What are the effects of extractive informal institutions on the horizontal accountability process in a developing democracy? This paper presents evidence about the harmful effects of extractive informal institutions on horizontal accountability within subnational governments in Brazil. After three decades of free and competitive elections, the institutional design of oversight institutions for state governments has hardly changed. We explore the hypothesis that more extractive informal institutions, measured by the level of income inequality, is associated with decreasing transparency levels. Given its extensive social, political, and economic diversity embedded in an overall centralized formal institutional framework, Brazil provides an appropriate setting to test the hypothesis that extractive informal institutions responsible for increased income inequality can undermine horizontal accountability in new democracies.

Keywords: democracy; inequality; informal institutions; extractive institutions; accountability; transparency.

Transparência dos governos subnacionais: o impacto da desigualdade na transparência

Quais são os efeitos das instituições informais extrativistas no processo de accountability horizontal numa democracia em desenvolvimento? Este artigo apresenta evidências sobre os efeitos nocivos das instituições informais extrativistas na accountability horizontal dos governos subnacionais no Brasil. Após três décadas de eleições livres e competitivas, o desenho institucional das instituições de fiscalização dos governos estaduais praticamente não mudou. Exploramos a hipótese de que instituições informais mais extrativistas, medidas pelo nível de desigualdade de renda, estão associadas a níveis decrescentes de transparência. Dada a sua extensa diversidade social, política e econômica, inserida num quadro institucional formal centralizado, o Brasil oferece um cenário apropriado para testar a hipótese de que as instituições informais extrativistas responsáveis pelo aumento da desigualdade de rendimentos podem minar a accountability horizontal nas novas democracias.

Palavras-chave: democracia; desigualdade; instituições informais; instituições extrativistas; accountability; transparência.
Transparencia de los gobiernos subnacionales: el impacto de la desigualdad en la transparencia

¿Cuáles son los efectos de las instituciones informales extractivas sobre el proceso de accountability horizontal en una democracia en desarrollo? Este artículo presenta evidencia sobre los efectos dañinos de las instituciones informales extractivas sobre la accountability horizontal dentro de los gobiernos subnacionales en Brasil. Después de tres décadas de elecciones libres y competitivas, el diseño institucional de las instituciones de supervisión de los gobiernos estatales apenas ha cambiado. Exploramos la hipótesis de que las instituciones informales más extractivas, medidas por el nivel de desigualdad de ingresos, están asociadas con niveles decrecientes de transparencia. Dada su amplia diversidad social, política y económica integrada en un marco institucional formal, general y centralizado, Brasil proporciona un entorno apropiado para probar la hipótesis de que las instituciones informales extractivas, responsables de una mayor desigualdad de ingresos, pueden socavar la accountability horizontal en las nuevas democracias.

Palabras clave: democracia; desigualdad; instituciones informales; instituciones extractivas; accountability; transparencia.

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1. INTRODUCTION

Information about how the government deals with daily problems and how funds are allocated are as vital as free, fair, and competitive elections. However, institutions that support transparency are more difficult to be built. Hollyer, Rosendorff, and Vreland (2018) highlight that increasing transparency is a necessary step for improving governance and quality of life in the developing world. They show that higher levels of information produce higher levels of investment and more stable democratic politics. The main reason is that political action requires coordination, which in turn requires shared information. Healthy democratic mobilization of society requires a rich information environment available for organized civil society. Here our focus is on transparency as a fundamental element of accountability.

No democracy can stand firm when society is blind to what happens inside government. One of the main challenges for new democracies is to democratize their institutions, many of them inherited from non-democratic periods. Oversight institutions are critical because they are essential to hold politicians accountable in the period between elections. As audit bodies, they are official suppliers of information about how public resources are employed.

Horizontal accountability tends to be more fragile than vertical since authoritarian informal institutional legacies are more challenging to transform than organizing elections in new democracies. While the latter is mostly about free and fair elections, the former is about how officeholders must well behave in between elections. Moreover, establishing the rule of law can be harder at the subnational level. That happens when traditional local authoritarian elites can better hold institutional power.
and block transformations by informal channels. One of the main challenges for new democracies is building strong and effective oversight institutions as a keystone of horizontal accountability and the rule of law and, therefore, for the quality of the democratic process. Only countries with robust vertical and horizontal accountability can become vigorous democracies with a solid rule of law (Mungiu-Pippidi, 2015).

In this paper, we explore the relation between accountability and informal institutions. Accountability rules, which are to a large extend formal institutions, producing information may have different interpretations depending on the informal institutions that prevail in a specific context. That makes informal institutions extremely important to understand accountability effectiveness and how transparent the public sector is. We propose that informal institutions resulted from extractive forms of development tend to support political systems that are less open to public accountability.

Helmke and Levitsky (2006) describe informal institutions as human-made devices that constrain and guide human behavior and shape social interactions, shared, unwritten, created, communicated, and enforced outside officially sanctioned channels. Informal institutions emerge to complement formal institutions, circumvent the formal rules and are associated with a particular historical experience that creates certain socially shared expectations. We call them henceforth extractive informal institutions in the cases where they keep political and economic resources in the hands of elite groups, notwithstanding any formal institutional rearrangement or reform (Amendola, Easaw, & Savoia, 2013). Amundsen (2019), for instance, points out that beyond the enrichment of elites, extractive institutions also relate to keeping or strengthening political elites’ hold on power.

Our central hypothesis is that the more extractive informal institutions are embedded in a political regime, the less transparent is the public sector and, consequently, the poorer the quality of horizontal accountability in any formal institutional framework. In this way, democracies with extractive informal institutions tend to be of lower quality than those with more inclusive institutions, which makes formal institutions inherited from non-democratic regimes less accountable. Institutions can be classified in a wide range of ways. Here, we employ the idea that they may be seen in a continuum between extractiveness and inclusiveness. While borders may be very hard to precise, the opposite poles are clear.

