

UNIVERSIDADE DE SÃO PAULO
FACULDADE DE LETRAS, FILOSOFIA E CIÊNCIAS HUMANAS
DEPARTAMENTO DE CIÊNCIA POLÍTICA
PROGRAMA DE PÓS-GRADUAÇÃO EM CIÊNCIA POLÍTICA

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IDENTIFYING AND EVALUATING THE POLITICAL DETERMINANTS OF
SUBNATIONAL DEBT - VERSÃO CORRIGIDA

SÃO PAULO

2019

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Dissertação apresentada ao Programa de Pós-Graduação em Ciência Política do Departamento de Ciência Política da Faculdade de Letras, Filosofia e Ciências Humanas da Universidade de São Paulo, como requisito parcial para obtenção do título de Mestre em Ciência Política.

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SÃO PAULO

2019

ENTREGA DO EXEMPLAR CORRIGIDO DA DISSERTAÇÃO/TESE

Termo de Ciência e Concordância do (a) orientador (a)

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Data da defesa: 04/02/2020

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Z32i Zanlorenssi, Gabriel
 Identifying and Evaluating the Political
Determinants of Subnational Debt / Gabriel
Zanlorenssi ; orientadora Lorena Guadalupe
Barberia. - São Paulo, 2019.
 103 f.

Dissertação (Mestrado)- Faculdade de Filosofia,
Letras e Ciências Humanas da Universidade de São
Paulo. Departamento de Ciência Política. Área de
concentração: Ciência Política.

1. Dívida estadual - Ensino. 2. Políticas de
endividamento. 3. Federalismo. I. Barberia, Lorena
Guadalupe, orient. II. Título.

TERMO DE APROVAÇÃO

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AGRADECIMENTOS

First of all, I am thankful to my family, for all the support and the opportunities they gave me. Also all the friends, teachers and professors that I had, from different moments of my life.

I am also very thankful to my advisor Lorena Barberia, Allyson Benton and my colleagues from the Political Science Department, specially Luiz, Maria Letícia and Natália for their comments on my dissertation.

I owe a special acknowledgment to George Avelino and Fabiana Rocha, for participating and for contributing with so many insights during my dissertation's defense.

I also thank Paula Miraglia, Renata Rizzi and Marina Menezes for all the comprehension that I get at my work in Nexo Jornal to finish this text.

Finishing this dissertation, accumulating working and study and writing it in another language, was an enormous personal challenge for me. It would not be possible without the aforementioned friends.

RESUMO

Essa dissertação tem como objetivo avaliar a política de endividamento subnacional brasileira, desde 2002. Após uma série de reformas iniciadas em 1997, o país adotou regras mais rígidas para aprovação de novos empréstimos aos estados brasileiros, centralizando no governo federal a aprovação ou rejeição destes contratos. A análise do crédito concedido no período que vai de 2002 a 2018 mostra que a União tem um papel ainda mais importante neste processo pois os principais credores dos estados são os bancos públicos federais. Para que modelos top-down de endividamento subnacional, baseados em regras funcionem, é necessário que as exigências fiscais não sejam relaxadas e não haja favoritismo partidário na concessão do empréstimo. Caso contrário, há um risco inerente à estabilidade fiscal dos entes subnacionais. Atenção especial foi dada a possíveis diferenças entre contratos internos e externos de endividamento, pois o governo federal têm menor influencia nos contratos firmados com instituições estrangeiras. A partir de um modelo rare logit, as probabilidades de aprovação de contrato foram estimadas. Resultados mostram que a interferência de fatores políticos é significativamente mais forte nos contratos internos. O alinhamento partidário com o presidente aumenta as chances de aprovação de um empréstimo pela via interna. Mais ainda, ao contrário da via externa, o grau de endividamento dos estados não afeta as taxas de sucesso ao conseguir empréstimos. Estes resultados apresentam evidências que ainda que o Brasil tenha reduzido o espaço para comportamento oportunista no acesso ao endividamento, há fatores políticos que impactam o sucesso dos estados brasileiros em suas estratégias de endividamento.

Palavras-chaves: dívida estadual, política de endividamento, políticas fiscais subnacionais, federalismo, Brasil.

ABSTRACT

This dissertation aims to evaluate the Brazilian subnational debt policy since 2002. After a series of reforms initiated in 1997, the federal government adopted stricter rules for approving new loans to Brazilian states that directed greater authority for the approval or rejection of these contracts. The analysis of the loans that were approved from 2002 to 2018 shows that the federal government plays an even more important role in the concession of domestic loans because the main creditors of the states are federal public banks. For rule-based top-down models of subnational debt to work, fiscal requirements must not be relaxed and there must be no party favoritism in the lending process. Otherwise, there is an inherent risk over the fiscal stability of subnational entities. This study explores whether there are differences between internal and external debt approvals since the federal government has less influence on the agreements signed with foreign institutions. Using a rare-logit model (KING; ZENG, 2001), loan approval probabilities were estimated. Results show that political factors have a significantly stronger affect on the approval of domestic contracts. Party alignment with the president increases the chances of approval of a loan in the internal way. Moreover, in contrary of the external loans, the indebtedness level of the states does not affect the success rates in getting loans. These results present evidence that although Brazil has reduced the scope for opportunistic behavior in accessing debt at the sub-national level, there are political factors that affect the success of Brazilian states in their debt strategies.

Key-words: state debt, debt policy, subnational fiscal policies, federalism, Brazil.

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LIST OF ABBREVIATIONS

BNDES Brazilian Development Bank

CAE Economic Issues Commission of the Senate

Confaz National Council of Finance Policy

DCL Net Consolidated Debt

FHC Fernando Henrique Cardoso

FNS Healthcare National Fund

FPE State Transfers Fund

Fundeb Fund for the Development and Maintenance of Basic Education

Fundef Fund for the Development and Maintenance of Elementary Education

GDP Gross Domestic Product

IBGE Brazilian Institute of Geography and Statistics

IBRD International Bank for Reconstruction and Development

ICMS Tax on the circulation of goods, interstate and intercity transportation and communication services

IDB Inter-American Development Bank

INEP National Institute for Educational Studies and Research Anísio Teixeira

IPVA Tax on the property of motor vehicle

ITCMD Tax on Causa Mortis property inheritance and donations

LRF Fiscal Responsibility Law

OECD-UCLG Organisation for Economic Co-operation and Development-United Cities and Local Government

PAC Growth Acceleration Program

PEF States and Federal District Emergencial Financing Program

PGFN Attorney General's Office of the National Treasury

PMDB Brazilian Democratic Movement Party. Changed its denomination to **MDB**, dropping 'Party' from its acronym.

PSDB Brazilian Social-Democracy Party

PT Worker's Party

PVL Request for Limist Verification

Proinveste State and Federal District Investment Support Program

RCL Net Current Revenue

STF Federal Supreme Court

STN National Treasury Secretariat

Sadipem System of Analysis of Public Debt, Credit Operations and Guarantees of the Union, States and Municipalities

Siconfi Accounting and Tax Information System of the Brazilian Public Sector

TSE Superior Electoral Court of Brazil

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1 INTRODUCTION

To make investments and promote future economic growth, state or provincial governors need money. Permitting subnational entities to undertake loans can be a beneficial way to increase public investments. The ability to secure credit is especially crucial in developing countries as debt can be converted incrementally into future progress for the locality and, ultimately, improve the economy of the whole country at a macro-level.

