of the community? (Community Leader1)

It was frequently mentioned during the interviews that the socio-environmental impacts of the dam project had not been clearly assessed from the outset. Additionally, many local people who protested against the project were threatened, as one of the interviewees (Community Leader 2) confirmed: "...we were scared and decided to keep quiet." Furthermore, our interviewees revealed another important issue underlying the execution of the dam project: the public order problem in the region due to the operation of illegal armed groups. LAMC deliberately neglected to acknowledge this conflict and its sociopolitical consequences until 2020, when the company was asked to develop a risk matrix as part of its contingency plans. The project was executed without disclosing the protracted violent episodes that had occurred in the region since the 1990s. Almost 50% of the victims were from the two municipalities located closest to the project. Furthermore, 358 inhabitants of these 2 municipalities disappeared between 2000 and 2001 (JEP, 2020). In total, 4828 cases of forced disappearance have been reported along the riverside municipalities closest to the project. These figures show the sheer scale of human rights violations in the region where the project was located. Thus, the construction of the dam has drawn significant criticisms both because of the location selected and the violation of human rights that it entailed. However, LAMC's commitment to improving the human rights situation in the region is yet to materialize in practice, despite the enactment of its human rights policy, as outlined in its 2012 report:

In 2012, LAMC enacted the Institutional Human Rights Policy, through which it commits to comply with and promote in its value chain compliance with what is enshrined in the Universal Charter of Human Rights and its protocols, conventions and binding agreements, including International Humanitarian Law and the provisions of the Political Constitution. (LAMC, 2012, p. 390)

Critics have also pointed out that LAMC overlooked the ruling of the Inter-American Commission on Human Rights (IACHR) against the state in which LAMC operates for the massacres that occurred between 1996 and 1997. The IACHR granted precautionary measures in 2001 in favor of the civil population affected by the clashes that occurred between the guerrilla and paramilitary groups in an area close to the project. Moreover, between 2020 and 2021, more than 20 cases were recorded in which the civilian population was once again subject to extortion, threats, forced displacement, and murder (Hacemos-Memoria, 2022). In 2020, a lawsuit was filed against LAMC by a social movement representing the population living near the project site who were subject to the constant violation of human rights. It is therefore evident that the vision of sustainable development internalized within LAMC's structure was very different from that which communities have had to face in their everyday lives.

The apparent failure to account for the human rights violations experienced by the community and the socio-environmental implications of the dam project has raised concerns about the reliability of LAMC's sustainability reports. In fact, the social movement demanded that LAMC should take full responsibility for what happened because of the dam project and compensate the victims and the community. Claims have been made that the disaster was mainly a result of the project's poor execution, with little attention paid to the possible socio-environmental impacts. In regard to this point, a community leader recalled:

From 2016 to 2017, I witnessed how LAMC was cutting down trees roughly because they weren't interested in how they cut them down or how many they cut down. LAMC didn't have the capacity to remove the felled trees and they covered them with sand. LAMC dammed the river without authorisation and unfortunately, the river went down in a storm that brought down all that wood... LAMC only had one tunnel that it built without an environmental licence. That tunnel didn't have the capacity to evacuate

all the water with the wood in it, so it became clogged and when it became unclogged, it caused the emergency. (Community Leader2)

Researchers have also outlined several errors that the company made during the execution phase of the project. For instance, Núñez-Fernández and Ocampo-Soto (2020) observed that the extent to which the dam project would affect the communities that had settled near the river was not taken into account. In a report published by Wåhlin (2015), it is highlighted that Swedish companies that were working in collaboration with LAMC in executing the dam project did not carry out a detailed risk assessment that would be required for this type of project. This is probably because disclosing these risks would have jeopardized the involvement of these companies. The report also mentions other issues relating to the impact of the project on the local economy, in particular, the artisanal mining carried out by the *barequeros*. Approximately 30,000 people surviving on informal jobs were affected when the company exploited the river, which had been their source of employment, in the construction of the hydroelectric project. A large number of people were relocated, but their resettlement was poorly planned and inadequate. Perhaps more striking was that LAMC built the collapsed tunnel of the dam project without obtaining the required license from the National Environmental Licensing Authority (ANLA) (Pérez-Gutiérrez, 2019, p. 95). In addition, an international consulting firm, Pöyry, was hired to solicit expert opinions, despite the firm having attracted criticism for its poor handling of similar projects in other countries in the region (Zuleta, 2021). Many scholars have argued that local authorities also played a part in making the disaster inevitable. For instance, Moreno-Avila and Moreno-Mora (2021) highlighted the failure of the environmental authority to conduct rigorous surveillance throughout the project execution period. As a result, the National Constitution, environmental laws, and international treaties were all violated, yet no action has been taken against the company. Similarly, no proper consultation process was held with a view to mitigating the adverse impact of the dam project on the local environment and surrounding communities.