Informal institution analysis indicated the existence of two interconnected dimensions. First, informal extractive political institutions which define the rules of the game give structure to political life, which reduces political participation. Second, informal extractive economic institutions reduce people’s access to productive assets other than the labor force. We follow the Engerman and Sokoloff (1997, 2002, 2006) hypothesis that contemporary inequality has historical roots. When endowments were favorable for large plantations and mines, the elites created institutional rules that protected their extractive interests. That means inequality before the law, high-income inequality, and a biased judicial system (Bennett & Nikolaev, 2016; Engerman & Sokoloff, 1997, 2002, 2006). Later the industrialization substitution strategy also fostered income inequality in Latin American countries (Furtado, 1972; Kingstone, 2018).

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1 Helmke and Levitsky (2006) organized a book on how political behavior can deviate substantively from prescribed formal rules, positively or negatively affecting the quality of democracy in Latin America.
We measure the continuum of informal institutions from inclusiveness to extractiveness by the degree of income inequality. We use The Gini index as a proxy for economic inclusiveness, following the literature (Chong & Gradstein, 2007; Krieger & Meierrieks, 2016; Savoia, Easaw, & McKay, 2010). To test it, we run a Logit panel model for binary dependent with novel data about the processes of horizontal accountability in Brazilian state governments. We surveyed the opinions of Tribunais de Contas from 2003 through 2019 for every Brazilian state. Access to information about the accounts is our basic measure of transparency. As control variables, we use population, gross state product, infant mortality, homicide rate, total imports, state government expenditures, and the effect of the Brazilian Transparency law.

The country’s continental size offers a unique opportunity to monitor the enormous variation on extractive informal institutions. Contrary to the United States of America (USA), the Brazilian legal framework has been homogeneous across the country since colonial times. Thus, Brazilian states have the same institutional mechanisms of horizontal and vertical accountability in the formal arena, despite the fact that there were changes across time that were applied to all territory. On the other hand, informal institutions vary from state to state. In the south of the country, slavery was scarcely encountered, and settlers arrived mainly to live their lives on small farms. In the Northeast and around Rio de Janeiro, extensive plantations were dominant, and slavery underpinned the whole economy (Fausto, 2014). In these areas, extractive informal institutions are stronger than in the south (Mahoney, 2010; Naritomi & Assunção, 2012). Consequently, informal institutions vary a great deal around the mean of extractiveness across the country, while formal institutions have been more homogeneous territorially since the establishment of the colonial administration.

Another strength of our research design is that state and municipal governments in Brazil are responsible for the delivery of most health and education services. They are held accountable by a specific group of state-level oversight institutions called Tribunais de Contas. Thus, a vast proportion of public resources and expenditure in Brazil are oversaw not by federal institutions but by these state-level bodies.

Our main empirical findings confirm our theoretical expectations. In the areas of the country where institutions seem to be more inclusive, horizontal accountability institutions are more transparent, and there is better access to information. That means that access to information – our primary dependent variable – will be negatively affected whenever the informal institutional environment is identified as extractive. In short, we closely follow Bennett and Nikolaev's (2016) findings, and Engerman and Sokoloff (1997, 2002, 2006).

We organize this paper as follows. After this introduction, in Section 2, our hypotheses of how extractive informal institutions affect transparency are further developed. Section 3 presents some remarks about how accountability institutions have evolved in Brazil. Section 4 presents the institutional background of the Brazilian case. Next, we discuss the methodological tools and describe the data collected about the transparency of oversight institutions. We present the main results in Section 6 and then our conclusion.
2. THEORY AND HYPOTHESES

The modern democratic state is the result of considerable efforts to change the ancien régime’s absolutist nature and to protect citizens against the horrors of religious warfare (O’Donnell, 1998). Consequently, institutions considered essential for contemporary democracies have developed from institutions established in non-democratic times. For instance, in France, the Chambre des Comptes was one of the most important institutions of the monarchy in the fifteenth century (Morin, 2011). Several oversight institutions have been established without democracy, except perhaps the European Court of Auditors, designed by Brussels’ bureaucracy (Laffan, 1999). As a consequence, some oversight institutions may still have institutional designs that diverge from the current political regime.

As clearly put by Diamond and Morlino (2004, p. 20), as democracy grew globally, research has moved from analyzing regime change to understanding and describing how new regimes function, highlighting the full development of the horizontal accountability process as a fundamental feature of high-quality democracies. As new threats to democracy in the developed world become an essential topic in the comparative literature and public debate (Levitsky, 2018; Runciman, 2018), the quality of democracy is one of the day’s main issues.

Diamond and Morlino (2004) define horizontal accountability as the requirement that officeholders must behave lawfully and appropriately. They must answer not just to voters but also to other officials and state institutions with the expertise and legal authority to monitor them continuously. The vitality of the horizontal accountability process depends on a legal system that provides for the exercise of checks and balances on public entities independent of the elected government. Schedler, Diamond, and Plattner (1999) sum up the challenge faced by new democracies:

[...] it is becoming increasingly clear that without working systems that can provide “credible restraints” on the overweening power of the Executive, democratic regimes tend to remain shallow, corrupt, vulnerable to plebiscitary styles of rule, and incapable of guaranteeing basic civil liberties. In short, they tend to remain “low quality” democracies (Schedler et al., 1999, p. 2).

Traditionally, we see the accountability system from that two-dimensional perspective (O’Donnell, 1998) divided into horizontal and vertical mechanisms. That may lead to an excessive simplification.