Although subnational debt often represents a small share compared of GDP or even to central government debt, subnational governments hold a significant amount of the public investments in many countries, ranging from 35/% in lower-middle to 49% in high income countries (SMOKE, 2019). A well-functioning debt policy is important in order to keep public investments.

On the other hand, unsustainable debt levels can undermine both local development and the national economic stability, due to risks of public sector solvency (DILLINGER; WEBB, 1999). In developing economies, this situation can be caused by the lack of controls on local governments about the amount of debt that can be borrowed and how it should be managed. For example, local governments can raise debt for their own purpose and then externalize the costs with the rest of the country, in case of bailouts.

These situation occurred in countries such as Argentina and Brazil two decades ago and brought severe macroeconomic instability for them. In the case of Brazil, the scenario of hyperinflation and high interest rates damaged the national accounting and led to discussion about controlling subnational governments activity, mainly their scope of indebtedness. Under that situation, a frequent option in Latin America was the implementation of fiscal laws, as an option to impose fiscal discipline and control state debt (WEBB, 2004). Considering the existence of the previous framework, the rules were the easiest option to build fiscal discipline for those countries (RODDEN, 2002).

This framework of fiscal rules for subnational debt can be divided in two types. One is the top-down system based on the strict control of subnational contracts by the central government and the other is the bottom-up system that is focused more on transparency. Among other things, these systems require equal treatment across states based on technical criteria and also that debt bailouts must be linked with conditionals. An unconditional bailout can vanish the entire credibility of the federal government's fiscal rules.

In this dissertation, I study Brazilian subnational debt in the context of a transition from an almost no-rule policy to a top-down and rules-based system, highly controlled by the central government. I seek to examine how political factors contributed to how each state responded to the introduction of fiscal rules to restrict the power of state governors to undertake loans.

I propose an hypothesis that the extent to which politics influences debt accumulation depends on what type of loans are undertaken. Since the federal government controls entirely the domestic lending process (from the credit to the approval) and partially the international (where it divides the veto power with the senate and the credit come from international development banks), I argue that there are differences in how politics influence the likelihood that states be able to secure loan approval.

I test my propositions using data from loan approvals that Brazilian states sought to contract from both internal and external creditors in the period between 2002 and 2018. The dependent variable is a dichotomous measure if a loan was approved. I employ rare-logit regressions (KING; ZENG, 2001) to examine which factors help to explain which contracts are approved. These models help us to understand how the same political determinants influence different types of debt accumulation.

Based on a data set of loans approved after the implementation of these new laws (2012-2018), the success rate of each state and the interest rates of the contracts is evaluated, for both internal and external loans. The hypothesis is that loans provided and regulated by the national government are more prone to opportunistic political behavior than external loans, where the credit is controlled by international development

banks and the Senate is also a relevant actor.

The results found in the dissertation suggest politics loyalties increase the likelihood that debt contracts will be granted to favor the president party in internal loans. The results also show that sustainability indicators are not a determinant of receiving new loans. For external loans, where the influence of the central government is lower, criteria based on markets are more prevalent. In particular, the debt sustainability measure affect the probability of a loan contract's approval.

My findings have important policy implications as they reinforce the importance of strengthening the lending institutions in order to reduce the risks of opportunistic behavior and major fiscal imbalances. The research findings of this master's thesis is important in order to evaluate the transition of debt policy in developing countries and if there is possible to have failures in the top-down rules based system. If the political criteria drive the success of state's to secure loans rather than fiscal sustainability, a new subnational debt crisis may appear. In its turn, Brazil is remarkable case in the literature of subnational debt, often remembered for its transition from a completely unregulated framework to the adoption of fiscal rules.

In the next chapter, a brief literature review is presented to introduce the discussion. In the third chapter, the state debt and the institutional, political and economic environments of Brazil will be presented. This chapter is divided in four section, one introducing the federative framework, the second the history of subnational debt, the third the actual framework that states use to contract new loans and, finally, the data evolving recent debt and debt indicators are shown. On its turn, chapter four focus on the empirical framework, also with four sections: the hypotheses, the empirical strategy, the data used in the test and the results. The last chapter is the conclusion, where some implications are discussed and suggestions for further researches presented.

2 LITERATURE REVIEW

In the last two decades, many developing countries adopted modern frameworks to regulate subnational debt. This movement was motivated by the goals of fiscal responsibility and the improving of national accounts, just in a moment where the debt was a considerable threat for stability in newborn democracies, such as Argentina, Brazil, Mexico and Poland (DILLINGER; WEBB, 1999; MARTELL; GUESS, 2006).

We can separate these new subnational debt frameworks adopted in those countries in two categories, the first is the one adopted in Argentina and Brazil, based on rules created by law to access the credit market, the other is the one adopted in Mexico and Poland, expecting the regulation of the debt policy by private agents based on market criteria. The two models aim to deal with specific problems and can fail for specific reasons.

The market-based framework is the one that was adopted for subnational debt in countries like Poland and Mexico (MARTELL; GUESS, 2006). This system emphasizes no-bailouts, long-term credibility of the agents and interest rates that reflect risks, to promote lower costs for loans and fiscal discipline. There is an institutional regulation of debt policy, but the effective control is made by private commercial banks and lending institutions.

The other option, framework based on rules, emphasizes the requirement of regulatory controls to avoid any misbehavior. In its turn, this model can be subsetting in two, the first being based on bottom-up controls and the second being based on top-down rules. The bottom-up is centered in transparency to provide the good management of the debt while the top-down is driven by the control of subnational government by a national authority. This second model emerged in the context of absence of any regulations and the presence of market failures, that led to high indebtedness. One assumption of the top-down systems is that a private market is not suitable, at least in a first moment, for subnational debt, considering the past experience (MARTELL;

GUESS, 2006).

In the case of Argentina and Brazil, subnational debt suffered with the lack of any controls or common rules to the debt policy, that open a breach for opportunistic behavior of the political agents (DILLINGER; WEBB, 1999; BEVILAQUA, 2002). The raising debt in states brought macroeconomic instability for both countries and it led to establishment of fiscal rules and institutional controls of the subnational debt.

There are, however, challenges in making debt financing in top-down structures work properly, especially in developing countries, where fiscal and democratic institutions are in transition. These challenging factors are mainly driven by politics and such factors such as the vertical political alignment of the governor with the president, electoral cycles and political ideology.

The case discussed here is the Brazilian subnational debt policy that changed from an unregulated system, where states could issue bonds and borrow money from their directly controlled banks, to a top-down framework based on the control of state debt by the federal government through the National Treasury and national public banks.

The adoption of fiscal laws and new regulations over debt policy, between 1997 and 2002, established a new fiscal regime, empowering the central government on the issue of subnational debt (MORA, 2002; BEVILAQUA, 2002). In the particular case of Brazil, the central government is also the main creditor of internal loans (through public banks) and the guarantor of international contracts. For external loans, the approval of the Senate is also necessary and the loans are primarily undertaken with development banks, such as IBD and IRBD. Although the subnational debt is an exclusive matter of the Senate, the federal Executive can issue ordinances (ministerial decrees) to adjust minor rules concerning loans concession¹.