Overall, NPM-based MAPs and reporting have served as an important resource for LAMC managers and accountants through which to exercise power and continue prioritizing their profitability objectives. The case of LAMC clearly demonstrates the significance of MAPs for organizations in terms of identifying the costs of services provided, reducing inefficiency, and making them competitive. Following Giddens (1984) theory, the dialectic of control is apparent at LAMC in the fact that achieving efficiency and profitability have become corporate values, thereby enabling the managers and accountants to exercise power through selecting specific information to report and prioritizing those facts that could underpin such values. MAPs and reporting have served as resources through which to communicate good practices and obtain legitimacy in the process of facilitating social interactions. In this way, as argued by Roberts (2014), the structure of domination has been allowed to prevail through the use of MAPs and reporting, which, in the case of LAMC, undermined the public debates surrounding the socio-environmental and economic consequences of its actions. The next section discusses the significance of management accounting at LAMC and the social consequences of the dam project.

5.3 | The dam project in annual statements: efficiency versus social consequences

To address the collapse of the dam project, LAMC developed a risk matrix aimed at “managing risks derived from it and that could affect organisational sustainability under this new context” (LAMC, 2018, p. 27). The company adjusted its strategic direction to focus on the recovery of the project, securing liquid funds, and maintaining credit ratings. LAMC also proposed undertaking decisions based on a value scale that would prioritize safeguarding people’s lives, followed by environmental protection (LAMC, 2018, p. 316). The company’s financial statements demonstrated that the dam project had operated efficiently prior to the disaster. In its sustainability reports of 2016 and 2017, LAMC succinctly mentioned the public order problems in the area where the project was situated, but no action plans were put in place to mitigate the risks arising from these problems. Instead, LAMC constantly emphasized the need to finish the project on time.

The whole dam project was revisited after the disaster. By 2018, LAMC reported that the company had already achieved 90% progress in regard to providing compensation as part of its commitment to mitigating the environmental impacts of the disaster (LAMC, 2018, p. 407). In the report of 2019, it was further claimed that 98.6% progress had been made in terms of offering compensation and facilitating the resettlement of those displaced by the dam project (LAMC, 2019, p. 508). What was particularly striking in the 2019 reporting was that a special report dedicated to the dam project was included in the company's sustainability statements. In its sustainability report of 2019, LAMC reported the financial resources that the company had had to expend due to the contingency plan. The company also disclosed its progress on issues that had been overlooked before the disaster. For instance, LAMC was required to develop a sociopolitical risk matrix and recognize the precautionary measures promulgated by the IACHR with respect to protecting the human rights of the inhabitants of the region. Furthermore, in the sustainability report of 2020, LAMC disclosed the extent to which the financial costs of finishing the project had overrun. There was also a special section describing the judicial decisions taken by the authorities that had investigated the case.

A key issue, however, concerns the extent to which the financial and sustainability statements prepared by the company correspond to the ground-level reality. For instance, the company faced litigation due to its poor response to the victims and its failure to prevent human rights violations. The disaster adversely affected the company's liquidity position. As well as selling some shares in its subsidiaries operating in Chile and Colombia, LAMC attempted to save costs by choosing not to renew fixed-term contracts, thereby terminating the employment of a large number of employees. The company's focus was on quantifying the damages caused to third parties in order to claim different forms of compensation directly from the insurance company (through a MAPFRE SEGUROS policy) (LAMC, 2020, p. 1509). In its report, the Office of the Comptroller General revealed that the cost minimization and profit maximization decisions that LAMC had undertaken had been a key factor in triggering the collapse of the dam project (Reina-Jiménez, 2021).

The minutes of the Board of Directors showed that, in 2014, the company had replaced the contractor originally assigned to carry out the project to avoid delays in the schedule, which would have resulted in a loss of profit. The minutes also disclosed that the diversion tunnels had not been ready on time due to several issues associated with the contractor:

Limited resources of personnel and equipment, lack of planning of the works, logistics problems, and inopportuneness and delays in the location of the construction supports. (The Office of the Comptroller General of the Republic; cited in Reina-Jiménez, 2021, p. 59).

Because of LAMC's concern about the fines it would have to pay, it made the controversial decision to build a third diversion tunnel to speed up the work. LAMC diverted the "Big River"⁴ through tunnels without gates and made the mistake of constructing a new tunnel, which eventually blew up. (Pérez-Gutiérrez, 2019, p. 87)

The coating of Tunnel 3 that exploded was of the Ribs type, which is not continuous or uniform, and the rest was covered with shotcrete... It was not adequate for the hydrodynamic conditions that occurred. (auditing report; cited in Pérez-Gutiérrez, 2019, p. 120).

The collapse of the dam project also shows that decisions made by the company had failed to reflect the technical rigorosity that it claimed to have exercised. In regard to this, Jiménez-Villamil (2019) stated that decisions about the dam project were made in a circumstantial manner, which did not correspond to the strategic planning exercise that would normally characterize an engineering project involving this level of complexity. This provides evidence that many of the decisions undertaken by the company were politically and financially driven and that important technical issues were overlooked in the process. In a similar vein, Pérez (2019), cited in Reina-Jiménez (2021), pointed out that

TABLE 1 Comparison between Latin American Multiutility Conglomerate (LAMC) and Deloitte reports regarding the progress of the dam project.