Beyond the electoral processes, the vertical dimension has incorporated the collaborative dimension arising from interacting with the most varied forms of civil society organizations over time (Peruzzotti & Smulovitz, 2006). At the same time, the civic engagement through councils, public hearings, and ombudsmen, among other channels of dialogue, have enlarged the traditional mechanisms of the horizontal dimension (Justice System, Legislative Power, and Audit Courts). That leads us to the notion that, no matter the definition we use, transparency is a necessary condition to horizontal accountability. Because it is fundamental to preserving democracy, accountability presupposes a well-informed society (Olsen, 2013) and the ability to use such information to make decisions and demand the accountability system when necessary.
Regarding transparency, oversight institutions are very important for the free flow of information about what happens inside the public sector. More information about the public sector can jeopardize the ruling class by fomenting mass mobilization and civil society organization (Hollyer et al., 2018). As a result, oversight institutions are a fundamental element of horizontal accountability functionality. The modernization of these institutions is essential to understanding the quality of democracy besides free and fair elections.

All that said, we explore the fact that the same set of accountability rules may have different interpretations depending on the prevailing informal institutions. In other words, institutions matter to accountability. We define institution as any collectively accepted system of rules that enable us to create institutional facts. These rules imply that the same formal rules can have different consequences depending on the context. That new status means that someone or something can now perform functions that, based only on the original attributes of the status, would not be possible (Searle, 2005). Alternatively, North (1990) pointed out that “institutions are the rules of the game in a society or, more formally, are the humanly devised constraints that shape human interaction”. At the same time, institutions are also enabling, not constraining, devices because they create new kinds of power (Searle, 2005).

Institutions are endogenous and defined according to the social choices of society and the historical and geographical context. However, people have a range of preferences about economic and political institutions, so this endogenous process involves a significant degree of conflict of interest. The resolution of this conflict depends on the legal framework, but it also hinges on the distribution of available resources (Acemoglu, Johnson, & Robinson, 2005). The political winners consolidate their victories by creating a new set of institutions or, at least, reforming, adapting, or consolidating the old institution.

This paper focuses on a particular set of institutions whose rules are defined informally or vaguely (North, 1990; Voigt, 2018). Legislation is often seen as a formal institution because laws, regulations, and legal codes are the rules that people explicitly subscribe (Kunčič, 2014; North, 1981). They are usually sanctioned by an external actor in society: the state. However, some legal norms are broadly defined and, to a relevant extent, applied based on informal rules such as customs and ethical rules. That may, for instance, affect the ability of citizens to monitor politicians and the well-functioning of check and balance in democracy (Voigt, 2017; Weingast, 1993). To put it succinctly, a legal framework X may count as Y for a given institutional context (Searle, 2005). As a result, informal institutions deeply influence formal institutions. Cruz-García and Peiró-Palomino (2019), for example, explore the impact of the informal institution on formal institutions in credit markets. Their findings indicate that social trust positively affects credit. Most importantly, they show how formal and informal institutions can be complementary in some cases. The latter does not replace but can improve substantially the former. The opposite is also true. In some cases, informal institutions can jeopardize formal institutions. Wong (2006), for example, studying the Chinese and German capital markets, shows how informal institutions can damage the quality of the macroeconomic environments and public institution.

Helmke and Levitsky (2006) and O’Donnell (1994) present an extensive literature analysis of how informal political institutions are created, how they communicate, and how their influence is
enforced outside officially sanctioned channels in authoritarian or new democracies. Brinks (2003) highlights how, in Brazil, punishment with extra-judicial executions is an informal institution within the Brazilian public security apparatus, affecting most of the population’s less fortunate segments.

As Helmke and Levitsky (2004) proposed, a strong reason for the development of informal institutions is

[…] the pursuit of goals not considered publicly acceptable. Because they are relatively inconspicuous, informal institutions allow actors to pursue activities - from the unpopular to the illegals - that are unlikely to stand the test of public scrutiny. Even where bribery, patrimonialism, and vote-buying are widely accepted, prevailing norms of universalism prevent their legalization (Helmke & Levitsky, 2004, p. 730).

In this sense, informal institutions can communicate and be promoted without public visibility, reducing the public nature of democratic power (Bobbio, 1987) and reflecting coercion and conflict rather than political coordination. So, we expect that extractive informal political institutions would reduce the overall level of control by the state’s oversight agencies. Of course, other historical paths could have led to more positive informal institution, that could be more inclusive, for example.

A vast empirical literature on development has exploited the different styles of colonization Europeans adopted in the Americas. In places where tropical diseases were widespread or natural resources were abundant, settlement based on European migration was not possible or, at least, not economically feasible. In these colonies, resource extraction became an essential activity. That led to the creation of institutions that were extractive in nature (Acemoglu et al., 2001, 2002, 2003; Acemoglu & Johnson, 2005; Acemoglu, Johnson, Robinson, & Thaicharoen, 2003; Rodrik, Subramanian, & Trebbi, 2004; Bhattacharyya, 2009).

The institutional patterns of colonial times remained a driving force for extraction. Conversely, the distribution of wealth and political resources that tends to be structurally unequal within Latin America reinforces the extractive nature of their political systems. Mahoney (2010) presents an in-depth description and causal account of institutional variation in Latin America. For Mahoney (2010), the River Plata and the South of Brazil have more inclusive institutions than those inherited in the Andean colonies or the Northeast of Brazil due to the different timing of colonization.

We also closely follow the Engerman and Sokoloff (1997, 2002, 2006) hypothesis that contemporary inequality has historical roots in the institutional framework. When endowments were favorable for large plantations and mines, the elites created institutional rules that protected their extractive interests. That means inequality before the law, high-income inequality, and a biased judicial system (Bennett & Nikolaev, 2016; Engerman & Sokoloff, 1997, 2002, 2006). It also affected how suffrage evolved in the Americas (Engerman & Sokoloff, 2006). Besides, industrialization policies in the 20th century also deepened inequality (Fausto, 2014; Furtado, 1972; Kingstone, 2018).
The day-to-day politics of the subcontinent reinforce these institutional patterns. On the one hand, when there is a significant economic divide, the wealthy minority has a greater motivation and more opportunity to control information about the state. On the other hand, most of the population is less able to push for better monitoring of government activity. For instance, Jong-Sung and Sanjeev (2005) show that, in a comparative analysis of 129 countries, the wider the gap between the top and the lower brackets of income, the more corrupt the country is. In the same direction, Bennett and Nikolaev (2016) show that after inequality was established, it was associated with a rule of law that perpetuated inequality.

