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THEMATIC ARTICLE

A territorial approach for infrastructure project management: the case of the hydropower plant of Belo Monte, Pará, Brazil

Daniela Gomes Pinto [1]
Marco Antonio Carvalho Teixeira [1]

[1] Fundação Getulio Vargas (FGV EAESP) / Escola de Administração de Empresas de São Paulo, São Paulo – SP, Brazil

Abstract

The socio-political complexity and consequent transactional and institutional costs of infrastructure projects are magnified in the Brazilian Amazon, a rich-resource region with social and environmental fragilities, thus posing challenges for project management. One of the main drivers of the Brazilian development strategy is infrastructure projects. However, these projects struggle to meet results in terms of local development, overloading social services, changing livelihoods, violating human rights, and exacerbating social vulnerabilities, environmental degradation, and deforestation. Despite greater scrutiny in environmental licensing, the process remains insufficient to mitigate impacts, and social participation is limited. The decision-making process remains technocratic and isolated from civil society, ignoring its inherently political character. Territorially blind and socially deaf projects lead to contestations by civil society and poor anticipation of demands, making territories mere receptacles of investments. Consequences for project management include delays, processes in courts, reputational damages, and missed opportunities for sustainable territorial development. Through semi-structured interviews and documental analysis of the case study of the Belo Monte Hydropower Plant, we investigate how a territorial approach to infrastructure governance can affect project management. Analysis shows that territories are actively influencing and influenced by infrastructure delivery, which corroborates the idea that contextual specificities to infrastructure delivery require specific ways of planning and managing projects. Adopting a context-specific territorial approach could anticipate some of the challenges and complexities of infrastructure management in developing and emerging economies. Also, results oriented toward development goals, such as the SDGs, can be more efficient both for territories and project delivery.

Keywords: Infrastructure. Governance. Project management. Territory. Amazon.

Uma abordagem territorial para o gerenciamento de projetos de infraestrutura: o caso da usina hidrelétrica de Belo Monte, Pará, Brasil

Resumo

A complexidade sociopolítica e custos transacionais dos projetos de infraestrutura são exacerbados na Amazônia brasileira, rica em recursos e com fragilidades socioambientais, apresentando desafios para o gerenciamento de projetos. Vetores da estratégia nacional de desenvolvimento, megaprojetos não entregam desenvolvimento local, sobrecarregam serviços públicos, alteram modos de vida, violam direitos humanos, intensificam vulnerabilidades sociais, com degradação ambiental e desmatamento. Apesar do maior escrutínio do licenciamento ambiental, o processo é insuficiente para mitigar impactos, e a participação social limitada. Consequências para o gerenciamento de projetos incluem atrasos, judicializações e danos reputacionais, e oportunidades perdidas para o desenvolvimento territorial sustentável. A tomada de decisão permanece tecnocrática e isolada da sociedade civil, ignorando seu caráter político. Projetos territorialmente cegos e socialmente surdos levam a contestações da sociedade e baixa antecipação das demandas, fazendo dos territórios meros repositórios de investimentos. Por meio de análise documental e entrevistas semiestruturadas e um estudo de caso da Usina Hidrelétrica de Belo Monte, na Amazônia brasileira, investigamos como uma abordagem territorial na governança da infraestrutura pode afetar o gerenciamento de projetos. A análise mostra que territórios influenciam e são influenciados pelos megaprojetos, corroborando a ideia de que especificidades contextuais requerem formas específicas de planejamento e gerenciamento. Uma abordagem territorial específica ao contexto poderia antecipar melhor alguns dos desafios e complexidades da gestão de infraestrutura nos países em desenvolvimento e economias emergentes. Além disso, resultados orientados a metas de desenvolvimento, como os ODS, podem ser mais eficientes tanto para territórios como para a entrega de projetos.

Palavras-chave: Infraestrutura. Governança. Gerenciamento de Projetos. Território. Amazonas.

Un enfoque territorial para la gestión de proyectos de infraestructura: el caso de la central hidroeléctrica de Belo Monte, Pará, Brasil

Resumen

La complejidad sociopolítica y los consiguientes costos transaccionales e institucionales de los proyectos de infraestructura se agravan en la Amazonía brasileña, una región rica en recursos y debilidades socioambientales, que presenta desafíos para la gestión de proyectos. Las inversiones no están necesariamente relacionadas con el desarrollo local debido a la sobrecarga de los servicios públicos, el cambio de estilos de vida, la violación de los derechos humanos, la intensificación de las vulnerabilidades sociales, la degradación ambiental y la deforestación. A pesar de un mayor escrutinio de las licencias ambientales, el proceso es insuficiente para mitigar los impactos, con una participación social limitada. Las consecuencias para la gestión de proyectos incluyen retrasos, litigios y daños a la reputación. La toma de decisiones permanece aislada de la sociedad civil, con una visión tecnocrática de la gobernanza de la infraestructura que ignora su carácter inherentemente político. El desafío de la sociedad local y la poca anticipación a las demandas caracterizan a estos proyectos como "territorialmente ciegos" (Lotta & Favareto, 2016). Mediante análisis documental y entrevistas semiestructuradas, investigamos la implementación de la Central Hidroeléctrica Belo Monte, en la Amazonía brasileña. Aunque en cumplimiento de la legislación ambiental, Belo Monte ha sufrido legalizaciones recurrentes, ya que las acciones de mitigación socioambiental no se reflejaron en el desarrollo local. El caso muestra que los territorios influyen y son influenciados por las obras de infraestructura, corroborando la idea de que las especificidades contextuales para la entrega de infraestructura requieren formas específicas de planificación y gestión de proyectos. La adopción de un enfoque territorial específico del contexto para la gestión de proyectos podría anticipar mejor algunos de los desafíos y complejidades de la gestión de la infraestructura en los países en desarrollo y las economías emergentes.

Palabras clave: Infraestructura. Gobernanza. Gestión de proyectos. Territorio. Amazonas.

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INTRODUCTION

One of the recent most emblematic examples of challenges regarding project management of large-scale infrastructure projects in the Brazilian Amazon is the Belo Monte Hydropower Plant (hereafter, Belo Monte) on the Xingu River, Pará, Brazil. With a total investment of USD 10 billion (Norte Energia, 2020), Belo Monte faced social conflicts (Abers, 2018; Hochstetler, 2018), recurrent judicialization and project delays (Rojas, & Valle, 2013; Scabin, Pedroso, & Cruz, 2015) that affected execution and legitimacy (Pereira, 2014), cost overruns (Callegari, Szklo, & Schaeffer, 2018), and, according to evidence, collusion and corruption (Signor, Love, & Ika, 2020). Socio-environmental mitigation actions were not reflected in local development (Monzoni & Pinto, 2016), and investments benefited more economic elites than the less powerful populations (Abers, Oliveira, & Pereira, 2017).

Belo Monte embraces most of the characteristics and challenges of the so-called megaprojects (Flyvbjerg, 2014; Flyvbjerg & Sunstein, 2016). These projects involve a myriad of public and private stakeholders, create social and environmental impacts on many people, and depend on hundreds of sophisticated ties, thus becoming unpredictable and economically, politically, and socially risky (Flyvbjerg, 2014). Further, their socio-political complexity generates transactional and institutional costs (Ika, Söderlund, Munro, & Landoni, 2020). Since infrastructure-led development is a common strategy for developing and emerging economies (Schindler & Kanai, 2021), projects entail unprecedented transformational expectations (Abers et al., 2017). This is more complex in the case of investments in biodiversity hotspots like the Brazilian Amazon, a rich-resource region with social and environmental fragilities, making project management even more challenging.