Project progress in relation to each of the following components:	Progress level by December 2017 according to LAMC (%)	Progress level by February 2018 according to Deloitte (%)
Compliance with the schedule and S-curve	97.74	80.98
Dam and spillway	100	82.31
Reservoir discharge	100	82.32
Environmental costs and property	96.73	90.35
Pressure pipes	100	73.86

Source: Pérez-Gutiérrez (2019).

Tunnel 3 or the “Auxiliary Diversion Gallery” (GAD, as it is referred to in Spanish) was not constructed in accordance with the original designs that were presented to LAMC’s Board of Directors. Following a technical analysis, the Board had recommended that the construction of this tunnel should not go ahead. In fact, a group of professors with PhDs in hydraulics tested the operation of the GAD. They concluded that it was risky because the tunnel had channeled flows of the river that were inadmissible, and this constituted one factor leading to the collapse of the dam project. Moreover, Pérez-Gutiérrez (2019) pointed out that LAMC had fabricated information about the progress of the project. This was also evident in the audit report provided by Deloitte two months prior to the disaster (see Table 1).

The differences in progress reflected in Deloitte’s report, compared to the one produced by LAMC, show how the company manipulated its performance and legitimized its image as a champion in Latin America in terms of embracing the business model and associated management accounting techniques prescribed within the rhetoric of market-led development notions and embedded in NPM. During the interviews, a forensic audit expert outlined several reasons that are yet to be confirmed but could have forced LAMC to fabricate its sustainability reports. These included the following:

- providing assurance that the project would be completed on time to avoid paying fines;
- securing financial resources by demonstrating to the auditor that the project was progressing as intended;
- eliminating mass graves caused by the social conflict in the region where the dam project was constructed, prior to this information becoming publicly available.

The above statements provide further evidence of how the legitimization structure that shaped day-to-day practices at LAMC involved pursuing efficiency at any cost, overriding its duty to protect the well-being of community members. As a result, socio-environmental costs remained unaccounted for in its day-to-day operations, forcing others to bear these costs. The consequences of these failings were unprecedented. Local communities lost their land, livelihoods, and employment when the river upon which they relied on was invaded, and employees lost their jobs when their fixed-term contracts were terminated. Claims were also made during our interviews that several lives were lost fighting against human rights violations, and the loss of flora and fauna affected the ecology of the region—all of which are beyond the remit of NPM-based MAPs and sustainability reporting.

6 | DISCUSSION AND CONCLUDING REMARKS

Drawing on ideas from Giddens’ ST, in this paper we have demonstrated some of the far-reaching socio-economic, environmental, and humanitarian consequences of neoliberal market-led development and associated NPM-based MAPs in emerging economy contexts. Several forms of unintended consequences of market-led development and

NPM measures imposed on emerging economies by international organizations such as the WB and IMF have been discussed in prior accounting work (Adhikari & Jayasinghe, 2022; Hopper et al., 2009; Jayasinghe & Uddin, 2019; Nyamori et al., 2017; van Helden et al., 2021). Although our findings are in line with those of the aforementioned studies, we have moved beyond their scope by delineating the extent to which such notions of development and NPM could be exploited by large public companies in emerging economies—in this case LAMC—and how such companies have been able to continually maintain their image as models of success, by internalizing efficiency and profitability through the use of MAPs and reporting.

Unlike many other state-run conglomerates in Latin America and other emerging economies (Wickramasinghe & Hopper, 2005), since its establishment, LAMC has pursued MAPs, such as ABC, a balanced scorecard, and accrual accounting, driven by the internalization of efficiency as a corporate value. Achieving cost minimization and profitability has been central to its SBUs and is enforced as a key strategy in its day-to-day operations. A belief prevailed within the company that a successful image can be maintained by avoiding losses, and that the creation of profit is of paramount importance in the balancing act between profitability and social goals. This led to the internalization of the idea that social and environmental issues can be addressed only through the generation of profit. As a result, budgeting and accounting practices were designed in such a way as to reinforce the control mechanisms and monitor the company's success in achieving its EBIDTA—strategic goals set by the company. Efficiency, expressed in terms of profit maximization, had to be reproduced in day-to-day practices through income generation and cost minimization. The MAPs that were adopted and the annual statements prepared by the company continued to promote its image as a paradigmatic company and a benchmark of NPM success in Latin America in terms of maintaining efficiency with regard to resource management, operationalizing technical knowledge, and balancing social responsibilities.

On the contrary, our findings have demonstrated how the company's obsession with achieving efficiency has overshadowed many of its socio-environmental commitments. This implicitly played a part in triggering the dam disaster. The managers and staff members, who were aware of the project's technical defects and their possible consequences for society, remained silent, thereby violating the company's philosophy of creating sustainable territories. Its focus was on avoiding fines and ensuring cost saving by promoting technical efficacy and performing relevant tasks within the set timelines. Technical analysis was overlooked, whereas warnings from expert board members were disregarded and information fabricated (Pérez-Gutiérrez, 2019), thus making the disaster inevitable. Not only did the company fabricate information about the progress of the project in its annual reporting, but its stated intention to take responsibility for the human and socio-environmental consequences caused by the disaster has also raised significant concerns and been questioned. For instance, our findings show that LAMC's focus after the disaster was on completing the project and maintaining its credit ratings, whereas the socio-environmental costs were not fully disclosed. The propagation of the myth that the dam project was connected to community progress, the economic growth of the region, and increasing the profitability of its diverse stakeholders remained intact. Social and economic consequences resulting from the project, such as the displacement of a large segment of the local communities who were affected by the disappearance of artisanal mining (Barequeo), the termination of employment for a large number of employees whose fixed-term contracts were not renewed, and the violence resulting from the public order issued due to the operation of illegal armed forces in the region, remained undisclosed and largely excluded from the reporting.