Concerning the equality of social and political resources, constraint over the three branches of government is crucial for increasing access to political power in societies, strengthening democracy, and being a strong indicator of inclusiveness. When there is constraint over the Executive, the state's capacity can be enlarged without endangering democratic control. The same logic applies to the Legislative and the Judiciary branches in a reason of checks and balances. The likelihood that the elite will consolidate its power over the people diminishes, and political power broadens (Acemoglu & Robinson, 2016; Engerman & Sokoloff, 2006).

The variation in informal institutions affects Tribunais de Contas's work. Members of Tribunais de Contas have political and economic interests; they may want to keep a relevant role within the local elites. If the level of competition at the state level is low, political elites can keep their strong ties with counselors, reducing horizontal accountability. Therefore, in the Brazilian case, if local informal institutions are extractive, that is to say, if there are substantial economic disparities in the local economy, audit institutions' overall performance and transparency decrease.

It is important to say that inequality is a complex concept. We can measure it in many different dimensions (Galbraith, 2016). We can see economic inequality in the supply and demand sides of the economy. We can see it in a wide range of human capabilities. We explore here a more specific dimension: the income inequality, measured by the Gini Index. For further details, I. F. A. L. Fernandes and Cristofalo (2022) review the measurement of income inequality through the Gini index in Brazil and comparatively. We take leverage from the fact that, in the country, the Gini Index of income distribution at the state level is strongly linked to colonial economic dynamics, as extensive literature suggests (Acemoglu & Robinson, 2016; Bennett & Nikolaev, 2016; Engerman & Sokoloff, 1997, 2002, 2006).

Figure 1 shows the relation between Income Inequality Gini Index and the most important Brazilian economic cycles. Although there was slavery in the whole country, Sugar Cane was the first Brazilian economic cycle and profoundly unequal. It was export-led and based only on slavery. The Coffee and Amazon economic cycles were based on free labor and took place after the end of slavery in 1888 (Fausto, 2014). However, the latter was marked by intense exploitation of local farmers and, to some extent, can be linked to a transitory period between slavery and free labor. Later, Industrialization Substitution Strategy was also based on reinforcing inequality as it was based on the local production of high-value goods for the local elites (Furtado, 1972, 2020). Extractive Institutions in the past still play a part in Brazilian day-to-day politics. In short, we base our point on the extensive literature cited, which investigates how the colonial history of deep economic inequality in several countries forged practices, customs, and readings that perpetuate
inequality, despite the establishment of formal institutions, many of them imported from the less unequal colonizing countries.

An important issue to clarify the validity of our measure of informal economic institutions is related to the fact that in Brazil the rules established by the central power have been practically the same for all local governments. Thus, despite the oscillations across time between centralization and decentralization, formal institutions tend to have always been similar across states in Brazil since colonial times. Hence, the variation of the inequality measure we want to explore is not related to previous formal institutions, as their institutional effect was homogeneous across the country.

A comparison with U.S. formal institutions highlights the suitability of the Brazilian context for our identification strategy. The U.S. had different formal institutions in the XIX century, as some states legally allowed slavery while others prohibited it. In Brazil, slavery was legally binding in all the territories. Colonial and post-independent administrations were always formally very centralized (Fausto, 2014). That said, the heritage of slavery in today’s economics is strongly connected with informal institutions. We can capture it with the effects of informal institutions on inequality. Suppose a federal norm X can be interpreted differently, such as Y at a specific state. In that case, it must be because of informal institutions in the Brazilian case, as depicted in Figure 1.

**Figure 1**  
**INCOME INEQUALITY IN BRAZIL AND THE INSTITUTIONAL DIMENSION**

Source: Elaborated by the authors.
We take transparency as a proxy for effective horizontal accountability by oversight agencies. Measuring the transparency of all government institutions and then estimating the impact of oversight agencies is desirable. However, that would be out of reach of our article. We then restrict our research to explore the role of the oversight bodies. Moreover, in this respect, for them to be relevant to overall transparency, it is fundamental that they are transparent, especially about the documents they produce for society. Among all these, the most relevant are undoubtedly the opinions issued concerning the governors’ accounts. We assume that when oversight agencies help disseminate information about the behaviors of government officers, there is a tendency to increase levels of control of government activities by other officials and state institutions with the expertise and legal authority to monitor them on an ongoing basis. Consequently, we use access to information about opinions issued by oversight institutions to measure their transparency. In short, if extractive informal institutions (i.e., those that perpetuate inequality) are stronger than the inclusive informal institutions (i.e., those that reduce inequality), we expect worse results for the oversight system.

We thus suggest the following empirical hypothesis:

\[ H_0 – \text{ More equality in the distribution of economic resources (less economic inequality) positively correlates with transparency.} \]

3. HORIZONTAL ACCOUNTABILITY IN BRAZIL: THE CASE OF TRIBUNAIS DE CONTAS

Tribunais de Contas and Ministério Público (Public Attorney Bodies) are the most important bodies of horizontal accountability in Brazil. In this paper, we focus on the Tribunais de Contas since they hold accountable periodically officeholders in Brazil (G. A. A. L. Fernandes, Teixeira, I. F. A. L. Fernandes, & Angélico, 2020). The Brazilian framework follows the legal model standard in Roman law countries such as France’s Cour des Comptes, Italy’s Courte dei Conti, Spain’s Tribunal de Cuentas, and the European Union’s Court of Auditors. Structural similarity of the oversight agencies can coexist with significant disparities in the procedures to disclose information to the public. The quasi-judicial structure is widespread in Brazil.