Scholars on institutional arrangements within the realm of institutional theory have been investigating large-scale infrastructure projects in Brazil. They point out that besides adequate use of planning and project selection techniques, policies and projects in the infrastructure sector demand innovative governance arrangements capable of producing both technical-economic rationality and democratic legitimacy since technocratic governance does not fully embrace the complexity of megaprojects (Gomide & Pereira, 2018a; Loureiro, Teixeira, & Ferreira, 2014; Pires & Gomide, 2018). One of the main demands for such arrangements is to address the territorial blindness identified in these projects.

Main infrastructure megaprojects are "territorially blind," making territories mere passive recipients of investments without any influence on project implementation (Lotta & Favareto, 2016) and not incorporating a trajectory for territorial development (Leitão, 2009; Oliveira, 2015). In addition, the participation of local actors and communities is very limited and usually instrumental (Abers, 2018). The territorial blindness and societal deafness generate disputes in civil society and make it difficult to anticipate demands and contestations. Consequences include delays, court cases, reputational damages, and cost overruns (Callegari et al., 2018; Scabin et al., 2015), which negatively impact project management.

Innovative governance approaches that incorporate the territorial dimension into infrastructure governance could achieve both better project delivery and territorial development (Lotta & Favareto, 2016, 2018). Broader territorial governance could also tackle the exacerbation of the territorial blindness and deafness by part of the local population under an "infrastructural fetish" (Harvey & Knox, 2015) and by exaggerated optimistic entrepreneurs under a "planning fallacy" (Flyvbjerg, 2014).

If a territorial approach qualifies institutional arrangements for infrastructure governance, are there insights and lessons to be learned for adopting such an approach in project management? What can an in-depth case study of a large-scale infrastructure project teach us regarding the linkages between institutional arrangements and project management? Would it be useful to consider a territorial governance approach to project management?

There is growing literature on project management relating projects to contextual factors and institutions (Orr & Scott, 2008; Söderlund & Sydow, 2019; Van Den Ende & Van Marrewijk, 2019), highlighting concerns about external stakeholders and emphasizing that context matters for project delivery (Ika, 2012; Söderlund & Sydow, 2019). However, it is still unclear how to create integrative mechanisms for corporations, the government, and the public for effective societal governance (Ma, Zeng, Lin, Chen, & Shi, 2017) and how to approximate the objectives of these projects with development outcomes (Shiferaw & Klakegg, 2012). Most of the literature concerning institutional or context-specific factors that influence project management

investigates societal challenges from the perspective of the *project*, looking at the processes that lead to trust, confidence, and legitimacy for project completion. This research tries to complement such literature, focusing instead on the *territory* hosting such projects, looking at processes that lead to shared visions and long-term goals.

Through an analytical framework extracted from the literature on institutional arrangements for infrastructure and territorial governance, documentary analysis, and semi-structured interviews, we present an in-depth case study of the territorial governance arrangement created in the Belo Monte hydropower plant. The objective of the research is to investigate how a territorial approach and governance can affect project management.

This paper seeks to bring two contributions to the project management field. First, it applies institutional arrangement and territorial governance concepts to shed light on the interrelation between large-scale project management and hosting territories, beyond a utilitarian view of the surroundings of projects as mere "external stakeholders" or as "context." Second, it organizes an analytical framework to assess how a territorial approach influence project management.

The paper is organized into five sections. The next section introduces the concept of institutional arrangements within the neo-institutional theory and its territorial dimension. It also points out the relevance of discussing this lens in the field of project management. The third section presents the research context, the case, and explains the qualitative research method adopted. The fourth section presents and analyzes the findings of the in-depth case study of Belo Monte, and the complexity of adopting a territorial approach. The fifth and final section, discusses the findings and concludes the paper with suggestions for future research.

THEORETICAL AND CONCEPTUAL BACKGROUND

Literature on project management rarely investigates the connections between projects and institutional contexts, often situating projects as "separated islands" that almost do not interact with the surrounding environment. Thus, the literature often neglects the contextual factors influencing the projects and when studies consider the context, the project is addressed as a "black box" that does not interact with broader institutional issues, which is a scenario very different from what project managers experience in the field (Derakhshan, Turner, & Mancini, 2019; Söderlund & Sydow, 2019; Van Den Ende & Van Marrewijk, 2019).

Scholars that have turned to institutional theory emphasize social acceptability and credibility (Levitt & Scott, 2016) and propose attention to social, cultural, and political dynamics in the ongoing pursuit of organizational legitimacy (Orr & Scott, 2008; Van Den Ende & Van Marrewijk, 2019), recognizing that context matters (Ika, 2012; Söderlund & Sydow, 2019). Context influences key societal, macroeconomic, and leadership triggers for cost overruns in project management (Mahmud, Ogunlana, & Hong, 2021). Also, stakeholder and relationship management with the host country and its various actors are key factors for global project management (Aarseth, Rolstadås, & Andersen, 2011). Most literature covering contextual factors in project management recognizes and focuses on stakeholder engagement and how to ensure institutional differences are overcome for project success (Söderlund & Sydow, 2019). However, much of the literature is focused on internal stakeholders (Derakhshan et al., 2019) and usually neglects an understanding of the complexity of external stakeholders, especially local communities, and how they can negatively affect project outcomes (Di Maddaloni & Davis, 2017).

The literature points out the need for more research, including local communities in project management and a more humanistic approach to institutionalization by project actors to better respond to the prevailing belief systems and cultural schemes thus achieving legitimacy (Di Maddaloni & Davis, 2017; Van Den Ende & Van Marrewijk, 2019). The nature of the institutional factors affecting business practice includes history and culture, shared experiences, informal rules, and understanding (Orr & Scott, 2008)

While a growing literature on large-scale infrastructure project management investigates the quality of the relations between projects, contexts, and institutions, a growing literature on institutional arrangements for large-scale infrastructure projects investigates how territories relate to and influence infrastructure governance.

The geographer Milton Santos refers to the territory as a social construction in permanent transformation, composed of society and its institutions, firms, and business organizations, ecological support or natural environment, and infrastructure (Santos, 1997 as cited in Dallabrida, 2020). Studying the territory is, therefore, understanding its relationship with society and the processes arising from the space-society relationship (Dallabrida, 2020).

The emphasis on the territorial approach has emerged in recent decades in Brazil and Latin America and explored as a new characteristic and perspective of policies and development processes, seeking to promote the specificities of territories and incorporate demands and voices of the social forces of the territories into public policies and political resistance (Berdegué, Escobal, & Bebbington, 2015; Lotta & Favareto, 2018; Saquet, 2018). Others discuss *territorial* governance processes, placing territorial heritage or capital as a constitutive element of public action (Dallabrida, 2020; Davoudi, Evans, Governa, & Santangelo, 2008). This emphasis is supported by academics coming from different fields of knowledge (rural development, public administration, organizational theory, and human geography) who stress that territories – or places – are constitutive of the formulation and implementation of policies, programs, and projects (Berdegué et al., 2015; Dallabrida, 2020; Pollitt, 2015; Saquet & Bozzano, 2020; Spink, 2015).

In Brazil, infrastructure-led industrial development policies demand more complex governance, as they need to deal with the new Brazilian political-institutional environment post the 1988 Constitution (Machado, Gomide, & Pires, 2018) and new arrangements for the relationship between the state and society (Farah, 2000). Brazil's challenges align with the reflections of theorists of the developmental state in the 21st century. These scholars advocate that state bureaucracies have to seek, besides high performance and industrial policies, the ability to establish connections with society, requiring new types of capabilities – especially those aimed at promoting more comprehensive forms of social entrenchment or partnerships with different segments of society – to expand the intelligence of the state itself (Evans, 1993, 2015) and to give territorial scope of state action (Mann, 2006 as cited in Diniz, 2013).