The application of ST has enabled us to delve deeper into the way in which notions of efficiency and profitability were operationalized at LAMC, by adhering to the NPM-based MAPs, as well as the role played by these MAPs in internalizing such notions as corporate values. Built on the influence of the School of Mines and its technostructure (Aristizábal et al., 1988; Barrios-Álvarez et al., 2021; J. López, 2005; Varela, 2011), and having been embedded as a corporate value, the notion of efficiency was transmitted from one generation to the next at LAMC. Thus, the reflexivity and structured mindset of managers and staff members continued to reproduce this corporate value (Giddens, 1993), and the advent of NPM and market-led development further rationalized their agency by prioritizing profitability over social goals. Agency was therefore reproduced by focusing on cost reduction, while reiterating the notions of efficiency and profitability. Meanwhile, the socio-environmental and human costs relating to the dam project continued to be overlooked.

Our study has illustrated how the use of MAPs by LAMC has connected agencies and structures in a dialectic way through social reproduction (Englund & Gerdin, 2008). In the process of monitoring the costs of the dam project, LAMC developed a triad consisting of accounting (entity accumulation of capital), budgeting (resource allocation), and planning (control order), so as to ensure that the financial indicators set were achieved (Barrios-Álvarez et al., 2021; León-Paime, 2005). The triad operated as a space-time ordering device connecting future activities with the efficiency criteria that were central to the strategic goals specified by the company (Carmona et al., 2002; Macintosh & Scapens, 1990; Roberts & Scapens, 1985). In this way, we have theorized the reflexive characteristics of social practices and their reproduction through MAPs and reporting in emerging economic contexts. Extending prior work on the application of management accounting in emerging economies (Barrios-Álvarez et al., 2021; de Araújo & Cullen, 2012; Uddin & Hopper, 2003; Uddin & Tsamenyi, 2005; Wickramasinghe & Hopper, 2005), the essence of ST in generating insights into the role that management accounting can play in the performance elevation of public sector entities has been explicitly reflected in the study. Drawing on ST has enabled us to bring out the internal values that shaped LAMC's operations and add to the discussion on the catastrophic failure of market-led development (Adhikari & Jayasinghe, 2022; Jayasinghe & Uddin, 2019; van Helden et al., 2021) and its associated MAPs to protect the well-being of disadvantaged communities in emerging economies.

Having said this, the role that LAMC has played within the utility sector in the LAC where it has been operating for the last six decades, generating employment and other opportunities for millions of people, should not be overlooked. LAMC has been intrinsically interlinked with the development that has taken place in this country during the last few decades, specifically in the city where LAMC's headquarters are located. The dam disaster was neither an intention nor a planned action by LAMC. However, our intention in the paper was to demonstrate how an extensive focus on market-led development and NPM mechanisms has marginalized many of the other socio-environmental and human costs incurred through the company's operations. Primacy was afforded to the pursuit of efficiency and profitability without anticipating the socio-economic, environmental, and human ramifications and the reconstitution of citizens as customers, both of which were the consequences of adopting the market-based NPM reforms and the violation of "publicness" through MPAs. Our key contribution therefore concerns highlighting the limitations of market-led development and NPM-based MAPs and reporting within the contexts of a growing discussion about the significance of "publicness." We therefore emphasize the need to rethink market-led development and identify alternative modes of delivering development beyond market-oriented logics and embedding contemporary challenges facing the public sector in emerging economies.

Hopper et al. (2009) argued that the enactment of neoliberal MAPs could be problematic in emerging economies due to local politics, culture, and organizational structures. It has been shown that these practices can be transformed for coercive purposes and used for external legitimacy, "rather than rational control and democratic accountability" (Hopper et al., 2009, p. 470). Such was the case at LAMC. Being presented as a role model for NPM adopters and showcased as a benchmark of success that other public sector entities in LACs could emulate. LAMC was eulogized even though it concealed and fabricated its operations using MAPs and reporting, and the company was reluctant to accept that social responsibilities had been continually ignored and violated. Thus, the lives of the poor and vulnerable were put at risk for the sake of achieving efficiency, profitability, and championing success. The dam disaster highlights the fact that such a narrow focus on market-led development and NPM by large-scale entities serving a wider community can have devastating socio-economic, environmental, and humanitarian consequences, far more severe than any other unintended consequences of NPM discussed in extant literature (Hopper et al., 2017; Uddin & Tsamenyi, 2005; Wickramasinghe et al., 2021).