Tribunal de Contas da União (TCU), the leading accounting oversight institution, was established at the end of the nineteenth century, long before Brazil became a democracy and just two years after the abolition of slavery. Below the federal level, the country set up most of its audit institutions in the first half of the last century. As they had to mirror the Tribunal de Contas da União, the state level Tribunais de Contas ended up reflecting the autocratic structures of Portugal’s ancien régime exported just before Brazilian independence by the transfer of the Portuguese court to Rio de Janeiro in 1808 (Costa, 2008; Loureiro, Teixeira, & T. C. Moraes, 2009). Each of the 27 Brazilian states has one Tribunal de Contas responsible for holding to account the state governments. In the Brazilian literature, state governors have been called the Barons of the Federation and have substantial political power inside their state (Abrucio, 1994). They are also the key players in choosing the people to be watchdogs for these local-level institutions. They are often chosen based on political
rather than technical criteria, representing the protection of local elites against the pressures of
democratic modernization.

According to Dye and Stapenhurst (1998), Santiso (2009), Brazil follows the legal model of a
collegiate court with semi-judicial power in administrative matters. The semi-judicial tradition
usually implies that audit institutions adopt practices and rules mirroring the ones used by the
judicial branch, although they are independent. Although the federal and state constitutions provide
the definitions of Brazilian audit institutions, there is no explicit federal regulatory body for these
institutions. That leads to a potential lack of uniformity that allows members of the audit bodies to
act like a collegiate court, defining their own rules used to approve public accounts as well as
to decide how to disclose information. In addition, their reports go to the legislative branch
at the state level, where they receive the final approval. In the end, there is great confusion about
who regulates Tribunais de Contas in Brazil. Although legally there is scope for variation, a close
empirical analysis indicates that even with a more flexible design, the institutional designs of
subnational oversight institutions are closely similar (G. A. A. L. Fernandes, I. F. A. L. Fernandes,
& Teixeira, 2018).

According to Rocha (2013), the absence of any kind of external regulation on what should be a
national standard of transparency and institutional behavior decreases the quality of the opinions
issued by the oversight institutions and weakens their effective control. His findings also highlight
excessive legalism and a lack of focus on results, limiting the information received by citizens.
Abrucio (1994) shows that Tribunais de Contas are vital institutions to enforce political control
by governors over state elites since their members usually act in favor of the political interests of
those who appointed them. Similar conclusions are also drawn by Hidalgo, Canello, and Lima-
de-Oliveira (2015) and Weitz-Shapiro, C. Moraes, and Hinthorn (2015), indicating that political
allegiances still play a fundamental role in the oversight of Brazilian subnational institutions.

Although the law forbade that members of oversight institutions engage in political activities,
the presence of former politicians as members of these institutions is not unusual. Blume and
Voigt (2011) and Melo, Pereira, and Figueiredo (2009) agree that external control is heavily
influenced by subnational political and economic actors and interest groups despite being
autonomous bodies. Although there were minor modifications in how members were chosen
following democratization, Hidalgo et al. (2015) and Weitz-Shapiro et al. (2015) have also shown
substantial evidence that state oversight institutions exhibit a pro-politician bias in decision-
making, especially for co-partisans.

G. A. A. L. Fernandes et al. (2020) and Loureiro et al. (2009) showed that counselors partially
blocked the institutional development of the Brazilian audit courts after 1988. As counselors are key
players in structuring accountability in state governments, the lack of reform and the adoption by
Tribunais de Contas of a more transparent process of horizontal accountability can be an essential
factor in reducing the effectiveness of oversight institutions.

In retrospect, some degree of horizontal accountability has been achieved mainly because of
advances in the judicial system over the last three decades of democracy in Brazil, mainly at the federal
level (Ferraz & Finan, 2008; Hagopian, 2016; Santiso, 2009). However, at the state level, the evidence
is not entirely positive. The bureaucratic structure of oversight established during the dictatorship remains very stable. The literature indicates that the accountability problem is not related to the mere inexistence of formal institutions responsible for the job but, as a matter of fact, to how they operate in day-to-day politics (G. A. A. L. Fernandes et al., 2020). Thus, the accountability problem has to do with the complex relationship between formal and informal institutions, how they work, and how they operate or impact each other.

4. METHODOLOGY

Our empirical strategy starts with the collection of novel data from the Brazilian state oversight system. We surveyed the opinions of Tribunais de Contas from 2003 through 2019 for every Brazilian state. Data was collected in 2015 from 2003 to 2012 and then again in 2020 from 2003 to 2019. We use access to information about the accounts as a measure of transparency. Concerning measuring access, we attempted to access the information if no data was immediately available on the institution's website. First, we sent an email requesting information; if no answer was received, we made a phone call to ask for the information. We also measured our effort to get the information using this research strategy. We detail results in Table 2. As we collected the data twice at different times, we could also check for improvement between 2003 to 2019. We use Income Gini Index as our primary independent variable to capture the long-term effects of informal institutions. As a possible confounding factor, we control for the level of political competition at the subnational level, using a minimal definition: the share of valid votes of the unsuccessful candidates in the total number of votes in the first round. We propose these variables as the electoral system may affect how informal institutions affect horizontal accountability. It is essential to say that elections are strongly centralized in Brazil. The federal government has established an electoral institution organizing elections since 1932, the so-called Tribunal Eleitoral. The advance of democratic institutions in the central government attenuated the effects of local elites on electoral competition (Fausto, 2014). As a result, elections in Brazil are usually considered fair. Thus, although this variable is far from perfect, it undeniably correlates with political competition and implies a straightforward meaning.