Davis and North (1971) used the concept of institutional arrangement, and authors such as Williamson (1985) applied the term governance structure to the same phenomenon of coordination of activities in society. However, both terms are the object of disputes and controversies in the literature. For Gomide and Pires (2014), an institutional arrangement is the set of rules, mechanisms, and processes that define how actors and interests are coordinated in the implementation of a specific public policy (Gomide & Pires, 2014 pp.19-20, our translation).

Among the various conceptualizations of the term, we consider governance as a set of institutions and actors in addition to government actors, with the necessary blurred borders and responsibilities to address social and economic issues between actors in an interactive process (Stoker, 1998). Cavalcante and Pires (2018) propose the understanding of governance as a strategic perspective to deal with the challenges of coordination and implementation of government programs in increasingly complex, dynamic, and uncertain internal and external environments. Fiani (2014) discusses the relevance of institutional arrangements – or governance structures, treated by the author as synonyms – for the formulation of development policies.

To reconcile traditional approaches to state capabilities with contemporary notions of governance, Pires and Gomide (2016) highlight the political-relational dimension of the state, emphasizing the importance of including multiple actors, processes of dialogue between state and society, and the creation of minimum consensus on policy issues. Such relational capacities are associated with the legitimacy of state action, social mobilization, and accommodation of conflicting interests (Pires & Gomide, 2016, p. 126). Further, the complexity of such projects in a highly uncertain and risky environment, such as the Brazilian Amazon, demands broader infrastructure governance to engage a variety of stakeholders, including local communities and further actors at the territorial level (Gomide & Pereira, 2018b; Pinto, Monzoni, & Ang, 2018).

Main infrastructure projects are "territorially blind," making territories mere passive recipients of investments without any influence on project implementation (Lotta & Favareto, 2016) and do not incorporate a trajectory for territorial development (Leitão, 2009; Oliveira, 2015). The great engine of the so-called developmental policies throughout 2000, the Growth Acceleration Program (PAC), created and executed between 2007 and 2016 by the federal government, was essentially aimed at heating the national economy. Although they directly impacted certain territories, they usually reiterated historical contradictions

of state action in territories and corroborated the tradition of the country's selective, concentrated, and unequal territorial development (Leitão, 2009; Oliveira, 2015). Further, social participation is limited or inexistent (Abers, 2018). The blindness and deafness generate disputes in civil society and make it difficult the anticipation of demands by project managers. Consequences include delays, court cases, reputational damages, and cost overruns (Callegari et al., 2018; Scabin et al., 2015).

The territorial blindness and social deafness are exacerbated in megaprojects. The "infrastructural fetish" and a local society eager for the "dream of progress" (Harvey, 2016; Larkin, 2013) are combined with overly optimistic entrepreneurs falling under a "planning fallacy" about the benefits of infrastructure projects to increase the likelihood of project approval and consequent financial and political gains for politicians, contractors, private consultants, and investors (Flyvbjerg & Sunstein, 2016). However, in practice, projects have little legitimacy and inefficiencies, including low autonomy and cohesion, precarious relations between bureaucracy and society, weak federative coordination, and *a posteriori* sectoral coordination (Gomide & Pereira, 2018c; Lotta & Favareto, 2018; Pires & Gomide, 2018). Also, the decision-making process remains isolated from civil society (Machado et al., 2018), focusing on a technocratic view of infrastructure governance, which ignores its inherently political character (Wegrich & Hammerschmid, 2017). In Brazil, governance arrangements in infrastructure are flawed for the reconciliation of environmental, social, and territorial interests (Gomide & Pereira, 2018b). Even in public-private partnerships, conflict of interests requires more transparent, participatory governance arrangements (Fiani, 2014).

Analytical framework: the territorial dimension of infrastructure governance

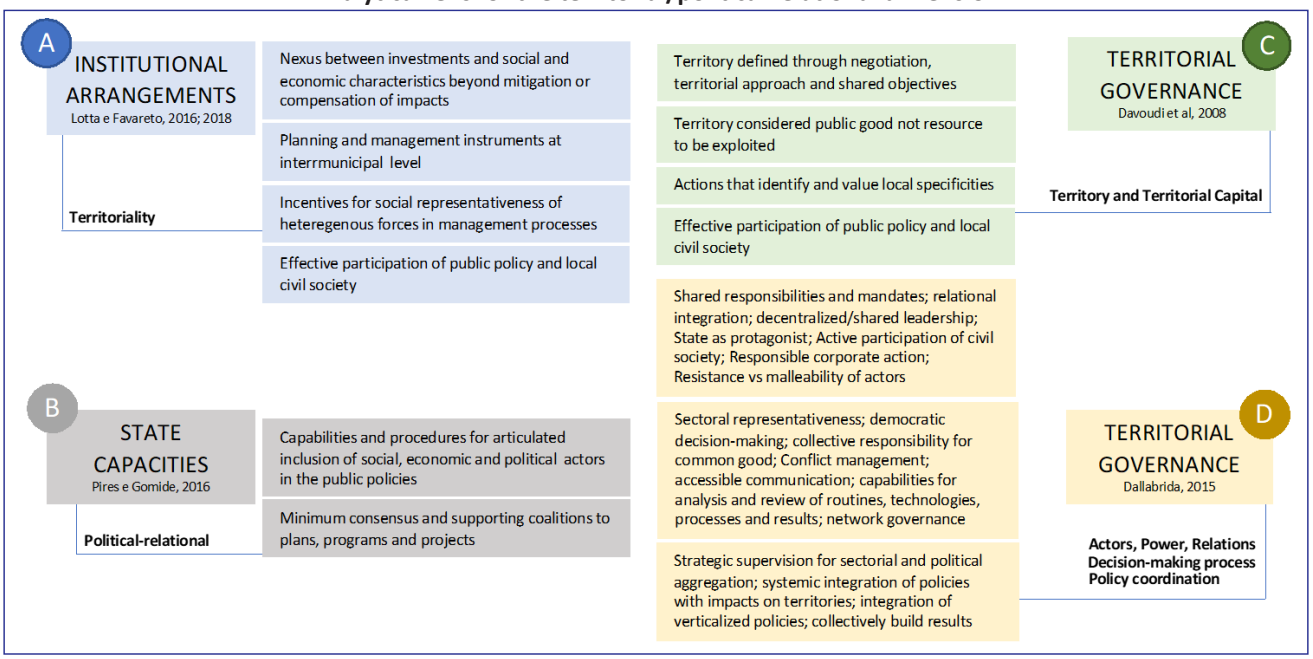
When investigating the quality of institutional arrangements for infrastructure delivery, Lotta and Favareto (2016, 2018) proposed four analytical dimensions: intersectorality, subsidiarity, social participation, and territoriality. Davoudi et al. (2008) proposed similar categories when analyzing territorial governance: horizontal coordination, vertical coordination, social participation, and territories. Although both studies emphasize the social participation of multiple actors at the local level, Davoudi et al. (2018) focus on the importance of recognizing territorial capital and the specificities of territories, while Lotta and Favareto (2016, 2018) highlight inter-municipal planning and the link between infrastructure and social and economic investments in the territory.