The attempt of federal governments to control of subnational debt can open the door to opportunistic behaviors motivated by politics. Noticeably, agents might be motivated in their debt management policies by partisan ties, electoral cycles and

¹ One example is the Ministry of Economics' ordinance 501, of 2017. It established a new metric to evaluate whether states can afford a new loan. This will be discussed in further chapters.

ideology. If these motivations exist, the system can fail to produce fiscal responsibility (ALT; S. S. ROSE, 2007).

As mentioned above, political factors can impact the success of a top-down model. Some of them are the vertical partisan alignment, the electoral cycles and ideological partisanship. There is different possible arrangements of vertical partisan alignment (BENTON; SMITH, 2017), but here it means that the presidential party and gubernatorial parties are vertically aligned. It is expected that agent in a lower level would acting coherently with government in an upper level. In counterpart, it can receive some benefits from this alignment.

The electoral cycles theory started with the conception that incumbents adjust the expansionary and contractionary periods of a cycling economy to the electoral calendar, in order to obtain political benefits (TUFTE, 1975; NORDHAUS, 1975; HIBBS, 1977). This concept now is more broad, considering other possible cycling instruments that the rulers are able to use for electoral benefits, such as taxing (ROGOFF; SIBERT, 1988; ROGOFF, 1987). Regarding subnational debt, the cycles presume that the electoral calendar drives the requests for loans. The success of this strategy also can interact with vertical partisan alignment if the loans approval are dependent on the federal government approval, as it is in Brazil.

Ideological partisanship means that right and left wing acts differently considering the debt policy, with the left more to raise spending and right to fiscal discipline. This conception is elaborated by Hibbs (1977) and is based on the Phillips Curve, a trade between inflation and unemployment. The left would prefer low unemployment and the right low inflation. To raise growth and decrease unemployment, it is expected that a leftist government would increase debt. Although this is a convincing argument, evidences from subnational studies in Mexico (BENTON; SMITH, 2017) show that opportunistic behavior, where all parties use cycling instruments, is more stronger than the ideological assumption.

Returning to Brazil, it is a well-known case study of a country that adopted top-down model to regulate subnational debt. The country experienced a huge impact on the

national currency due to the instability generated by unsustainable state debt. Governors used to have the option to borrow money from their own banks and also issue bonds. Large economies were the most indebted during the nineties, since these resources are more available for them (MORA, 2002). In the nineties, the federal government made an agreement with states, changing completely the policy framework.

It reinforced the power of the national executive over the states, which was already strong according to the literature (M. ARRETCHE, 2004). According to the Regional Authority Index from Hooghe, Marks e Schakel (2010), cited by M. T. S. Arretche e Schlegel (2014), Brazil is one of federations with less power concentrated in subnational entities, with values comparable to some unitarian countries. The index does not evaluate the subnational debt policy. If it was measured, Brazil would be even more concentrated. This dissertation aims to the interference of political factors over debt policy, with the assumption that the new debt framework is one more instrument that presidents have to counterpart governors.

3 STATE DEBT IN BRAZIL

3.1 STATES IN THE FEDERATE REPUBLIC OF BRAZIL

This section introduces the federative framework that is in place in Brazil. It shows the responsibilities and revenue's sources of the states, presenting the subnational governments as important providers of public services such as education, healthcare and public security.

Regarding the structure of the public administration, Brazil is a three-level federalist state¹, composed by 27 subnational units at the state level, with more fiscal attributions concentrated in the central government. According to OECD-UCLG, tax collection at federal level corresponds to 22.8% of GDP, while states collect 8.1% and municipalities 2%. When compared to other federations, state tax collection in Brazil is not too much neither too little concentrated in the central government, with a distribution similar to Germany or Switzerland. Considering all sources of revenues, such as transfers and fees, states' current revenues represent 11.7% of national GDP. This is presented in TABLE 1, where it is possible to see that Brazil is not an atypical federation when comparing federal and subnational tax revenue.

¹ The Union, 26 states and one federal district, and 5570 municipalities.

TABLE 1 – Tax collection by level of government, in selected federative states, as a share of total GDP

Country	Central	State	Local	State / Central
India	17.6%	10.6%		60.1%
Argentina	23.9%	12.1%	1.0%	50.4%
Canada	28.4%	12.8%	3.5%	45.1%
United States	19.7%	8.8%		44.6%
Russia	17.9%	7.6%	1.2%	42.4%
Germany	23.5%	9.1%	3.2%	38.8%
Brazil	22.8%	8.1%	2.0%	35.3%
Switzerland	21.1%	7.0%	4.3%	33.2%
Spain	22.0%	4.9%	3.3%	22.2%
Australia	26.5%	4.5%	0.9%	17%
Belgium	30.1%	4.7%	2.2%	15.7%
Mexico	13.6%	0.7%	0.2%	4.9%
Austria	27.5%	0.5%	1.2%	1.9%
South Africa	37.5%	0.3%	1.1%	0.7%

SOURCE: OECD-UCLG (World Observatory on Subnational Government Finance and Investment), latest year available. NOTE: There is no data for local governments in USA and India.

Regarding current expenditures, states spend the equivalent of 9.9% of national GDP. The 1988 Brazilian Constitution separates the responsibilities of each level of government in regulation and provision of public services². Regulation is often a matter of the Union, while provision is divided among the governments in the three levels.

Regarding the provision, states in Brazil have many constitutional attributions in keeping essential public services, such as education, healthcare, public security and the prison system. In education, states are mainly responsible for high school education. According to INEP³, a federal institute that monitors education, 84.6% of all high school students in Brazil studied in a state school in 2018⁴. In primary education, this percentage is 26.1% and in pre-school it is only 0.6%. In colleges, 6.7% of undergraduate students are enrolled in a state university.

The role of state governments is also very high for healthcare where states

² For example, basic education is provided by states and municipalities whilst a national curriculum is decided at federal level.

³ Data from School Census and Tertiary Education Census.

⁴ Excluding special schools for partially or fully uneducated adults

TABLE 2 – Taxes in Brazil by level of government that collects them

Tax	Incidence	Collection	Rate
IE	Exports	Federal	varies
IGF	Wealth	Federal	not regulated
II	Imports	Federal	varies
IOF	Financial operations	Federal	varies
IRPF	Income, individuals	Federal	up to 27.5%
IRPJ	Income, companies	Federal	up to 25%
ITR	Rural properties	Federal	0.03% - 20%
ICMS	Commerce and services	State	varies
IPVA	Vehicles	State	1% - 4%
ITCMD	Heritage and donations	State	1% - 8%
IPTU	Urban property	Municipality	varies
ISS	Services	Municipality	varies
ITBI	Transfers of properties	Municipality	varies

SOURCE: 1988 Constitution, National Treasury and JusBrasil.

provide middle and high complexity services. In 2018, among public assistance in ambulatory care, 96.6% of high-complexity, 24.6% of middle-complexity and 2.6% of basic assistance were provided by state hospitals and clinics. Furthermore, 67.3% of high-complexity and 48.8% of middle-complexity hospitalizations occurred in state institutions ⁵. Finally, in public security, states' role is essential, since the civil and the military police are under their control and they hold almost all prisons - 99.9% of prisoners are held in state prisons⁶ and Brazil has the third largest incarcerated population after China and US⁷. Although independent from the governor, criminal justice is financed by state budgets ⁸.