Besides, we also use many other control variables: population, gross state product, infant mortality, homicide rate, total imports, and state government expenditures. Finally, we also control the effect of the Brazilian Transparency law. The federal government enacted in 2013 a law determining some minimum requirements about the disclosure of information in the public sector. It states clearly that all Tribunais de Contas must follow all of them. To control for the impact of the law, we use a dummy variable that assumes a value of zero for the years before 2013 and one after. The statistical description of all variables is in Table 1.
For estimation strategy, we use a straightforward Logit panel model for binary dependent variables:

\[ y_{it} = \alpha_i + \sum_{j=1}^{J} \alpha_j X_{jt} + \epsilon_{it} \]

Where \( y \) stands for transparency, is a set of variables according to our hypothesis and controls. We use the random effect panel Logit model in the first four models following Acemoglu et al. (2008). To estimate the effects of income in democracy, Acemoglu, Johnson, Robinson, and Yared (2008) propose a framework using fixed effects to take out time-fixed variance correlated with long-run informal institutions’ effects. Suppose our hypothesis that the correlation between inequality and transparency is due to the long-term impacts of informal institutions is correct. In that case, we expect fixed effects to eliminate this relationship. Hence, in the first four models, we use random effect panel Logit, adding controls in each specification. Model 1 is the baseline, and 4 is the entire specification, considering all controls. Finally, for the robustness check, we employ fixed effects in column 5, while in column 6, we use a random linear panel model.

5. MAIN RESULTS

In this section, we present our main findings and the descriptive statistics of the variables we use.

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<tr>
<td>Transparency (2003-2012)</td>
<td>270</td>
</tr>
<tr>
<td>Transparency (2003-2019)</td>
<td>459</td>
</tr>
<tr>
<td>Transparency Law</td>
<td>540</td>
</tr>
<tr>
<td>Gini Index</td>
<td>459</td>
</tr>
<tr>
<td>Political Competition</td>
<td>540</td>
</tr>
<tr>
<td>Population</td>
<td>540</td>
</tr>
<tr>
<td>State Gross Product*</td>
<td>432</td>
</tr>
<tr>
<td>Homicide Rate</td>
<td>513</td>
</tr>
<tr>
<td>Imports*</td>
<td>540</td>
</tr>
<tr>
<td>Total State Gov. Expenditures*</td>
<td>538</td>
</tr>
</tbody>
</table>

* In millions of BRLs.
Source: Elaborated by the authors.
Concerning the variable Transparency, we show results for two-time collections: 2003-2012 and 2003-2019 – the latter present figures for the whole period. We collected the information if the opinion was available as a dummy variable. If it was, it inputted one, zero otherwise.

In our first data collection (2003-2012), only information was available to the public in 79.30% of cases, i.e., 214 out of 270 observations. For the whole period, we found in 77.00% of the cases. Figure 2 displays the average times the opinion issued was available for each Brazilian state. Results in Table 2 show states in three groups. The most accessible are those whose final opinion was available on the website. In addition, when the document was unavailable online, an inquiry was made by email and, if there was no response, a telephone consultation with the Tribunal de Contas ombudsman. The last two lines display respectively whether there was no response or, if there was, the number of working days to answer the inquiry.

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Available on the website</td>
<td>40.70%</td>
<td>51.85%</td>
<td>64.60%</td>
</tr>
<tr>
<td>Available after email request</td>
<td>37.00%</td>
<td>24.81%</td>
<td>23.01%</td>
</tr>
<tr>
<td>Available after phone request</td>
<td>1.50%</td>
<td>0.00%</td>
<td>0.00%</td>
</tr>
<tr>
<td>No return</td>
<td>20.70%</td>
<td>23.34%</td>
<td>12.39%</td>
</tr>
</tbody>
</table>

Source: Elaborated by the authors.

It is noteworthy that in some states that provide any information electronically, it is sometimes difficult to access the website, despite search tools, because a specific random assigned number identifying the process is required. Finally, the third group of states was unwilling to provide any information. For the statistical analysis, we consider transparency as a dummy variable whether we found information about each year’s account report for each state. Figure 2 shows the average levels during the whole period for each state. It ranges from one in the case the opinion was available for all years to zero when for no year it was available. The worst cases are Piauí and Paraíba, where we found no opinions available. On the other end, in the states of Bahia, Ceará, Espírito Santo, Minas Gerais, Pará, Pernambuco, Rio de Janeiro, Rondônia, Rio Grande do Sul, Santa Catarina, and São Paulo, it was available in all years.
Acre and Amapá, two poor states in the Amazon region, illustrate the lack of transparency of the Tribunal de Contas indicating a weakened horizontal accountability. In both cases, there were no scanned documents, and everything needed to be consulted in person at the institution's headquarters, impractical in a country of continental size. Neither does the Tribunal de Contas of Espírito Santo, in the Southeast region of Brazil, provide their reports or opinions online, requiring the submission of a formal request by email. Twenty-nine days after the request, we received an answer, and two months later, the audit institution mailed a CD-ROM with the opinion. Moreover, in the Tribunal de Contas of Alagoas, in the Northeast, we were informed that the issue was confidential, and that the disclosure of information was available only for those living in the state. Finally, five audit institutions in the North and Northeast did not respond 45 working days after the request.
The same data for 2003-2012 we collected five years later in 2020. In 14.00% of cases, we saw no improvement at all. Despite the technological advances in these five years, data was not yet available. Interestingly, in 9.00% of cases, data was no longer available, while in 7%, the opposite happened. For the remaining 70%, audit institutions disclose the same data at both times. Eventually, considering the whole 2002-2019 period, disclosure of information increases from 79% to 88%. However, the number of states with some lack of transparency also increases from 5 to 11 for the whole period. Surprisingly, in 2019, five out of 27 states have no disclosure of information.