From the perspective of state capacities for infrastructure governance in Brazil, relationships between the bureaucracy, local society, representatives of federative entities, and control agencies are precarious (Gomide & Pereira, 2018c; Machado et al., 2018). Pires and Gomide (2016) define two dimensions in state capacities: i) technical-administrative, which involves capacities derived from the existence and functioning of competent and professional bureaucracies; and (ii) political-relational, associated with the skills and procedures of inclusion of multiple social, economic, and political actors in a connected manner in public policy processes, aiming at building minimum consensus and supporting coalitions for government plans, programs, and projects (Pires & Gomide, 2016). These authors associate the first dimension with efficiency and effectiveness and the second with legitimacy, learning, and innovation in institutional arrangements. Others adopted the latter political-relational dimension as a category for analysis of the state's capacity to relate to the territory (Ramagem, 2020), especially in infrastructure governance (Gomide & Pereira, 2018b; Pereira, 2014).

Dallabrida (2015) conducts a systematic literature review on territorial governance and proposes categories and criteria for evaluating territorial governance practices, organized in the dimensions of (i) actors, powers, and relationships; (ii) decision-making processes; and (iii) policy coordination; for achieving results of territorial governance processes (Dallabrida, 2015).

We propose an analytical framework to investigate how the territorial approach and governance of large-scale infrastructure affects project management by using these three related theoretical-methodological references that draw upon institutional arrangements and territorial governance literature: (i) the analytical categories to assess the incorporation of the territorial dimension proposed by Lotta and Favareto (2018) for the analysis of institutional arrangements of infrastructure; (ii) the analytical categories proposed by Pires and Gomide (2016) and applied by Gomide and Pereira (2018b; 2018c) to assess political-relational state capacities for infrastructure governance; and (iii) the analytical categories proposed by Davoudi et al. (2008) and Dallabrida (2015) for territorial governance conceptualization. Figure 1 summarizes the different categorizations of the territorial dimension by these authors.

Figure 1
Analytical lens for the territorial/political relational dimension



Source: Elaboration by authors based on Lotta and Favareto (2016, 2018); Pires and Gomide (2016); Davoudi et al. (2008). and Dallabrida (2015).

RESEARCH CONTEXT

Social and environmental impacts of Brazilian infrastructure-led development

Infrastructure projects are not only a risky business for investors (Flyvbjerg, 2014) but also for territories hosting such projects. In Brazil, one of the main hosts of large-scale infrastructure projects is historically the rich-resource region of the Amazon, home to more than 30 million people, including traditional communities and indigenous peoples. They live together with 15% of the global terrestrial biodiversity and the largest source of fresh water in the world, which is responsible for regulating hydrological cycles and weather patterns, all benefits that depend on the conservation of the biome (Vilela et al., 2020). However, the Amazon Basin continues to experience rapid deforestation and environmental degradation, and its social indicators are among the worst in the country. All 772 Amazon municipalities have a Social Progress Index below the country's average (Santos, Mosaner, Celentano, Moura, & Veríssimo, 2018). Per capita income is 26% lower than national figures, only 36% of households in urban areas have adequate sanitation, and in the rural and forested areas, the Amazon witnesses the most violent land conflicts in Brazil (Comissão Pastoral da Terra, 2019; Programa das Nações Unidas para o Desenvolvimento [PNUD], 2013).

Roads, hydroelectric plants, and logistical complexes are classic drivers of deforestation in developing countries with tropical forests (Alamgir et al., 2019; Barni, Fearnside, & Graça, 2014; Giongo, Mendes, & Werlang, 2017). In the transport sector alone, the rapid expansion of roads is permanently altering the world's largest rainforest. Of the 75 projects and 12,000 kilometers of roads planned in the Initiative for the Integration of Regional Infrastructure in South America (IIRSA), most lack rigorous impact assessments or even economic justification. All of them will negatively impact the environment, and almost half of the projects will generate economic losses, even without considering social and environmental externalities (Vilela et al., 2020).

Infrastructure projects, one of the main drivers of the Brazilian development strategy (Gomide & Pires 2014), have historically raised vigorous debates in the country, particularly on the carrying capacity of hosting locations to tackle environmental impacts and socioeconomic consequences (Pinto et al., 2018). Territorial vulnerable conditions are not minimized by the opportunities that, in theory, large investments could provide. More commonly, vulnerabilities are exacerbated.

Despite greater environmental scrutiny in environmental licensing since the 1980s, the process remains insufficient to mitigate impacts, and social participation is limited and ineffective (Abers, 2018; Hochstetler, 2018). In some cases, coalitions between activists, the Public Ministry Prosecutor, and environmental authorities change specific projects. Global media and financing agencies pay special attention to these cases, situation rooms are created at the governmental level, and social actors have some capacity to demand compensation for impacts and eventually change the exact location of a project (Hochstetler & Tranjan, 2016). However, environmental problems are usually only addressed if they directly threaten the short-term viability of activities or if heavily organized social movements demand changes (Ospina-Peralta, Bebbington, Hollenstein, Nussbaum, & Ramírez, 2015).

From the construction of the *Transamazônica* highway in the 1970s to the Belo Monte Hydroelectric Power Plant, completed in 2019, the Brazilian Amazon has experienced the impact of large-scale infrastructure projects. Such projects are announced as drivers of progress, national integration, and economic development (Moran, 2016). The results, however, point to national indebtedness, significant social and environmental impacts – the collapse of local welfare services, changes in livelihoods, violation of human rights, intensification of social vulnerabilities, besides environmental degradation and deforestation – and little evidence of local economic development (Garcia & Cardoso, 2015; Monzoni & Pinto, 2016; Moran, 2016; Ospina-Peralta et al., 2015; Vilela et al., 2020).

The case

The Belo Monte Hydropower Plant has an installed capacity of 11,233 MW and an average annual generation of 4,571 MW (Siffert, Santiago, Magalhães, & Lastres, 2014). The bidding for the construction and 35-year concession of the plant was launched in 2010 and won by the public-private consortium Norte Energia (hereafter, NE) (Fuchs, 2016). The construction began in 2011, the plant was partially in operation from May 2016, and fully operational in 2019 (Fearnside, 2015; Norte Energia, 2020). State-owned or state-controlled participation in the consortium totals 77.5% and is dominated by the state-led electric utility Eletrobras, with a 49.98% stake divided among itself (15%) and regional subsidiaries Eletronorte (19.98%) and Chesf (15%), and another 25% comprises pension funds of government banks and other state-owned entities (Norte Energia, 2015).

The reservoir encompasses 50,300 ha and directly affects the shores and islands of the Xingu River. It displaced more than 40 thousand people in urban and rural areas and affected 5 municipalities and 11 indigenous territories (Chaves, Monzoni, & Artuso, 2019; Monzoni & Pinto, 2016). More than USD 1 billion was designated for mitigation and compensation measures within the environmental licensing process to fulfill almost one hundred conditionalities (Norte Energia, 2021). The recurrent history of non-compliance with the conditions during the triphasic licensing process (Monzoni & Pinto, 2016; Ramos & Alves, 2018) was not an obstacle to project delivery since government legal maneuvers in 2006, 2010, and 2012 made it viable for the Operation License to be issued (Rojas, & Valle, 2013).

In addition to the environmental licensing obligations, a territorial plan - the Xingu Sustainable Regional Development Plan (PDRSX) – was created in 2010 by an inter-ministerial effort coordinated by the Federal Government. An amount of USD 100 million (BRL 500 million) for plan execution was included in the bidding process as an additional investment obligation for the winning consortium Norte Energia (Rios, 2013).