To finance the public sector, the country obligates its citizens and firms to pay 12 different taxes. Of these, three are collected by states. They are charged over the circulation of goods and services (ICMS), vehicles (IPVA) and inheritance (ITCMD). The entire list of taxes is listed in TABLE 2.

Tax collection in Brazilian states has a high and positive linear correlation with

⁵ Data from Datasus, Ministry of Healthcare.

⁶ Data from Infopen, in June, 2017.

⁷ Data from World Prison Brief, in 2018.

⁸ In the Federal District, the budget of the police and the justice is paid by the federal government.

GDP per capita⁹. The Pearson's r between GDP per capita and the share of the tax in state current revenues is 0.64 for ICMS, 0.71 for IPVA and 0.80 for ITCMd¹⁰.

To compensate this tax framework that benefits the richest states, part of taxes collected at the federal level is distributed to states through transfers. The major transfers fund, the State Transfers Fund (FPE), is a classical non-matching grants fund and distributes, by law, 85% of its resources to states from Center-West, North and Northeast and 15% to states from South and Southeast. Inside these two groups, area, population and the inverse of GDP per capita are the criteria. The resources of the fund came from tax over income and industrial production, both federal, and the percentages received by each state is fixed since 1989¹¹. The fund is a distorted solution to the imbalanced framework and probably reflects the power distribution in the Congress, where the representation of small states is higher. In practice, if we exclude the Center-West, the poorest states are who receive more of it, with the state of Bahia earning the largest portions, 9.4%. In comparison, São Paulo gets only 1% and Rio de Janeiro 1.5%. In 2012, the Supreme Court forced the Congress to change the criteria of distribution. However, the Complimentary Law 143 of 2013 made official the old coefficient, of 1989, with small changes in some cases of excess of resources in the fund.

There are also specific matching funds for education (Fundeb, formerly Fundef) and healthcare (FNS). Royalties also constitute an important part of states' revenue, since Brazil is a world major producer of natural resources. There are six royalties that are received by states and municipalities, three for oil production¹² and three different funds to mitigate the impacts of hydroelectric and mining production in municipalities¹³. States receive transfers and compensation for oil royalties only. There is different rules for distribution for oil extraction contracts before and after 2012, regarding the

⁹ Data from Siconfi (National Treasury) and IBGE. The year is 2017 for tax revenue and 2016 for state GDP.

¹⁰ Distrito Federal was excluded from this account because it accumulates both municipal and state taxes and its GDP per capita is disproportionately higher than other states because it hosts the capital, Brasília. The correlation with ICMS, IPVA and ITCMd including Distrito Federal is 0.40, 0.57 and 0.57, respectively.

¹¹ Regulated by Complimentary Law 62 of 1989.

¹² Two transfers fund for all municipalities and states and one special payment for top producers.

¹³ One specifically for Itaipu Dam, one for hydroelectric

percentages received by the producer states is higher than non-producers.

Most states (17 of 27) rely more on their tax collection as compared to their other sources of revenue. Tax revenue represents 65.3% of total of Brazilian state revenues, compared to 21.6% from transfers. The ICMS is the main tax collected in states, representing on average 53% of state current revenues, ranging from 14% in Acre to 64% in São Paulo. It is similar to a value-added tax and it is charged at the destination (not in the state of origin), being more collected in states with more complex and developed economies, with higher GDPs per capita. According to the 1988 Constitution¹⁴, states can set their own ICMS percentage. However, there is a law of 1975¹⁵, still in operation, that stipulates that specific tax exemptions have to be unanimously approved by Confaz¹⁶. Any violation to this rule can lead to an overruling by the Supreme Court, which has a long history in sustaining the sovereignty of the Confaz over this matter¹⁷.

In its turn, the IPVA corresponds to 4.6% of current revenues (from 1.1% in Acre to 7.3% in São Paulo) and charges the owners of vehicles such as cars, motorcycles and trucks. Owners of aircrafts, helicopters and watercrafts do not have to pay IPVA. Finally, the ITCMd focus on inheritances and represents only 0.8% of states' tax receipts. This tax is only a significant source of revenue in three states (Rio de Janeiro, São Paulo and Minas Gerais), where it has a share of revenues higher than 1%.

Other tax sources include the income tax on state civil servants incomes¹⁸ (3.8% of the revenues) and some fees classified by the National Treasury as tax revenue (2.7%). In the Distrito Federal, where there is no municipal government, city-level taxes represent 4.8% of the district revenue and are collected at state-level. The data are presented here are displayed below in the graph FIGURE 1 and in the table TABLE ??.

¹⁴ Article 55

¹⁵ Complementary Law 24, of 1975.

¹⁶ A council composed by the Ministry of Economy and the 27 state secretaries of Finance.

¹⁷ More recently, in 2012, the justice of Supreme Court, Gilmar Mendes, wrote the legal binding precedent (Súmula Vinculante 69, from 2012). It summarized the understanding made by the court sustaining the veto power of each state in Confaz.

¹⁸ The income tax is federal, but the Constitution does not allow direct taxation of one level of government over another. Therefore, income tax collected over state personnel is directed to states.