Table 3 show our main quantitative empirical results. In Table 3, columns 01 to 04 are estimated using a Logit panel model random effect, while in column 05, we deploy a fixed effect Logit panel model. Income inequality measured by the Gini Index seems to play a critical role in predicting the disclosure of information. In models 1 to 4, the more unequal the state is, the less transparent it is. That finding is confirmed even if we include all controls and dummies for the year and time of data collection. We see this pattern even when controlled for socioeconomic variables such as population, the size of the local economy, and child mortality. There is no effect of the political competitiveness control variable. The impact of the share of valid votes received by nonelected candidates is not statistically significant in all models, although it varies widely. That is an exciting result since the standard variation of income inequality is equal to 7.72% of its mean, while for political competition, it is equal to 43.03%.

To put it into context, the Gini Index average among the states has decreased in the whole period from 0.56 in 2003 to 0.53 in 2017, the last available year. During the same period, political competition decreased from an average of 0.36 in 2003 to 0.32. Our findings suggest that the political arena at the state level in Brazil has not affected the levels of transparency. Alternatively, political competition in elections does not mirror a more open society but is a game elites play. Or indeed both. As the federal government fully organizes the elections through the Tribunais Eleitorais, state level elections are usually considered fair. So, further research is needed to address these questions.

The Brazilian Transparency Law seems to have no effect even though it explicitly orders that all audit institutions make all reports available. The same applies to all other controls, including the infant mortality rate, the homicide rate, the total of goods and services imported by the state, and the total expenditures of the state government.

Results are similar when we use an OLS panel model (model 6). Following Acemoglu et al. (2008), when we use fixed effects (model 5), the long-run impact of the institutions is no longer seen as captured by income inequality. As expected, it is no longer statistically significant as the fixed-effects portion of the equation washes away the long-run informal institution's effects.
TABLE 3  TRANSPARENCY RESULTS

<table>
<thead>
<tr>
<th></th>
<th>(1) LOGIT RE</th>
<th>(2) LOGIT RE</th>
<th>(3) LOGIT RE</th>
<th>(4) LOGIT RE</th>
<th>(5) LOGIT FE</th>
<th>(6) OLS RE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gini</td>
<td>-0.273</td>
<td>-0.311</td>
<td>-0.189</td>
<td>-0.257</td>
<td>-0.170</td>
<td>-0.019</td>
</tr>
<tr>
<td></td>
<td>[0.078]***</td>
<td>[0.087]***</td>
<td>[0.091]**</td>
<td>[0.122]**</td>
<td>[0.141]</td>
<td>[0.007]***</td>
</tr>
<tr>
<td>Transparency Law</td>
<td>-0.493</td>
<td>-3.028</td>
<td>-5.676</td>
<td>3.001</td>
<td>-0.189</td>
<td></td>
</tr>
<tr>
<td></td>
<td>[0.470]</td>
<td>[0.845]***</td>
<td>[3.823]</td>
<td>[9.326]</td>
<td>[0.132]</td>
<td></td>
</tr>
<tr>
<td>Log(pop)</td>
<td>-1.706</td>
<td>-5.618</td>
<td>-23.561</td>
<td>-0.095</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>[1.341]</td>
<td>[3.818]</td>
<td>[12.054]*</td>
<td>[0.128]</td>
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<td></td>
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<tr>
<td>Log(State Wealth)</td>
<td>3.688</td>
<td>8.491</td>
<td>6.723</td>
<td>0.112</td>
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<tr>
<td></td>
<td>[1.045]***</td>
<td>[5.685]</td>
<td>[9.602]</td>
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<tr>
<td>P. Competition</td>
<td>-2.338</td>
<td>-4.720</td>
<td>-0.014</td>
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<tr>
<td></td>
<td>[2.138]</td>
<td>[2.633]**</td>
<td>[0.194]</td>
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<tr>
<td>Homicide rate</td>
<td>0.099</td>
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<td>0.005</td>
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<td></td>
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<tr>
<td></td>
<td>[0.042]**</td>
<td>[0.057]</td>
<td>[0.004]</td>
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<tr>
<td>Log(Import)</td>
<td>0.600</td>
<td>0.758</td>
<td>0.025</td>
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</tr>
<tr>
<td></td>
<td>[0.598]</td>
<td>[0.751]</td>
<td>[0.046]</td>
<td></td>
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<tr>
<td>Log T. Expenditure</td>
<td>-1.903</td>
<td>-4.440</td>
<td>0.054</td>
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<tr>
<td></td>
<td>[3.969]</td>
<td>[3.726]</td>
<td>[0.125]</td>
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<td>New Collect</td>
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<td>-1.008</td>
<td>-0.057</td>
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<td></td>
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<td>[0.100]</td>
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<tr>
<td>Time Dummies</td>
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<td>X</td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Fixed Effect</td>
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<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Constant</td>
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<td>21.335</td>
<td>1.214</td>
<td>46.071</td>
<td>0.221</td>
<td></td>
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<tr>
<td></td>
<td>[4.328]***</td>
<td>[4.874]***</td>
<td>[13.697]</td>
<td>[63.979]</td>
<td>[1.967]</td>
<td></td>
</tr>
<tr>
<td>Lnsig2u Constant</td>
<td>3.188</td>
<td>3.167</td>
<td>2.361</td>
<td>3.195</td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>[0.522]***</td>
<td>[0.522]***</td>
<td>[0.557]***</td>
<td>[0.742]***</td>
<td></td>
<td></td>
</tr>
<tr>
<td>N</td>
<td>405</td>
<td>405</td>
<td>405</td>
<td>403</td>
<td>133</td>
<td>403</td>
</tr>
</tbody>
</table>

*p < .01; ** p < .05; ***p < .001

Standard Errors clustered in the states.

Obs. Models 1 to 4 are estimated by a logistic random effect model. Model 5 is estimated by a logistic fixed effect model. Model 6 is estimated by a linear random effect model.

Source: Elaborated by the authors.
It is essential to consider that despite inequality remaining high in Brazil, there is considerable variation within states, ranging from 0.630 in the Federal District to 0.424 in Santa Catarina. We show the average inequality within Brazilian states in the period in Figure 3.