However, critics of NPM have not been confined to emerging economies and are increasingly gaining momentum in Western countries, particularly in the evolving post-COVID society (Bracci et al., 2021). The narrow scope of NPM in terms of promoting efficiency, effectiveness, and economy has been portrayed as outdated, in order to facilitate public governance development and to account for issues of wider social relevance, including encouraging co-production, hybridization, and the digitalization of public service delivery, addressing crises such as austerity measures and the cost of living, responding to disasters, pandemics, and wicked problems, and, more importantly, creating and

maintaining public value (Bracci et al., 2021; Grossi et al., 2023; Steccolini, 2019). Steccolini (2019) emphasized the urgent need to replace NPM with “publicness,” which has “come to refer more to the attainment of public goals and interests, than to the organisations and concrete spaces where the related activities take place” (p. 262). Claims have therefore been made that public value has become a new paradigmatic alternative to NPM, in which the focus is on collective action through public engagement, co-design and co-production, inclusive dialogs and deliberation, and the pursuit of the common good and a public ethos (Grossi et al., 2023; Steccolini, 2019). Accounting has been presented as an important element in terms of responding to increasingly intangible publicness, in which public value and interest are planned, decided upon, and accounted for within public space (Bracci et al., 2021). However, empirical work delineating how MAPs can be implicated in public value creation and promoting the wider notion of publicness in general, and in emerging economies in particular, is scarce. Further research is therefore warranted to discuss the role of MAPs beyond NPM and market-led development and how they can be deployed in the pursuit of publicness and public value within emerging economic contexts. As pointed out by Steccolini (2019), such work is of paramount importance not only in preventing the “unexpected and unwanted effects of public sector accounting” (p. 270) under NPM and market-led development but also to preserve the lives and livelihoods of poor and vulnerable community members in emerging economies.

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DATA AVAILABILITY STATEMENT

The data that support the findings of this study are available on request from the corresponding author. The data are not publicly available due to privacy or ethical restrictions.

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ENDNOTES

¹ The name of the local newspaper has been made anonymous in the reference list to protect the identity of LAMC.

² The real name of the city has been changed to protect the identity of LAMC.

³ The technostructure at LAMC constituted a group of employees who had been working there for an extended period of time, and who were involved in developing and executing its business model.

⁴ The real name of the river has been changed to protect the identity of LAMC.

REFERENCES

- Adhikari, P., & Jayasinghe, K. (2017). ‘Agents-in-focus’ and ‘Agents-in-context’: The strong structuration analysis of central government accounting practices and reforms in Nepal. *Accounting Forum*, 41(2), 96–115.
- Adhikari, P., & Jayasinghe, K. (2022). Public sector accounting in developing countries: What we know and what we still need to know in general and in the African context in particular. *African Accounting and Finance Journal*, 4(1), 109–119.
- Adhikari, P., Nkundabanyanga, S., Soobaroyen, T., & Jayasinghe, K. (2023). Public sector accounting in emerging economies in the evolving post-COVID era. *Journal of Public Budgeting Accounting and Financial Management*, 35(3), 297–308.
- Ahrens, T., & Chapman, C. S. (2004). Accounting for flexibility and efficiency: A field study of management control systems in a restaurant chain. *Contemporary Accounting Research*, 21(2), 271–301.
- Alawattage, C., & Azure, J. D.-C. (2021). Behind the World Bank’s ringing declarations of “social accountability”: Ghana’s public financial management reform. *Critical Perspectives on Accounting*, 78, 102075. <https://doi.org/10.1016/j.cpa.2019.02.002>