TABLE 3 – Current revenues composition in Brazilian states in 2017

State	Cur. rev.	GDPpc	Tax	ICMS	IPVA	IR	ITCD	Other	Transf	Others
SP	R\$ 211.5	R\$ 43.9	76.1%	64.2%	7.3%	0.0%	1.4%	3.2%	9.9%	13.9%
SC	R\$ 33.7	R\$ 35.9	73.4%	60.7%	4.9%	4.7%	0.8%	2.2%	15.8%	10.8%
MG	R\$ 85.9	R\$ 25.9	72.3%	56.4%	5.8%	5.4%	1.0%	3.8%	17.8%	9.9%
GO	R\$ 38.4	R\$ 27.5	72.2%	58.2%	3.5%	3.8%	0.8%	5.8%	14.5%	13.3%
RS	R\$ 57.1	R\$ 35.9	72.0%	58.5%	4.4%	4.9%	0.9%	3.2%	15.6%	12.5%
RJ	R\$ 73.4	R\$ 37.1	69.0%	53.7%	4.2%	5.6%	1.8%	3.8%	9.3%	21.7%
PR	R\$ 56.6	R\$ 35.5	68.2%	55.9%	6.1%	5.3%	0.8%	0.2%	18.1%	13.6%
MS	R\$ 15.1	R\$ 35.1	67.0%	54.4%	4.0%	6.3%	0.9%	1.5%	23.6%	9.4%
DF	R\$ 24.5	R\$ 78.9	64.7%	41.8%	4.3%	12.2%	0.6%	5.7%	17.4%	17.8%
ES	R\$ 18.3	R\$ 26.4	63.4%	53.0%	2.8%	3.6%	0.4%	3.7%	27.2%	9.4%
PE	R\$ 32.3	R\$ 17.4	57.8%	47.0%	3.4%	4.4%	0.2%	2.8%	32.8%	9.3%
BA	R\$ 46.6	R\$ 17.0	57.7%	47.7%	2.6%	4.4%	0.3%	2.8%	30.8%	11.5%
MT	R\$ 24.1	R\$ 38.5	57.5%	48.8%	2.7%	4.8%	0.4%	0.8%	19.6%	23.0%
CE	R\$ 26.4	R\$ 15.4	56.5%	45.5%	3.3%	4.1%	0.4%	3.2%	35.6%	8.0%
AM	R\$ 17.6	R\$ 21.6	55.0%	49.2%	1.9%	3.4%	0.1%	0.5%	31.6%	13.4%
PA	R\$ 26.1	R\$ 17.2	51.7%	41.6%	2.2%	4.7%	0.1%	3.1%	35.2%	13.1%
RN	R\$ 13.3	R\$ 17.4	51.6%	41.8%	2.8%	4.3%	0.1%	2.5%	42.8%	5.6%
PB	R\$ 13.3	R\$ 15.0	49.2%	40.7%	2.5%	3.4%	0.2%	2.4%	42.5%	8.3%
AL	R\$ 10.7	R\$ 15.2	46.2%	38.5%	2.7%	4.3%	0.1%	0.6%	45.5%	8.3%
RO	R\$ 9.4	R\$ 22.5	45.6%	37.4%	2.9%	4.0%	0.1%	1.2%	40.4%	13.9%
MA	R\$ 18.5	R\$ 12.4	44.2%	36.3%	1.9%	4.0%	0.1%	1.8%	47.1%	8.7%
PI	R\$ 11.5	R\$ 13.1	44.0%	35.2%	2.5%	3.6%	0.1%	2.5%	47.1%	8.9%
SE	R\$ 9.9	R\$ 17.4	41.0%	33.9%	2.2%	3.7%	0.3%	0.9%	48.6%	10.3%
TO	R\$ 10.1	R\$ 21.2	35.9%	26.4%	2.1%	5.7%	0.2%	1.5%	50.8%	13.2%
AC	R\$ 6.2	R\$ 17.4	25.4%	19.3%	1.1%	4.6%	0.2%	0.3%	66.0%	8.6%
RR	R\$ 4.3	R\$ 22.5	24.2%	19.1%	1.4%	2.6%	0.0%	1.1%	65.1%	10.7%
AP	R\$ 5.7	R\$ 19.6	20.1%	14.1%	1.2%	4.3%	0.0%	0.6%	68.0%	11.8%
Brazil	R\$ 900.6	R\$ 29.9	65.3%	53.1%	4.7%	3.8%	0.8%	2.8%	21.6%	13.0%

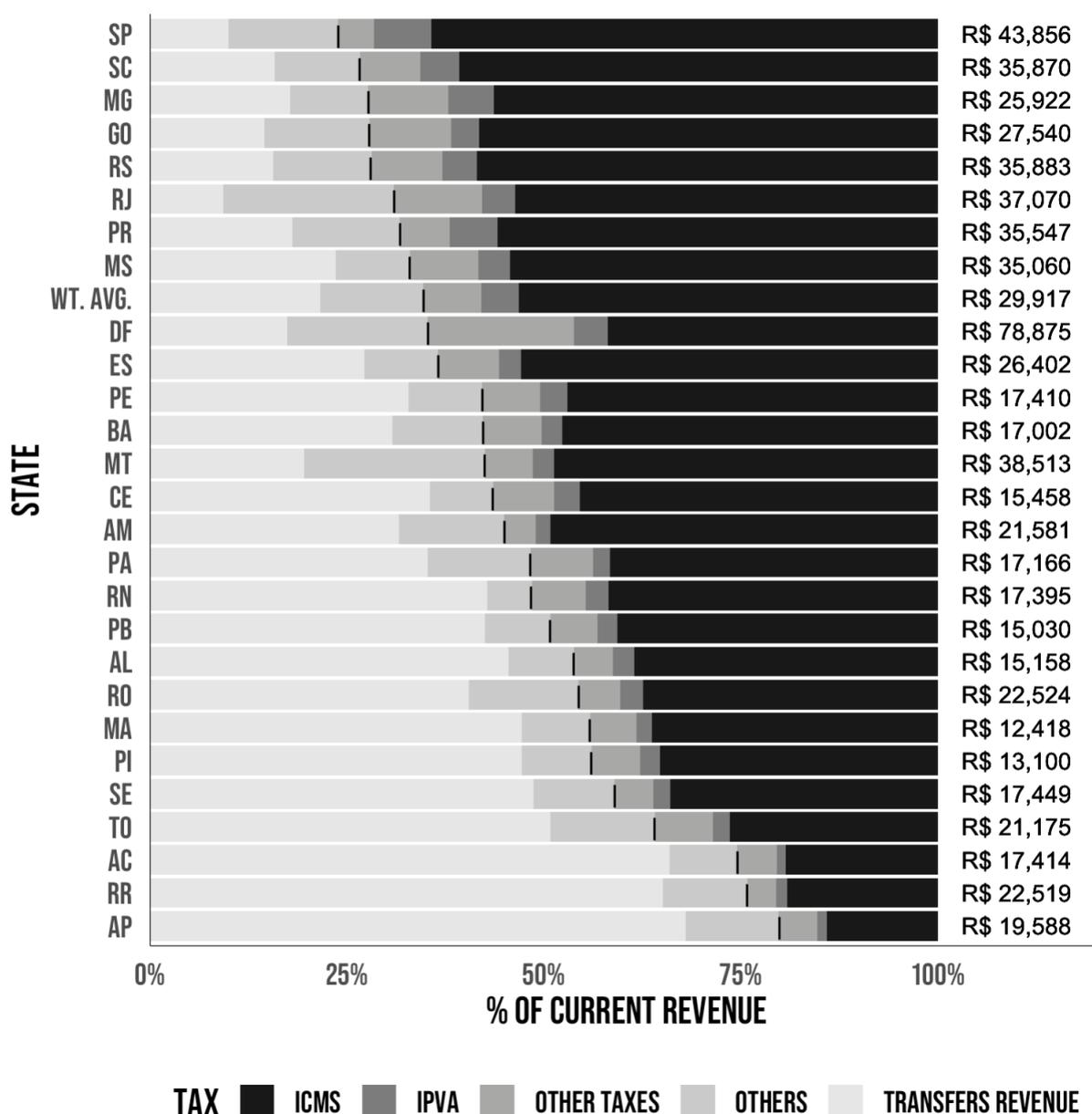
SOURCE: Siconfi, National Treasury and IBGE. NOTE: GDP per capita data is from 2016. Current revenue is in billions and GDP per capita is in thousands of Reais.

Considering the size of population and economy, Brazilian states are quite diverse. The largest unit, the state of São Paulo, has 45 millions of inhabitants¹⁹ (more than Argentina) and holds 31.8% of the national economy²⁰. In contrast, the three smallest states have less than 1 million citizens (Acre, Amapá and Roraima). Even

¹⁹ Estimates of 2019 from IBGE attests that São Paulo has 45,919,049 inhabitants.

²⁰ Also estimates from IBGE, in 2016.

FIGURE 1 – COMPOSITION OF STATES REVENUES IN 2017



SOURCE: Siconfi, National Treasury

NOTE: GDP per capita of 2016, deflated to 2019, is indicated on the right. The - "markers signalize the division between tax collection and other sources. "WT. AVG." represents the weighted average of the composition with the total revenue as the weight.

being very small, these three states have each eight representatives in the lower house (compared to 70 of São Paulo) and three senators (the same as all other states).