A deliberative forum was created for PDRSX implementation, with representatives of civil society, the government, and the entrepreneur, with monthly open meetings from 2011 to 2019 in Altamira, in Pará, through plenary sessions and thematic technical chambers (Ramos, 2020) until its extinction in 2019 by the government of Jair Bolsonaro (Harari, 2019). The PDRS Xingu was configured as a *locus* of territorial governance explicitly and intentionally created for discussing a territorial development plan in the context of the impacts brought by Belo Monte and the challenges for the Middle Xingu River region. For its unique and novel territorial approach in the context of large-scale infrastructure investments in the Brazilian Amazon, this case was selected for an in-depth investigation for this research.

Research methodology

Method and case selection

A qualitative approach was chosen to explore and understand the meaning that individuals or groups attribute to a social or human problem (Creswell, 2013). The choice was for an in-depth intrinsic case study, selected based on the criterion of relevance for deep learning about the themes proposed in the research (Stake, 1998), and to capture "how" things occur, i.e., an investigation of social processes, and to provide an analysis of rich complex multivariate social phenomena (Yin, 2008), under the interpretivist tradition. The case was selected because of (i) its magnitude in comprising a complexity of actors, stakeholders, social and environmental impacts, and conflicts in a very delicate and globally relevant territory, the Brazilian Amazon; (ii) the innovative territorial governance instrument put in place in the context of large-scale infrastructure projects in the Brazilian Amazon; and (iii) the access of the first author to the case due to involvement in applied research being conducted in the region from 2015 to 2018.

Data sources

Primary data was collected through 23 semi-structured interviews conducted by a team of researchers from the Center for Sustainability Studies at the Fundação Getulio Vargas under a research project coordinated by the first author of this paper. Prior to commencing the interview, researchers asked for permission to digitally record the conversation, transcribe it later, and anonymously quote the interviewees in written documents, fully safeguarding their confidentiality. The interviews occurred between September 2017 and June 2018 and lasted between 1 and 2 hours. Secondary data was collected through documentary analysis and non-participant observation to help understand the phenomena (Langley, 1999). The documentary analysis comprised public documents related to Belo Monte licensing process and the PDRSX process. The non-participant observation took place through the presence of one of the authors in monthly plenary meetings of the Xingu Sustainable Regional Development Plan Management Committee between July 2014 and December 2015.

Box 1
Summarizes the data collected

Data Sources				
Data Source	Description	Period	Objective	Reference
Semi-structured interviews	23 interviews with stakeholders involved in Belo Monte project.	September 2017 to June 2018	Main data source; comprehension of the territorial governance, challenges, and perspectives.	Patton (2002)
Non-participant observation	Field notes from the participation at PDRSX meetings.	July 2014 to December 2015	Apprehension of the interaction among social actors; collection of stories.	Langley (1999)
Public document analysis	PDRSX Reports, Norte Energia Reports, NGOs, and research reports.	2014 to 2018	Complementary data for a better understanding of the project and related institutional arrangements.	Langley (1999)

Source: Elaborated by the authors.

Interviewees

23 representatives of the government, consultancies and nonprofit organizations were interviewed. Representatives of NE were invited but did not accept to participate. The study selected interviewees who represented different sectors involved in the Belo Monte project and could share relevant and reliable knowledge related to the case (Creswell, 2013). They had been involved in different moments of the implementation of the hydropower plant and/or the PDRSX, both from a perspective of environmental licensing and territorial governance. Interviewees were selected purposively, i.e., the researchers deliberately chose the participant due to their knowledge, experience, availability, and willingness to contribute (Etikan, 2016). In addition, the snowball technique was used to identify other potential interviewees not captured purposively.

Box 2 presents the codification of interviewees, the date and location of the interview, and the interviewees' role in the plant's implementation phase.

Box 2
Profile of Interviewees and Interviews

Interviewee ID	Date of interview	Interview location*	Type of interviewee
I1	November 29, 2017	ALT	State Government
I2	October 10, 2017	SP	Nonprofit Organization
I3	November 27, 2017	ALT	Nonprofit Organization
I4	June 19, 2018	BSB	Nonprofit Organization
I5	February, 27, 2018	BSB	Federal Government- Planning and Management
I6	October 24, 2017	BSB	Public Prosecutor Ministry
I7	September 28, 2017	BSB	Federal Government- Indigenous Protection Agency
I8	April 12, 2018	ALT	Consultancy
I9	April 11, 2018	ALT	Nonprofit Organization
I10	October 26, 2017	BSB	Federal Government- Office of the Chief of Staff of the President
I11	September 26, 2017	BSB	Federal Government- General Secretariat of the Presidency
I12	September 25, 2017	BSB	Federal Government- Integration
I13	June 19, 2018	BSB	Nonprofit Organization
I14	February 03, 2018	RJ	Social and Economic Development Bank
I15	February 27, 2018	BSB	Federal Government- Agrarian Development
I16	April 11, 2018	ALT	Consultancy
I17	November 30, 2017	ALT	Nonprofit Organization
I18	October 23, 2017	BSB	Federal Government- General Secretariat of the Presidency
I19	April 11, 2018	ALT	Consultant
I20	November 29, 2017	ALT	Federal Government- Indigenous Protection Agency
I21	November 28, 2017	ALT	Federal University of Pará
I22	October 24, 2017	BSB	Federal Government- Environmental Agency
I23	December 01, 2017	ALT	Municipal Government- Environment

*ALT: Altamira, PA; BSB: Brasília, DF; RJ: Rio de Janeiro, RJ; SP: São Paulo, SP.

Source: Elaborated by the authors.

Interview questions

Although we had a semi-structured interview script, questions were open enough for the emergence of categories different from those previously identified in the literature on the territorial dimension of institutional arrangements, as shown in Figure 1. They were drawn from the recommendations of Patton (2002) regarding the interview-guided approach, constituting a checklist of topics to be covered by the interview, the order and specific content of the questions being flexible based on

the interviewee's context (Patton, 2002). We also avoided too much definition around existing theory and terminology, as recommended by Gioia, Corley, and Hamilton (2013), aiming to consider people constructing their realities as "knowledgeable agents," i.e., they know what they are trying to do and can explain their thoughts, intentions, and actions thus not missing their sensemaking and without preordaining understandings on their experience (Gioia et al., 2013).

Informants were encouraged to talk about their role in Belo Monte implementation, and their description of the main challenges of project implementation in relation to a territorial approach, with questions such as "what do you think were the main challenges for the territorial planning implementation," "what is the involvement of Norte Energia (the entrepreneur) in the territorial planning implementation," and "how was the participation of local communities and other local actors addressed in the PDRSX governance?".

Data analysis

A coding framework was developed for the analysis of the qualitative interview data based on the Gioia method (Gioia et al., 2013), inspired by grounded theory (Corbin & Strauss, 2014; Glaser & Strauss, 2017), seeking to organize data and analyze them through an interpretative approach to capture and frame meanings brought by interviewees, coherent with single case studies. The intention is that from a data-based and theory-based approach, it is possible to relate the theoretical dimensions with a current theory, seeking new understandings of analysis of phenomena. Our induction of categories, themes, and dimensions following the Gioia Method took place through a progressive abstraction. We first devise a first-order analysis coding a myriad of informant-centric data, labeling terms, and phrasal descriptors faithfully to informant terms. Then we moved to a second-order analysis relating this first coding to researcher-centric conceptual themes and dimensions that might explain the observed phenomena (Gioia et al., 2013). Finally, we organized the second-order themes in aggregate dimensions, looking for a dialogue between the reviewed literature and emerging theory.