- Alawattage, C., & Wickramasinghe, D. (2022). Strategising management accounting: Liberal origins and neoliberal trends. *Accounting, Auditing & Accountability Journal*, 35(2), 518–546. <https://doi.org/10.1108/AAAJ-01-2021-5124>
- Alford, J. (2016). Co-production, interdependence and publicness: Extending public service-dominant logic. *Public Management Review*, 18(5), 673–691. <https://doi.org/10.1080/14719037.2015.1111659>
- Aristizábal, L. F., Arias, J., & Tobón, C. (1988). *Un modelo racionalizador* [Master of business administration]. EAFIT University.
- Bakre, O., Lauwo, S. G., & McCartney, S. (2017). Western accounting reforms and accountability in wealth redistribution in patronage-based Nigerian society. *Accounting, Auditing & Accountability Journal*, 30(6), 1288–1308. <https://doi.org/10.1108/AAAJ-03-2016-2477>
- Ball, I. (2012). New development: Transparency in the public sector. *Public Money & Management*, 32(1), 35–40.
- Barrios-Álvarez, C., Adhikari, P., & Mejía-Gómez, A. (2021). Management accounting practices and efficiency in a Colombian multi-utility conglomerate. *Journal of Accounting in Emerging Economies*, 11(5), 714–734.
- Boehm, F. (2005). Corrupción y captura en la regulación de los servicios públicos. *Revista de Economía Institucional*, 7(13), 245–263.
- Bracci, E., Saliterer, I., Sicilia, M., & Steccolini, I. (2021). Accounting for (public) value(s): Reconsidering publicness in accounting research and practice. *Accounting, Auditing & Accountability Journal*, 34(7), 1513–1526. <https://doi.org/10.1108/AAAJ-06-2021-5318>
- Bryson, J. M., Crosby, B. C., & Bloomberg, L. (2014). Public value governance: Moving beyond traditional public administration and the new public management. *Public Administration Review*, 74(4), 445–456.
- Busco, C. (2009). Giddens' structuration theory and its implications for management accounting research. *Journal of Management & Governance*, 13(3), 249–260. <https://doi.org/10.1007/s10997-008-9081-6>
- Busco, C., Riccaboni, A., & Scapens, R. (2000). Management accounting systems and organisational culture: An institutional framework for interpreting their linkages and processes of change. In: *Paper presented at the 2nd workshops on management accounting change, Oslo, Norway* (pp. 1–43).
- Carmona, S., Ezzamel, M., & Gutiérrez, F. (2002). The relationship between accounting and spatial practices in the factory. *Accounting, Organizations and Society*, 27(3), 239–274.
- Coad, A., Jack, L., & Kholeif, A. (2016). Strong structuration theory in accounting research. *Accounting, Auditing & Accountability Journal*, 29(7), 1138–1144. <https://doi.org/10.1108/AAAJ-07-2016-2625>
- Conrad, L. (2005). A structuration analysis of accounting systems and systems of accountability in the privatised gas industry. *Critical Perspectives on Accounting*, 16(1), 1–26. [https://doi.org/10.1016/S1045-2354\(02\)00212-5](https://doi.org/10.1016/S1045-2354(02)00212-5)
- de Aquino, A. C. B., & Batley, R. A. (2022). Pathways to hybridization: Assimilation and accommodation of public financial reforms in Brazil. *Accounting, Organizations and Society*, 98, 101297.
- de Araújo, C., & Cullen, J. (2012). A case of management accounting change: The political and social dynamics. *Revista Contabilidade & Finanças-USP*, 23(60), 161–172.
- Englund, H., & Gerdin, J. (2008). Structuration theory and mediating concepts: Pitfalls and implications for management accounting research. *Critical Perspectives on Accounting*, 19(8), 1122–1134. <https://doi.org/10.1016/j.cpa.2007.06.004>
- Englund, H., Gerdin, J., & Burns, J. (2011). 25 Years of Giddens in accounting research: Achievements, limitations and the future. *Accounting, Organizations and Society*, 36(8), 494–513. <https://doi.org/10.1016/j.aos.2011.10.001>
- Englund, H., Gerdin, J., & Burns, J. (2020). A structuration theory perspective on the interplay between strategy and accounting: Unpacking social continuity and transformation. *Critical Perspectives on Accounting*, 73, 101988.
- Escobar, A. (2007). *La invención del Tercer Mundo: construcción y deconstrucción del desarrollo* (Primera edición). Fundación Editorial el perro y la rana.
- Giddens, A. (1984). *The constitution of society: Outline of the theory of structuration*. University of California Press.
- Giddens, A. (1993). *New rules of sociological method: A positive critique of interpretative sociologies*. Stanford University Press.
- Goddard, A., Assad, M., Issa, S., Malagila, J., & Mkasiwa, T. A. (2016). The two publics and institutional theory—A study of public sector accounting in Tanzania. *Critical Perspectives on Accounting*, 40, 8–25.
- Gonzalez, N. (2014). *50 años de gerencia tecnocrática de los ingenieros de la Escuela de Minas de Medellín en las empresas de servicios públicos en Medellín 1920–1970* [Master of business administration]. EAFIT University.
- Grossi, G., & Argento, D. (2022). The fate of accounting for public governance development. *Accounting, Auditing & Accountability Journal*, 35(9), 272–303.
- Grossi, G., Steccolini, I., Adhikari, P., Brown, J., Christensen, M., Cordery, C., Ferry, L., Lassou, P., McDonald, B., Raudla, R., Sicilia, M., & Vinnari, E. (2023). The future of public sector accounting research: A polyphonic debate. *Qualitative Research in Accounting & Management*, forthcoming.
- Hacemos-Memoria. (2022). *Masacre en La Granja: 25 años después persiste el miedo*. Hacemos-Memoria, University of Antioquia.
- Hopper, T. (2017). Neopatrimonialism, good governance, corruption and accounting in Africa. *Journal of Accounting in Emerging Economies*, 7(2), 225–248. <https://doi.org/10.1108/JAEE-12-2015-0086>
- Hopper, T., Lassou, P., & Soobaroyen, T. (2017). Globalisation, accounting and developing countries. *Critical Perspectives on Accounting*, 43, 125–148.