It is possible to define Brazil as a country that has its economy concentrated

in few states²¹ while the political power is more fragmented among the members of federation, with an over-representation of smaller states. This situation increases the tensions between states in the national-level arenas and is crucial to understanding the history of bailouts of state debt in Brazil²².

Regarding subnational debt policy, the power of the federal government towards it has varied over time. In the military dictatorship (1964-1985), states witnessed a stricter control of their fiscal accounts. They could not set tax rates and transfers to subnational units were at the discretion of the federal government. Therefore, states resorted to debt to circumvent the situation. After the transition to democracy in 1985 and the new constitution of 1988, state governors were used to having a large scope to contract loans and issue bonds. This led to rising inflation and risks to public sector solvency, exemplifying how the lack of control over the debt policy is a major threat for a developing economy.

In this context, Brazil drew attention of scholars in the subnational debt literature (RODDEN, 2002; 2006; DILLINGER; WEBB, 1999), also because the country switched policies in the late nineties, establishing fiscal rules and increasing the power of the federal government to manage state debt. In the period, the questions raised were whether the new framework could improve state accounting and bring fiscal responsibility (RODDEN, 2002; MORA, 2002; BEVILAQUA, 2002).

In fact, after two decades, the situation improved with the subnational debt as a share of the national GDP dropping from 17.3% in 2003 to 7.9% in 2014. However, despite a trend of improving fiscal solvency in state debt after the reforms, the debt-GDP ratio worsened after 2015, increasing almost 20%. The pressures of an increasing payroll was one of the primary reasons for the bad situation of state accounts. In 2017, the state of Rio de Janeiro, very dependent on oil resources, asked the federal government for a bailout. The Union came to help, but required an austerity plan by counterpart. In Rio Grande do Sul, the government was not able to pay public servants

²¹ 50% of the economy lies in the neighbor states of São Paulo, Rio de Janeiro and Minas Gerais.

²² This relationship will be explained in the next section.

and its debt charges with the federal government. Between 2016 and 2018, both states were controlled by MDB, the same party of the president Michel Temer.

Given tax structure of Brazilian federalism, fiscal situation of states is very sensitive to downturns in the economy, since they rely on revenue from value-added taxes. Even states more dependent on transfers can be affected because the transfers fund is based primarily on the revenue received from industrial production and income taxes.

On the other hand, as mentioned, states have to provide essential public services as education, healthcare and public security and can not cut it or fire servants in difficult times. A chronic fiscal deficit and an uncontrolled debt burden can directly affect the provision of these services and public investments. Ultimately, it also affects the human development as the quality of the education and the healthcare drops.

3.2 HISTORY OF STATE DEBT IN BRAZIL

3.2.1 The beginnings of state financing

In the period before the military regime (1964-1985), there were no national regulations over state debt policy and this question was relegated to the governorship and state assemblies. After the 1964 *Coup d'État*, the military regime started a new agenda of reforms, noticeably the tax reform which greatly affected public finances (Tributary Law of 1965²³) and the administrative reform (Administrative Law of 1967²⁴). These changes modified tax policy supposedly to avoid over-taxation of the productive sector, since Union, states and municipalities taxed production (VARSAÑO, 1996).

The tax over movement of goods (ICM, predecessor of ICMS) was established as the main state tax and was collected more intensively in more developed states as it is today. To compensate the discrepancy between states, a national transfers fund was created in 1968²⁵, although the criteria of distribution was discretionary to the federal government. This new fiscal structure also reduced state autonomy because states were not allowed to set their own tax rates.

According to Mora (2002), in this period, governors used borrowing as an alternative to the loss of fiscal autonomy. Furthermore, the introduction of monetary correction of contracts in Brazil allowed the growing of public bond market for subnational governments (BEVILAQUA, 2002). This increase in indebtedness led to the first national regulation of lending policy in 1975, with the Senate Resolution 62 of 1975, that set a ceiling cap for state debt of 70% of previous year's revenue. There were more three regulations (one issued by the Senate and two by the Central Bank) until the end of the military regime.

At the time, the regulations also served as an additional instrument of domination of the authoritarian regime, since the discretion of the credit distribution was concentrated under the control of the Union (MORA, 2002). However, on the other hand,

²³ According to Dias (1968), this reform was composed by the new Federal Constitution of 1967, the Decree-Law 199 of 1967 and the Decree-Law 200 of 1967.

²⁴ Constitutional Amendment 18, of 1965. Palácio do Planalto.

²⁵ Complementary Act 40 of 1968. Palácio do Planalto.

the regulation allowed a path - even if it was under federal surveillance - to increase indebtedness.

The situation changed in the decade of 1980, when debt crises and episodes of hyperinflation hit Latin American countries, especially after the Mexican moratorium in 1982. It prompted the International Monetary Fund (IMF) to pressure national governments to limit spending and debt contraction. This has brought less availability of international credit and increased the use of instruments in Brazil such as government bonds issued by the states and borrows from state banks to their own controllers.

3.2.2 The three federal bailouts (1989, 1993 and 1997)

In 1989, in fourth year of the new democratic regime, the federal government made the first bailout to restructure state debt under Law 7976 of 1989. This law covered the refinancing of foreign debts and debts made in federal programs in 240-month payments, with weekly installments (MORA, 2016). This external debt was contracted by Aviso MF 30/1983, when the Union offered bridging loans to cover the absence of external credit for subnational entities. The debt was converted into long-term debt with the treasury, with no counterpart. As Rodden (2006) points out, this reinforced the idea that the federal government is the final responsible for state debt, providing incentives to states to increase indebtedness.

In 1993, Law 8727 allowed a new bailout in state debt, mainly with debts contracted by states with Caixa Econômica Federal (or simply, Caixa), the federal savings bank. The deal reduced the state's immediate debt service obligations and allowed for further debt expansion. Again, no counterparts were required, reinforcing negative state behaviors and bailout expectations.

After the Real Plan²⁶, the state budget crisis worsened as these state bonds were fixed at the national interest rate (with an additional risk prime for state's creditors). In the first tenure of FHC government (1994-1998), a new scenario of low inflation and

²⁶ The monetary plan started in 1994 that aimed successfully to attack hyperinflation. The plan was implemented during the Itamar Franco (independent, aligned with PMDB) government when Fernando Henrique Cardoso (FHC) was the Finances Minister.

high interest rates increased the debt-GDP ratio from 8% to 14%. The states of São Paulo, Rio Grande do Sul, Minas Gerais and Rio de Janeiro, all of them owners of large public banks²⁷, were the most indebted states in that period (MORA, 2016).

The critical condition of the state debt led to a negotiation with the federal government in which the Union agreed to take on the debts of states and give a new term for repayment to the states with subsidised interest rates. According to Bevilaqua (2002), the federal government was reluctant in making an extended deal. However, the political impact of a no-bailout scenario could be very high to the incumbent coalition, given that the worsening of the situation was caused by the interaction of the absence of fiscal discipline by states and the side effects of the Real Plan. As pointed by the author, the president FHC (PSDB) was under pressure because the largest states in population that were coincidentally ruled by the governors allied with the president's governing coalition were the ones in the worst situation and they would receive most of the bailout benefits. In that period, São Paulo, Minas Gerais and Rio de Janeiro were governed by PSDB, while Rio Grande do Sul was governed by an allied party, the PMDB.