First-order concepts comprised more than 50 terms/phrases, which were aggregated into second-order themes already relating to the literature.

The emergent themes representing the various aspects of a territorial approach and governance from the data analysis process were then aggregated on five "dimensions" of a territorial and governance approach for project management: (i) territorial planning instruments; (ii) shared responsibilities and objectives built collectively; (iii) effective and active social participation; (iv) social and economic investments beyond licensing; and (v) relational integration of policies and actors.

RESULTS AND ANALYSIS

A territorial planning instrument for infrastructure governance

The constitution of a territorial planning instrument, the PDRSX, with associated financial resources to meet territorial demands – prior to the arrival of the Belo Monte project and new demands brought about by the construction – seems to be an innovation in infrastructure governance in the Brazilian Amazon. Although the purpose of such endeavor by the federal government remains ambiguous, with perceptions that this territorial governance was being used as an instrument for co-option of local actors, the continuous exercise of governance, dialogue and negotiations influenced territorial development, as well as project management.

> It is interesting, if we did not have the PDRSX, the Belo Monte project wouldn't have reached the operational phase. So, one can say, PDRSX co-opted society! I think differently. Being there, talking to the people about their demands, when they manifested them, is to give voice, it is participation. To co-opt is to pay people. I saw the mayor knocking on the table, saying 'I want this' and they had to vote. […] In a hasty assessment, you can say, look at this, you bought oil, you bought filming equipment, is this development? Yes, it is questionable, but it was the decision, it is the majority that says what should be done (I5, February 27, 2018).

The constitution of a highly political arena, with strong interference by the federal government and the entrepreneur, limited the reach of negotiations and isolated discussions from the environmental licensing process during the most dramatic phase for the operation license of Belo Monte to be issued. However, the PDRSX arena was capable of organizing territorial demands, putting different actors together, and creating some form of dialogue, consensus, and coalitions, besides a relevant role as a territorial capacity-builder, functioning as a form of "formative governance."

Fruitful dialogues and organized space for demands to be brought and discussed created an agenda for action, anticipating demands, diminishing risks, and consequential costs. It has also boosted relational integration between policies and actors, although power struggles and groups of interests dominating agendas limited its opportunity to achieve territorial objectives collectively built.

> I think that deploying a process like this reduces further damage and minimizes conflicts during execution. It is a replicable process. I see PDRSX as a social investment in capacity building and this reduces impacts in the future. In general, you pay twice, three times the price when the process is not agreed with the actors (I15, February 27, 2018).

> In the beginning, it was a big clash. But today I believe that the PDRSX was something positive that happened in Belo Monte. The population thinks that the PDRSX is based only on BRL 500 million for projects, however, it is a network of many organizations that think differently. There are all kinds of movements, and they are not always aligned. And you have the three levels of government. Dialogue with this level of diversity is very important. (…) for these people to have a voice is no small thing (I3, November 27, 2017).

When diagnosing projects that are territorially blind in infrastructure, Lotta and Favareto (2018) point out that this characteristic is not simply a failure of the institutional arrangement but mainly the lack of planning, and that the improvement of these arrangements would imply reviewing the coordination structure and how this interacts with the processes and legislation of regional development planning processes. The weaknesses in institutional capacities and institutional arrangements, added to the difficulties of the Brazilian state in launching a robust regional development policy (Brandão & Siqueira, 2013), point to the low capacity of infrastructure policies in Brazil to become an effective vector of regional development, as prescribed in developmental policies (Leitão, 2009; Oliveira, 2015). On the contrary, the absence of strategic planning and coordination of actors reveals the enormity of problems produced by investments in infrastructure in Brazil, causing a loss of opportunities for inclusive development (Garcia & Cardoso, 2015). Large-scale infrastructure project management is intrinsically connected to territorial development strategies. The case of Belo Monte presents reflections in this direction.

Shared responsibilities and collective territorial objectives, and social and economic investments beyond licensing

In Belo Monte, the entrepreneur was also the state itself. The confusion between the role of Norte Energia (NE) and the federal government is evident in the speeches of both civil society and members of the federal government. The public-private partnership in Belo Monte also made the state less capable of defending territorial rights and demands since its role as an entrepreneur often blurred its capacity to act as a state. The lack of limits between actors' roles did not create room for shared responsibilities and collectively territorial objectives to be built with clear boundaries and mandates between public and private actors.

> Eletronorte [state-owned company with 49% of Belo Monte's shares] is public, it must have this public sense. But they're not going to do anything, there's nothing to oblige them. Somehow, both in Marajó and Xingu it had to do with this, I even understand their position, that they have to compete with private companies, and the state demanding that they make uneconomic investments, companies fulfilling the role of promoting the development. But they are public companies, it should have another purpose (I12, September 25, 2017).

The territory hosting Belo Monte received social and economic investments and licensing both through PDRSX planning and execution and through public policy processes. Special extraordinary budgets were designated for some critical social services, such as health (Derivi, Azevedo, Arthuzo, & Dal Fabbro, 2015). However, the confusion of roles between state and entrepreneur

gave the latter a "license" to interfere in public policies' actions. At least in the case of conditionalities on health issues and on indigenous protection measures, although the environmental process designated shared responsibilities between the state and the entrepreneur (Monzoni & Pinto, 2016), Norte Energia took the lead and conducted programs and projects for territorial actions. Territorial investments, in this case, lacked proper state supervision.

> It complicated a lot when it seemed that government and business were the same thing. That was an overwhelming aspect. The government must have independence, the monitoring and inspection bodies cannot feel constrained. Norte Energia spoke like the government and sublimated the government's own evaluative capacity. I was at a meeting where the entrepreneur spoke as the government. In this case, the entrepreneur was dictating the official indigenous policy. A strong confusion of roles. What did these guys understand about traditional populations? But the government abdicated its role. There would need to be a planning center to look at the mitigation measures, at the indigenous issues, to violently reduce the company's power. The company puts itself in the role of the State and the State sublimates, letting the company makes its policy. Even if there was any consideration, it was behind the scenes: "look, maybe it's better to do this...". It wasn't the state publicly defending the region's citizens, it didn't want to embarrass the company. It was almost a family relationship. You don't embarrass a relative publicly, just behind closed doors. […] The caliber of society's relationship with the state and with the company was totally degraded (I2, October 27, 2017).

Effective and active social participation

The lack of participation of the local population in the implementation of the sanitation system and in the displacement of the affected population (Chaves et al., 2019; Derivi et al., 2015; Monzoni & Pinto, 2016) are only two of the myriad of examples of how low compliance of existing guidelines regarding accountability, transparency, and social control triggered the destruction of livelihoods, social costs, and environmental degradation in Belo Monte. For project management, such deafness and blindness cost recurrent judicialization - one of the most dramatic by the Federal Ministry Prosecutor describing a "sanitation chaos" in Altamira, the main impacted city by the project (Derivi et al., 2015). This poses a false dilemma for entrepreneurs by perceiving that if lack of social participation causes risks, dealing with social participation creates greater unpredictability.

> It is crazy to implement a large-scale project like Belo Monte in Brazil because there are no rules, it is an inhospitable environment, almost like a pioneering spirit. There is no predictability, so having an implementation schedule is a core value for the entrepreneur. A public hearing started, and the objective was just one: to finish the public hearing. It brings fear of opening a space for participation and losing predictability. Open a dialogue about education measures in the territory and suddenly have a company with its activities suspended. It is not a coherent decision. The central government is very invasive in large-scale project implementation (I22, October 24, 2017).