- Hopper, T., Tsamenyi, M., Uddin, S., & Wickramasinghe, D. (2009). Management accounting in less developed countries: What is known and needs knowing. *Accounting, Auditing & Accountability Journal*, 22(3), 469–514.
- Jayasinghe, K., Adhikari, P., Soobaroyen, T., Wynne, A., Malagila, J., & Abdurafiu, N. (2021). Government accounting reforms in sub-Saharan African countries and the selective ignorance of the epistemic community: A competing logics perspective. *Critical Perspectives on Accounting*, 78, 102246.
- Jayasinghe, K., & Uddin, S. (2019). Continuity and change in development discourses and the rhetoric role of accounting. *Journal of Accounting in Emerging Economies*, 9(3), 314–333. <https://doi.org/10.1108/JAEE-01-2018-0011>
- JEP. (2020). La JEP establece que 2.094 personas fueron víctimas de desaparición forzada en el área de influencia de 'the dam project'. In *Infobae* (p. 1). JEP.
- Jiménez-Villamil, A. C. (2019). *'The dam project': un fracaso desde la gestión* [Ingeniería civil Tesis de pregrado]. Universidad de los Andes.
- Kuruppu, C., Adhikari, P., Gunarathna, V., Ambalangodage, D., Perera, P., & Karunarathna, C. (2016). Participatory budgeting in a Sri Lankan urban council: A practice of power and domination. *Critical Perspectives on Accounting*, 41, 1–17.
- LAMC. (1961). *Annual report* (pp. 1–71). LAMC.
- LAMC. (2012). *Sustainability balance* (pp. 778). LAMC.
- LAMC. (2018). *Sustainability report* (pp. 1–1153). LAMC.
- LAMC. (2019). *Sustainability report* (pp. 1–1396). LAMC.
- LAMC. (2020). *Sustainability report* (pp. 1–1512). LAMC.
- Lassou, P. J. C., & Hopper, T. (2016). Government accounting reform in an ex-French African colony: The political economy of neocolonialism. *Critical Perspectives on Accounting*, 36, 39–57.
- Lassou, P. J. C., Hopper, T., & Ntim, C. (2021). Accounting and development in Africa. *Critical Perspectives on Accounting*, 78, 102280. <https://doi.org/10.1016/j.cpa.2020.102280>
- Lassou, P. J. C., Hopper, T., Soobaroyen, T., & Wynne, A. (2018). Participatory and incremental development in an African local government accounting reform. *Financial Accountability & Management*, 34(3), 252–267.
- Lawrence, S., Alam, M., Northcott, D., & Lowe, T. (1997). Accounting systems and systems of accountability in the New Zealand health sector. *Accounting, Auditing & Accountability Journal*, 10(5), 665–683. <https://doi.org/10.1108/09513579710194036>
- León-Paime, E. F. (2005). *El concepto de lo "público" y su evolución histórica social en la prestación de servicios públicos en Bogotá* [Master dissertation]. Universidad Distrital Francisco José de Caldas.
- Local Newspaper. (2018, 31 de mayo de 2018). *¿Qué es lo que pasa en 'the dam project'? Este es el abecé de la emergencia*. Local Newspaper.
- López, A. (2011). *El trabajo: Nociones fundamentales: Fondo*. Editorial Universidad EAFIT.
- López, J. (2005). La génesis de Empresas Públicas de Medellín: el camino de la autonomía. *Revista Letras Jurídicas de Empresas Públicas de Medellín 50 años*, 10, 9–30.
- Macintosh, N. B., & Scapens, R. W. (1990). Structuration theory in management accounting. *Accounting, Organizations and Society*, 15(5), 455–477.
- Marini, R. M. (1994). La crisis del desarrollismo. In *La teoría social latinoamericana. Subdesarrollo y dependencia* (Tomo, II, pp. 135–154). Universidad Nacional Autónoma de México.
- Matilal, S., & Adhikari, P. (2020). Accounting in Bhopal: Making catastrophe. *Critical Perspectives on Accounting*, 72, 102123. <https://doi.org/10.1016/j.cpa.2019.102123>
- Mayor, A. (1989). *Ética, trabajo y productividad en Antioquia: una interpretación sociológica sobre la influencia de la Escuela Nacional de Minas en la vida, costumbres e industrialización regionales*. Tercer Mundo Editores.
- Miles, M. B., Huberman, A. M., & Saldana, J. (2020). *Qualitative data analysis: A methods sourcebook* (4th ed.). Sage.
- Moreno-Avila, W. G., & Moreno-Mora, H. H. (2021). *Responsabilidad del Estado colombiano por actos administrativos en la licencia ambiental caso 'the dam project'* (Maestría en Derecho Administrativo Tesis de maestría). Universidad Libre, Bogotá.
- Neu, D., Everett, J., & Rahaman, A. S. (2009). Accounting assemblages, desire, and the body without organs: A case study of international development lending in Latin America. *Accounting, Auditing & Accountability Journal*, 22(3), 319–350. <https://doi.org/10.1108/09513570910945642>
- Neu, D., & Ocampo, E. (2007). Doing missionary work: The World Bank and the diffusion of financial practices. *Critical Perspectives on Accounting*, 18(3), 363–389.
- Núñez-Fernández, D. F., & Ocampo-Soto, L. F. (2020). Voces del territorio: Conflictos por el agua y el capital extractivista en el caso del megaproyecto hidroeléctrico 'the dam project', LAC. *Boletín Geocrítica Latinoamericana*, 174–188.
- Nyamori, R. O., Abdul-Rahaman, A. S., & Samkin, G. (2017). Accounting, auditing and accountability research in Africa: Recent governance developments and future directions. *Accounting, Auditing & Accountability Journal*, 30(6), 1206–1229. <https://doi.org/10.1108/AAAJ-05-2017-2949>
- Ocampo-Salazar, C. A. (2017). *La Contabilidad Pública como tecnología de gubernamentalidad. Un análisis foucaultiano de la gestión del Municipio de Medellín (1990–2015)* [PhD in management]. Universidad EAFIT, Medellín.
- Pérez-Gutiérrez, L. (2019). *La verdad sobre 'the dam project'-Causa Raiz* (p. 294). Instituto para el Desarrollo de Antioquia-IDEA.