In this negotiation, differently than what occurred in the past, the federal government demanded counterparts. Governors and the president were allowed to run for reelection²⁸ but they had to privatize state banks and implement fiscal discipline. In the agreement, the states should repay part of the debt in cash and the rest in up to 30 years with interest rates varying from six to nine percent *per annum*, depending on the initial amount paid in cash plus the inflation rate.

Most states (more precisely 25 of 27²⁹), joined the program between 1997 and 1999, with 22 of these 25 states agreeing to pay 20% of debt in cash and negotiating the remainder at the lowest rate of six percent (MORA, 2002). In order to be able to make the payments, privatizations of state-owned companies were carried out by states, mainly suppliers of public services like water and energy.

²⁷ Banespa and Nossa Caixa in São Paulo, BEMGE in Minas Gerais and Banerj in Rio de Janeiro

²⁸ Reelection was allowed by Constitutional Amendment 16, of 1997. Approved by the Congress during the discussions of the new bailout.

²⁹ The only exceptions are Amapá and Tocantins, two small in population and recently created northern states.

3.2.3 The three bailouts in data

After the three bailouts mentioned above, the federal government took on 666 billion reais (in 2019 values) in debt (see TABLE 4) from states. The state of São Paulo, the most populous and the richest in the federation, got 45.7% of the total amount of the bailout, followed by Minas Gerais (10.4%), Rio Grande do Sul (9.2%) and Rio de Janeiro (8.2%). These four states, despite representing 47% of the Brazilian population³⁰, earned 73.5% of the bailout. The Northeast, with 29% of the population, received only 13.2%. In relative terms, the four richest states benefited 3.4 times more than the poorest³¹ region in Brazil.

³⁰ According to the 1991 Census, from IBGE.

³¹ Northeast was the poorest region in GDP per capita in 1991. Data also from IBGE, collected from Ipea Data.

TABLE 4 – Total amount of the three state bailouts, in millions of Reais of 2019

State	Region	1989 bailout	1993 bailout	1997 bailout	Total	Share
DF	CW					0.0%
GO	CW	2,966	15,290	6,464	24,720	3.7%
MT	CW	1,741	8,260	3,891	13,893	2.1%
MS	CW	1,550	5,250	4,358	11,158	1.7%
Center West		6,257	28,800	14,713	49,771	7.5%
AC	N	53	2,060		2,113	0.3%
AM	NE	132	6,281	575	6,988	1.0%
AP	N					0.0%
PA	N	177	3,115	1,324	4,616	0.7%
RO	N	17	1,092	710	1,819	0.3%
RR	N		281	35	316	0.0%
TO	N		445		445	0.1%
North		379	13,274	2,644	16,298	2.4%
AL	NE	539	3,912		4,450	0.7%
BA	NE	2,702	17,165	4,607	24,475	3.7%
CE	NE	3,763	4,510	550	8,823	1.3%
MA	NE	1,607	8,378	1,171	11,155	1.7%
PB	NE	847	5,651	1,284	7,782	1.2%
PE	NE	319	7,797	786	8,902	1.3%
PI	NE	515	4,715	1,201	6,431	1.0%
RN	NE	455	3,419	275	4,149	0.6%
SE	NE	126	3,029	1,865	5,021	0.8%
Northeast		10,873	58,577	11,738	81,188	12.2%
PR	S	1,146	6,919	2,508	10,573	1.6%
RS	S	3,455	12,003	45,594	61,052	9.2%
SC	S	3,108	3,044	7,487	13,639	2.0%
South		7,709	21,966	55,589	85,263	12.8%
ES	SE	459	2,869	2,073	5,402	0.8%
MG	SE	1,083	11,431	57,161	69,676	10.4%
RJ	SE	4,538	9,112	40,973	54,623	8.2%
SP	SE	19,009	42,780	242,844	304,633	45.7%
Southeast		25,089	66,192	343,051	434,333	65.1%
TOTAL		50,308	188,810	427,736	666,853	100.0%

SOURCE: table adapted from Bevilaqua (2002), using data from Central Bank of Brazil, Finances Ministry, *Gazeta Mercantil* and *O Estado de São Paulo*. NOTE: Original values were deflated to real values of 1998, using IGP-DI. In this table, the values were updated using the same indicator to January, 2019 values. Data from Bevilaqua (2002), differently from Mora (2002), presents no bailout for Distrito Federal.

According to Rodden (2002), vertical imbalance, when states rely on transfers rather than their own taxes, is a key factor for an unsustainable subnational debt and consecutive bailouts. In the case studied here, the states that were less dependent on

transfers threatened the fiscal stability, since they had higher success in the existing debt sources. Therefore, these states received largest amounts in bailouts.

In the Brazilian federation, some states, like São Paulo, Minas Gerais, Rio de Janeiro and Rio Grande do Sul, are too big to fail. The federal government, aiming macroeconomic stability and the political side-effects in the future elections, is pressured to bailout them. This is even more sensitive when there is partisan link between governor and the president. In TABLE 4, it possible to observe that, in the three bailouts, the presidential party was the most benefited. Controlling by other factors using a linear regression, Bevilaqua (2002) shows that there is a significant effect of vertical partisanship alignment and bailout amounts in 1997.

TABLE 5 – Share of the three state bailouts by incumbent party

Party	1989 Bailout	1993 Bailout	1997 Bailout
MDB*	98.04%	42.63%	15.75%
PTC*	1.07%		
PSB	0.63%		
DEM*	0.25%	29.56%	1.35%
PSDB		2.39%	81.50%
PDT		12.70%	0.59%
PT			0.48%
PSB			0.18%
PP*		1.09%	0.14%
PTB		8.98%	
PSC		2.07%	
PDC		0.58%	

SOURCE: adapted from Bevilaqua (2002), with data collected by author from different sources.
NOTE: president's party is indicated by grey boxes with bold text.

Furthermore, given that smaller states (in terms of population and GDP) represents the majority in the Congress, is expected that the bailout would be extended to all federative units. This repetitive game occurred three times and ended with a large renegotiation that included the building of fiscal rules and major institutional reforms in the debt policy. Although it is not possible to measure the social effects of the bailouts, they could have had a negative impact over the regional inequality in Brazil, considering that the richest states received more benefits with the subsidised interest rates of that

renegotiated debt.

3.2.4 The new framework under fiscal rules

The whole process of renegotiation brought two important changes that were the introduction of fiscal laws in the LRF (Fiscal Responsibility Law) of 2002³² and new rules for state loans approved by the Senate³³. The path to get new debt was completely reshaped and governors now have less autonomy in that policy, since the only option to inebting is banking loans that demand the authorization of the federal government.

Before this new framework, governors used to have two main possibilities to expand indebtedness: issue government bonds and take loans by state owned banks. These possibilities represented 38% and 21% of total state debt, respectively, in 1996, shortly before the renegotiations. In average, it represented a total debt per capita of R\$ 2.060 for public bond debt and R\$ 1.344 for debts with state banks, while total per capita debt was R\$ 6.437. This data, deflated to January, 2019 values, is originally from National Treasury and was adapted from Mora (2002). It is presented below, in table TABLE 6. A Principal Component Analysis (PCA) was made to reduce the dimensions of the data presented in that table. In that analysis, available in Appendix G, the largest debtors form a cluster which variation is most explained by state debt and public bonds.