**FIGURE 3  AVERAGE INCOME INEQUALITY AMONG THE BRAZILIAN STATES (2011-2017)**

Finally, it is important to say that some qualitative research must be done in future research. The same inequality levels can be the result of very different historical trajectories. For example, the two less unequal states – Santa Catarina and Rondônia – and the two more unequal states, Acre, and Bahia all of them have very similar historical trajectories. Acre, and Bahia are classical cases of states whose economies were export-led and based on slavery in colonial times while Santa Catarina and Rondônia are cases of economies where settlers primarily colonized the state and start their farms.
That may have strongly affected how informal institutions devolve and transparency is nowadays. Moreover, it would be interesting to explore how the Brazilian Transparency Law, enacted in 2013, has been translated into the local audit regulation. Despite the importance of our findings, we believe further research should explore qualitatively the content of the opinions that issued by Tribunais de Contas, and also how the Legislative branch used them.

Brazilian audit institutions are not reliable suppliers of information about the government for the society. Low income and high inequality seem to be relevant factors in predicting the lack of transparency at the state level. These results highlight the importance of a reform process for promoting a more inclusive institutional environment. There is strong evidence that extractive institutions play a fundamental role, impacting transparency and, consequently, reducing horizontal accountability. However, they may also be related to power-preserving strategies. Less transparency makes a more lenient oversight system feasible, as Amundsen (2019) suggested. To change that, the set of necessary policies goes beyond what one would suggest for eradicating corruption, as already proposed comparatively by Mungiu-Pippidi (2015). Police-makers must consider the informal dimension of institutions to build better governance. Without bearing that in mind, legal reforms to promote democracy and to improve accountability by just reforming formal institutions can lead to ineffective results.

6. CONCLUSIONS

Accountability is a necessary element for strengthening democracy. In newly established democracies, horizontal accountability tends to be more fragile than vertical accountability, especially at the state level (G. A. A. L. Fernandes et al, 2020). As already pointed out in the literature, it is less costly to build competitive electoral processes than an effective integrity system based on ethical universalism (Mungiu-Pippidi, 2015).

In Brazil, subnational oversight institutions carried almost the same institutional design from the period prior to the democratization in 1988, despite the massive progress in the last thirty years towards free and competitive elections. In this study we begin to explore how variations in the performance of these different subnational oversight institutions are affected by their context and how despite institutional similarities there is enormous variability in their behavior.

Our paper aims to analyze oversight institutions and their role in holding state governments accountable during the period between elections. Here we focus specifically on transparency of oversight institutions. Our findings show significant evidence of limited horizontal accountability, mainly because oversight institutions are not a reliable supplier of information about the government for Brazilian society. Consequently, we identified a democratic deficit at the Brazilian state level measure by its level of transparency. Using the Gini Index as a proxy, we find evidence that states in Brazil with more extractive informal institutions have a lower level of transparency of the oversight institution. Income inequality, reflecting long-run informal institutions at the state level, plays a significant role in defining the extent of transparency. In line with our hypotheses, oversight institutions work better when institutions are more inclusive.

This said, we conclude that the level of inclusiveness or extractiveness of institutions affects how Tribunais de Contas work. When local institutions are extractive, audit institutions’ overall performance
and transparency are worse. More oversight institution transparency influences how wrongdoing is detected since it improves information for those outside the public sector. Our results align with expected developmental institutionalist literature that points to the presence of extractive informal institutions as inhibitors of a nation’s political and economic development. However, we deepen the analytical framework by showing that this variation is also relevant within cases. The Brazilian case allows us to make this kind of analysis as it has had throughout its history, since the colonial period, an institutional framework reasonably homogeneous across states but very heterogeneous regarding the day-to-day functioning of the respective societies and local communities. Having said this, our study allows us to deepen reflections on the role of long-term informal institutions at the subnational level.

The improvement of horizontal accountability is a necessary condition to make democracy work in emerging economies, especially at levels of government closer to the daily life of citizens. We usually associate low levels of transparency with corruption. However, we can relate to power-preserving the hold of power. Moreover, these two consequences may come together. Corrupt incumbents may be elected simply because enough information is not available. Making democracy work is difficult, especially in the daily struggle to oversee what people do with public resources and guarantee free and fair elections.
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Gustavo Andrey de Almeida Lopes Fernandes
https://orcid.org/0000-0001-8281-390X
Assistant Professor and Researcher in the Department of Public Management at Getulio Vargas Foundation (FGV EAESP). E-mail: gustavo.fernandes@fgv.br

Ivan Filipe Fernandes
https://orcid.org/0000-0002-4236-4393
Professor in the Program of Public Policy at Universidade Federal do ABC (UFABC). E-mail: ivan.fernandes@ufabc.edu.br

Marco Antonio Carvalho Teixeira
https://orcid.org/0000-0003-3298-8183
Associate Professor and Researcher in the Department of Public Management at Getulio Vargas Foundation (FGV EAESP). E-mail: marco.teixeira@fgv.br

AUTHORS' CONTRIBUTION
Gustavo Andrey de Almeida Lopes Fernandes: Project administration (Lead); Supervision (Lead); Validation (Lead); Visualization (Lead); Writing - original draft (Equal); Writing - review & editing (Equal).

Ivan Filipe Fernandes: Project administration (Supporting); Supervision (Supporting); Validation (Supporting); Visualization (Equal); Writing - original draft (Lead); Writing - review & editing (Equal).

Marco Antonio Carvalho Teixeira: Project administration (Supporting); Supervision (Supporting); Validation (Equal); Visualization (Equal); Writing - original draft (Equal); Writing - review & editing (Supporting).

DATA AVAILABILITY
The entire dataset supporting the results of this study was made available in GitHub and can be accessed in https://github.com/ilha95/data_Transparency_Subnational_gov.git