In addition to the challenges of coordinating institutional arrangements and the lack of regional development projects, there is a challenging context of "tied-in escapism" between entrepreneurs who are overly optimistic about the benefits of infrastructure projects and circumvent known risks and unforeseeable uncertainties and local society eager for progress to be brought by such projects (Denicol, Davies, & Krystallis, 2020; Flyvbjerg & Sunstein, 2016; Larkin, 2013). This infrastructural fetish (Larkin, 2013) "blinds" parts of society, thus devoting the responsibility of connecting engineering projects to social concerns, as well as establishing clear boundaries between public and private actors to a few decision-makers (Harvey, 2016). Optimistic entrepreneurs, self-absorbed in the promise of perfect planning, blind themselves from the territory in front of them.

> One of the most important community leaders in the region, former Secretary of Health of several municipalities in Pará, born and raised between the Xingu River and the Transamazonica road, a 60-year-old mother, grandmother, and one of the twenty thousand people forcibly removed from their homes by the hydroelectric plant, asks to speak, after listening to the explanation of a director of Norte Energia. The packed auditorium swayed with the movement of hundreds of people fanning

> themselves because of the lack of air conditioning in the heat typical of an Amazonian night. The speakers, from Norte Energia and the Federal Government, sat behind a table, under an improvised platform, higher than the audience. They talked about the future plans for the region, foreseen in the mitigation and compensation actions of the environmental licensing of Belo Monte, showing plants, sophisticated projects, website links. She, standing, approaches the table. She wears sandals and a black and white patterned dress. Her strong, husky voice silences the audience. Using her arms as an invitation, she blurts out in a sarcastic but sweet tone: "Sir Director, I really enjoyed your explanation. Your views and your projects for **our** territory, **our** homes, **our** region, all very interesting. The future quality of **our** water, **our** future hospital, **our** future riverside paths. But I would like to make an invitation to you. Please, kindly, get out of your 21st century. Get out of your 21st century and come down here to our 20th century, or to sometimes our 19th century. Because it's not up there, in the 21st century, that we live, it's down here. Here". She points to the floor and marks the floor with her feet (Field Notes, February 2015).

Added to this is the sale of infrastructure by the developmental state as a driver for national development, and territories seem to become mere recipients of a marketing strategy. Further, burdens for the delivery of this development project rest unevenly on subnational governments (Williams, Mahadevia, Schindler, & Chattaraj, 2021).

> Territorial planning has its own characteristics. In the same way, it arrived from Europe carrying characteristics, it also arrived in the North region carrying characteristics from another part of Brazil. It is always this idea that forces external to the reality of people, communities, municipalities, or even the state, which is sometimes hostage, sometimes an accomplice, or partner in the initiatives. However, initiatives in the North always had the complicity of the state. It was never really something very shared. If this is the case with the state, imagine the case of municipalities. It's a bargaining chip. It is as if the federal government were an entity, and the others were incapable of managing, discussing, at first, the processes, participating in the discussion about how it is implemented and the impacts that may exist. […] Belo Monte is a megaproject with absurd impacts, not being the only one, in a context in which the North region continues to be the colony of Brazil. Talking about territorial planning with participation, diversity, inclusion, in a space where you are still a colony of your country is a difficult relationship, these are primary barriers. [...] The model of development, of enclaves, of the Amazon as a place of plunder, is real. In a space like this, the participation, even of the state, of the municipalities, is constrained participation. There is no equal footing of discussion. As long as the relationship with governments is based on a dynamic of looting, the relationship will continue to be tough. […] The social movements appropriated the plan because they were the ones who built it. It is necessary to understand that there is a movement of identity. When there is identification, there is the defense of the initiative. Who identifies with the construction of Belo Monte? It is always an enclave relationship. This methodology of creating projects needs to change" (Schor, Favareto, Souza, & Fontes, 2020).

Relational integration of policies and actors

In Belo Monte, fragile relational integration of policies and actors generated further inefficiencies. In 2015, the main entrance of Altamira municipality, the city most impacted by Belo Monte, which almost doubled its population by the migration caused by the project implementation, had a billboard stating: "Altamira: the first municipality in Brazil with 100% sanitation system." The message alluded to the environmental licensing conditionality that obliged Norte Energia to invest in an expensive and complex sanitation system for the area. At that time, however, not a single house was connected to the sewer system due to a lack of political linkage between Norte Energia and municipal, state, and federal governments (Derivi et al., 2015). One of the conditionalities on education obliged the construction of schools to tackle the massive migration in Vitoria do Xingu, another municipality affected by the movement of people. However, of the 19 schools built by the entrepreneur, 11 were not being used a year after because of closed-doors decision-making processes, changes in territorial educational policies, or because schools were built in localities later submerged by the dam reservoir (Monzoni & Pinto, 2016). Regardless of the specific reasons for each misuse of the education equipment, the lack of transparent and organized linkage among actors created inefficiency.

> In Belo Monte, the Institutional Articulation Program, within the constraints for the entrepreneur, was a catastrophe, the entrepreneur had to strengthen the capacities of the municipality, how do you do that? Does he have to do this? This is wrong. But we took on an articulating role. We used our role as an environmental agency a little. There is a lack of an institution with this mandate, to carry out integration, coordination (I22, October 24, 2017).

> Two things that Norte Energia made a lot of mistakes in their conduct were sanitation and indigenous issues, as they did not dialogue, did not coordinate among actors, they could reach the end of the process with much less cost and much better results (I15, February 27, 2018).

Further political relational limitations pose a challenge for advancing more transparent territorial-related measures. In addition to the lack of inter-federative coordination and state and relational capacities, infrastructure policies in Brazil face technical issues and essentially political ones, permeated by conflicts of interest, negotiations, and mutual concessions between the different actors and interests at stake in a fragmented decision-making network (Abers, 2018; Gomide & Pereira, 2019, 2018a, 2018b, 2018c).

> Today I am outside the process, and I have a very critical reading. The process was never very transparent. Transparency happens at levels; interests were never very much on the table. From a public, republican, and democratic perspective, participatory governance is fundamental and important. But not everything happens in these public spaces and the rules of the games varied. They seem like enigmas, but after everything I've experienced, along with the news, processes, and the situation in which the population finds itself nowadays, I question how much I, within the government, had, we had, fully information. Not even in the social area you had this information about the entire process" (I11, September 26, 2017).

The international literature also points to the essentially political characteristics in the allocation of investments in the sector (Wegrich & Hammerschmid, 2017). Projects are characterized by significant investments and contracts for their implementation, enabling the flow of resources to be diverted to feed political campaigns and keep political groups in power. Thus, transparency and accountability of the sector's plans, programs, and projects would be a vector for increased efficiency in the execution of investments (Gomide & Pereira, 2018c).

> The project was a great opportunity for improvement, and we did not know how to take advantage of it, [...] too much money wasted, did not solve problems. [...] But whose fault, is it? The fault is a little bit of each one; each one wanted to take advantage of it. It's a huge amount of investment and hasn't changed their lives at all. Lots of money, wealth, it did not fulfill what was expected. [...] Everyone is unemployed. What's new? The production chains are the same, cocoa, cattle, wood, a little for fish farming. Industries that could be installed did not come; energy is the most expensive in the country for those who come here. The state spent BRL 100 million in helicopters for what? We missed a huge opportunity to social transformations. We were not prepared, we threw it away (I1, November 29, 2017).