- Portilla-Gamboa, M. (2018). 'The dam project': ¿Qué pasó, por qué pasó, qué está pasando y qué podría pasar? (D. d. Geociencias, Trans.). Universidad Nacional de Colombia.
- Reina-Jiménez, L. (2021). *La auditoría forense como herramienta de detección de irregularidades en el caso 'the dam project'* [Contadora pública Monografía de grado]. Universidad del Valle.
- Roberts, J. (2014). Testing the limits of structuration theory in accounting research. *Critical Perspectives on Accounting*, 25(2), 135–141. <https://doi.org/10.1016/j.cpa.2012.12.002>
- Roberts, J., & Scapens, R. (1985). Accounting systems and systems of accountability—Understanding accounting practices in their organisational contexts. *Accounting, Organizations and Society*, 10(4), 443–456.
- Safari, M., Bicudo de Castro, V., & Steccolini, I. (2020). The interplay between home and host logics of accountability in multinational corporations (MNCs): The case of the Fundão dam disaster. *Accounting, Auditing & Accountability Journal*, 33(8), 1761–1789.
- Salemans, L., & Budding, T. (2023). Management accounting and control systems as devices for public value creation in higher education. *Financial Accountability & Management*.
- Sikka, P. (2015). The hand of accounting and accountancy firms in deepening income and wealth inequalities and the economic crisis: Some evidence. *Critical Perspectives on Accounting*, 30, 46–62.
- Steccolini, I. (2019). Accounting and the post-new public management. *Accounting, Auditing & Accountability Journal*, 32(1), 255–279. <https://doi.org/10.1108/AAAJ-03-2018-3423>
- Stones, R. (2005). *Structuration theory*. Palgrave.
- Uddin, S., Gumb, B., & Kasumba, S. (2011). Trying to operationalise typologies of the spectacle: A literature review and a case study. *Accounting, Auditing & Accountability Journal*, 24(3), 288–314.
- Uddin, S., & Hopper, T. (2003). Accounting for privatisation in Bangladesh: Testing World Bank claims. *Critical Perspectives on Accounting*, 14(7), 739–774.
- Uddin, S., & Tsamenyi, M. (2005). Public sector reforms and the public interest. A case study of accounting control changes and performance monitoring in a Ghanaian state-owned enterprise. *Accounting, Auditing & Accountability Journal*, 18(5), 648–674. <https://doi.org/10.1108/09513570510620493>
- van Helden, J., Adhikari, P., & Kuruppu, C. (2021). Public sector accounting in emerging economies: A review of the papers published in the first decade of Journal of Accounting in Emerging Economies. *Journal of Accounting in Emerging Economies*, 11(5), 776–798. <https://doi.org/10.1108/JAEE-02-2020-0038>
- van Helden, J., & Uddin, S. (2016). Public sector management accounting in emerging economies: A literature review. *Critical Perspectives on Accounting*, 41, 34–62.
- Varela, E. (2008a). El impacto de la mercantilización de los servicios públicos sobre las empresas estatales del sector. *Semestre Económico*, 11(22), 91–109.
- Varela, E. (2008b). *Gestión y gobernabilidad en Emcali: Liberalización de los servicios públicos y vulnerabilidad de las burocracias*. Ecoe Ediciones.
- Varela, E. (2011). *Políticas y estrategias en la gestión de EPM—Medellín*. Ediciones de la U.
- Velásquez-Loaiza, M. (2018). Crisis en 'the dam project' en Colombia: Miles de personas evacuadas, cuatro departamentos en alerta y el anuncio de una posible tragedia. CNN Español.
- Wåhlin, M. (2015). *Derechos ahogados, responsabilidades diluidas. Un informe sobre los abusos en torno a la construcción de la hidroeléctrica 'the dam project' en Colombia y la responsabilidad de los actores Suecos* (Henrik Fröjmark, Director interino ed., pp. 90). Swedwatch.
- Wickramasinghe, D., Cooper, C., & Alawattage, C. (2021). Neoliberalism and management accounting: Reconfiguring governmentality and extending territories. *Accounting, Auditing & Accountability Journal*, 34(3), 489–504. <https://doi.org/10.1108/AAAJ-01-2021-5077>
- Wickramasinghe, D., & Hopper, T. (2005). A cultural political economy of management accounting controls: A case study of a textile Mill in a traditional Sinhalese village. *Critical Perspectives on Accounting*, 16(4), 473–503.
- Zuleta, I. C. (2021). 'The dam project': Un desastre socioambiental con responsabilidad internacional. *IdeAs. Ideas d'Amériques*, 17, 1–7.
- [Correction added on 9 January 2024, after first online publication: Hidroituango url has been removed from the references, Portilla-Gamboa, M. (2018) and Velásquez-Loaiza, M. (2018) to protect the identity of the company].

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