DISCUSSION AND CONCLUSION

Megaprojects management is very peculiar. They are usually publicly owned, their deployment can have enormous impacts on their surrounding society, and they are designed not only for financial revenues but primarily to address public needs and demands by providing critical infrastructures for society (Derakhshan et al., 2019). Although growing literature on project management has been investigating external stakeholders and the linkages between projects, contexts, and institutions, it is still unclear how to create integrative mechanisms connecting corporations, the government, and the public for effective societal governance, so shared and sustainable value is created for all stakeholders throughout the megaproject lifecycle (Ma et al., 2017). It is also unclear whether the objectives of these projects are set and fulfilled according to the needs and priorities of the projects themselves or whether they are consistent with country development outcomes (Shiferaw & Klakegg, 2012).

This research sought to contribute to this discussion by investigating how a territorial approach and governance can affect large-scale infrastructure project management by proposing a shift from a project to a territory lens.

No single concept or framework can account for the multiple and varied causes and cures for the poor performance of megaprojects (Denicol et al., 2020). The territorial dimension is commonly limited in the literature on infrastructure project management to stakeholder and community engagement. Indeed, these are relevant elements for poor project performance since they involve an inadequate understanding of the parties, interests, power relations, relations with governmental agencies, competing and often conflicting priorities, goals, and interests, poor engagement, communication, and transparency with external parties, and mobilizations by unsatisfied local communities (Denicol et al., 2020).

This research proposes to look at the phenomena through a new lens. Since large-scale infrastructure projects comprise complex ties among state and non-state actors, especially territorial ones, we applied an analytical lens borrowed from institutional arrangements, political-relational state capacities, and territorial governance literature.

Although territories can only be understood by larger systems, the structures, institutions, and actors in the territories are processing ideas, shocks, and incentives from these systems (Berdegué et al., 2015, p. 135). Policies, programs, and projects influence the production of spaces, presenting a spatial and territorial dimension. However, they do not always incorporate this dimension in their planning and implementation cycles since clashes between social actors in political arenas in search of their own interests do not always match territorial particularities and peculiarities (Silva, 2018). These are tough lessons for both public policies and project management in the context of infrastructure.

Territorial planning instruments, shared responsibilities and collectively built objectives, effective social participation, social and economic investments beyond environmental licensing, and relational integration among policies and actors are some of the dimensions to be considered for the incorporation of a territorial approach in infrastructure governance.

Three main insights on the relationship between large-scale infrastructure project management and territories can be identified from these findings.

First, ***territorial planning instruments*** and related governance *locus* are opportunities for a broader stakeholder involvement – and therefore, understanding – of the complex linkage between institutions, contexts, and projects. They can operate as an "institutional work" (Van Den Ende & Van Marrewijk, 2019) toward a territorial approach beyond mere instruments for anticipating demands and getting to know the context for gaining legitimacy (Orr & Scott, 2008). They look at the long-term gains for the territory and its development. Consequently, they meet the local actors' demands in a more holistic and comprehensive way than pure acceptance of a project. This could generate more solid gains for territorial development and project delivery, beyond building trust and confidence and improving democracy in the selection of governance mechanisms (Derakhshan et al., 2019).

Second, a territorial approach and governance would ideally result in a participatory construction of ***shared responsibilities and collective territorial objectives*** toward a common territorial vision with clear responsibilities of actors (Davoudi et al., 2008). However, as in most cases of large-scale infrastructure projects, the entrepreneur and state are bound in project implementation and operation. If the almost inevitable confusion of roles is not addressed, there is a depreciation of the democratic governance needed for good project management, as well as problems of resource efficiency. This temporary hybridization between the bureaucratic state and corporate market (Matinheikki, Aaltonen, & Walker, 2019) can lead to a blurred definition of roles and, therefore, a lack of clarity for achieving common goals for society as a whole.

Finally, the case study of Belo Monte shows that - from a lesser to a greater degree - ***territories actively influence and are influenced by infrastructure governance and project management***. A context-specific territorial approach anticipated some of the challenges and complexities of infrastructure management, both for the state and project managers. It corroborates that contextual specificities (Ika, 2012) to the delivery of infrastructure require specific ways of planning and managing projects in developing and emerging economies. More important than "getting the territory right" to integrate national spatial planning strategies with global networks (Schindler & Kanai, 2021) is to give room for national and subnational planning that actually take territories as the final recipient of investments. Further, results oriented toward (territorial) development goals – such as the Sustainable Development Goals (SDGs) – could be more efficient both for territory development and project delivery.

From a theoretical standpoint, this paper seeks to bring two contributions to the project management field. First, it applies institutional arrangement and territorial governance concepts to shed light on the interrelation between large-scale project management and hosting territories, beyond a utilitarian view of the surroundings of projects as mere "external stakeholders" or as "context." The paper thus adds to the growing literature trying to understand the linkages between projects and institutions (Söderlund & Sydow, 2019). Second, it organizes an analytical framework to assess how a territorial approach and governance influences project management.

From a practical standpoint, our research encourages managers to consider a broader social construction of projects beyond opening their projects to local communities and stakeholders, as prescribed in the literature. This means a willingness to collectively create innovative territorial governance arrangements, shifting the epicenter of project governance to the territory. By proposing a perspective shift – from project-level to territorial-level – the research signalizes that socially validated long-term goals might bring better outcomes for territorial development and project delivery.

This research faces some limitations. The qualitative case study approach gave us breath to understand a single unique case, but further research on multiple cases would provide a more systematic account of the phenomena. Further research could provide a more thorough investigation of the similarities and differences between the concept of territory and context, and even challenge some discussions presented here. Finally, navigating through a dialogue between different fields of knowledge can be highly experimental, and further research should complement and test the ideas brought in this paper.

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Daniela Gomes Pinto
ORCID: https://orcid.org/0000-0002-1056-9976

Ph.D. candidate in Public Administration and Government at the São Paulo School of Corporate Administration of the Getulio Vargas Foundation (FGV EAESP); MSc. Development and Environment from the London School of Economics and Political Science; Research coordinator of the Local Development Program at the Center for Sustainability Studies at the Getulio Vargas Foundation (FGVces); Professor at the Professional Masters on Competitiveness Management (Line Sustainability) at the Getulio Vargas Foundation (FGV EAESP). E-mail: daniela.gomes@fgv.br

Marco Antonio Carvalho Teixeira
ORCID: https://orcid.org/0000-0003-3298-8183

Ph.D. and Master's in Social Sciences from Pontifícia Universidade Católica de São Paulo (PUC-SP); Adjunct Professor and researcher at the Department of Public Management at the São Paulo School of Corporate Administration of the Getulio Vargas Foundation (FGV EAESP); Leader of the thematic group Federalism, Intergovernmental Relations, and Decentralization in the Public Administration area of the EnANPAD (2021-2024). E-mail: marco.teixeira@fgv.br

AUTHOR'S CONTRIBUTION

Daniela Gomes Pinto: Conceptualization (Lead); Data curation (Lead); Formal Analysis (Lead); Funding acquisition (Equal); Investigation (Lead); Methodology (Lead); Project administration (Lead); Resources (Lead); Supervision (Equal); Validation (Lead); Visualization (Lead); Writing - original draft (Lead); Writing- review & editing (Lead).

Marco Antonio Carvalho Teixeira: Conceptualization (Supporting); Data curation (Supporting); Formal Analysis (Supporting); Funding acquisition (Equal); Investigation (Supporting); Methodology (Supporting); Project administration (Supporting); Resources (Supporting); Supervision (Equal); Validation (Supporting); Visualization (Supporting); Writing- original draft (Supporting); Writing- review & editing (Supporting).