³² Complementary Law 101 of 2002.

³³ Senate Resolution 78 of 1998. Important to cite in advance that regulating state debt is a constitutional attribution of the Brazilian Senate.

TABLE 6 – State debt by source in October, 1996

State	Total (in bi)	Per cap.	Bonds	External	STN	Federal	State	Floating	Others
SP	R\$432.8	R\$12,685	31%	6%	14%	0%	44%	4%	0%
AC	R\$5.1	R\$10,505	0%	0%	60%	13%	0%	27%	0%
MS	R\$19.5	R\$10,105	10%	18%	48%	0%	3%	11%	9%
MT	R\$22.4	R\$10,003	6%	13%	59%	9%	0%	8%	4%
GO	R\$43.2	R\$9,558	12%	9%	62%	9%	0%	8%	0%
RO	R\$11.0	R\$8,940	0%	3%	21%	18%	13%	43%	2%
RS	R\$78.4	R\$8,134	61%	5%	30%	0%	0%	4%	0%
MG	R\$101.4	R\$6,079	64%	6%	17%	1%	6%	5%	0%
RJ	R\$69.9	R\$5,217	62%	2%	25%	5%	4%	2%	1%
SC	R\$23.9	R\$4,907	25%	9%	38%	3%	16%	9%	0%
SE	R\$7.8	R\$4,784	18%	3%	64%	5%	0%	9%	0%
PI	R\$12.3	R\$4,589	0%	6%	65%	15%	0%	14%	0%
ES	R\$12.8	R\$4,562	7%	13%	40%	7%	0%	32%	1%
AM	R\$10.8	R\$4,538	0%	15%	78%	2%	0%	5%	0%
TO	R\$4.7	R\$4,494	0%	7%	13%	15%	0%	65%	0%
AL	R\$8.9	R\$3,394	33%	3%	64%	0%	0%	0%	0%
PB	R\$10.9	R\$3,301	4%	13%	83%	0%	0%	0%	0%
AP	R\$1.2	R\$3,212	0%	4%	0%	39%	0%	56%	0%
BA	R\$39.9	R\$3,185	13%	13%	62%	11%	1%	0%	0%
DF	R\$5.7	R\$3,149	0%	10%	0%	64%	20%	7%	0%
MA	R\$16.0	R\$3,070	0%	12%	88%	0%	0%	0%	0%
PR	R\$28.7	R\$2,984	10%	21%	39%	7%	18%	6%	0%
PE	R\$22.0	R\$2,969	19%	11%	58%	8%	0%	4%	0%
RN	R\$6.3	R\$2,445	0%	4%	85%	4%	0%	7%	0%
CE	R\$16.6	R\$2,433	4%	14%	69%	8%	0%	5%	0%
RR	R\$0.4	R\$1,637	0%	0%	100%	0%	0%	0%	0%
PA	R\$8.3	R\$1,501	0%	28%	59%	9%	0%	4%	0%
Brasil	R\$1,021	R\$6,473	32%	8%	30%	3%	21%	6%	0%

SOURCE: National Treasury, adapted from Mora (2002). NOTE: The values were deflated to Reais of January, 2019 using IGP-DI. Total amounts are in billions of Reais.

Considering each debt option presented in TABLE 6, state public bonds (column **Bonds**) were issued by state governments and in practice functioned as a monetary mechanism for governors, impacting national inflation. The interest rates of these bonds were usually higher than the national bonds, due to the increased risk (RODDEN, 2002). In a first moment, bond's issuance by states was suspended, and nowadays it is completely banished. Large economies were benefited by this resource, considering that their bonds were more valuable than bonds from small states. The three states that used the most resource were Minas Gerais (64% of total debt in 1996), Rio de Janeiro (62%) and Rio Grande do Sul (61%). After São Paulo, they were the largest debtors in

total amounts.

The second option mentioned, the loans from state banks (column **State** in the table), consisted in loan contracts signed between the state government and its own banks. Due to office-seeking pressures by the incumbent coalition, it is hard to believe that the terms of these contracts followed common market-based criteria and were not politically unbiased. Descriptive analysis, shows that state banks used to have fiscal deficits, significantly larger in electoral years (GAMA NETO, 2011). It is a small evidence of electoral cycles were present in that source of new debt.

Again, lending money from state banks was a common practice in some of the country's most developed states, specially in São Paulo, where it represented 44% of total debt. The state of São Paulo had two big public banks, Nossa Caixa and Banespa, both of them were heavily indebted in this period. In 1996, the FHC government started a financial reform³⁴ that resulted in the privatization most of those banks. Nowadays, only five states have public banks³⁵ and they are all semi-public companies. Moreover, the existing banks, from states or from the federal government can not lend to their controllers. It is classified as an administrative crime by the LRF and rulers can be judicially charged or even impeached for doing that.

In TABLE 6, STN represents the amounts from previous agreements between states and the Union. Globally, it was 30% of state debt in 1996 (value that will increase substantially after 1997 bailout) and concentrated in that moment in small states from North and Northeast. Another option common for small states was the floating debt, that consisted in emergency loans to cover some basic payments. For that, the governor had to request the approval of the state assembly. This option was the one with higher interest rates but it was only a small percentage of the global state debt (6% of total), reaching 65% in Tocantins and 56% in Amapá, two of the least populated states.

Loans from internal public banks (**Federal**, in the table) and external financing

³⁴ Provisional Measure 1,514 of 1996, that created the Proes, a program to reduce states' participation in the Brazilian banking system

³⁵ Banese in Sergipe, Banpará in Pará, Banrisul in Rio Grande do Sul, Banestes in Espírito Santo and Banco de Brasília in Distrito Federal

institutions (**External**) were not the first option for states. Together, they represented in 1996 just 11% of debt. However, they will assume, as it is presented in the last section of this chapter, the main role in state debt policy and the only way contract new loans.

With the changes made in the nineties, state bonds, state banks loans and floating debt were extinct. The power of the national executive power was especially strengthened during the negotiation of debts due to this resolution. It gave the exclusivity of the approval of the internal indebtedness and the prior approval of the external loans to the STN (Secretariat of the National Treasury), a body subordinated to the extinct Ministry of Finance (ARVATE; BIDERMAN; MENDES, 2008).

The limitations considerably diminished governors' discretion over the state budget, which consequently affected their ability to engage in electoral cycles. This occurs because all instruments find the federal government as a possible veto player³⁶. With the new framework, the ability to use subnational debt as an electoral cycle instrument is ultimately on the hands of the president.

³⁶ This relationship will not be studied in this dissertation, but it will be discussed as a topic for further research in the Conclusions.

3.3 THE POLITICAL VETO POINTS OF SUBNATIONAL DEBT IN BRAZIL

The new subnational debt policy in Brazil, after the introduction of fiscal laws and top-down rules, restricted the scope of instruments used by the governors. It also conditioned the securing of new loans by requiring the authorization of the National Treasury. Since then, the two possibilities for receiving new resources are internal loans from national financing institutions, such as Banco do Brasil, BNDES and Caixa, and external loans from international financial institutions, mainly the multilateral organizations of the IDB and IBRD. They follow different institutional paths from the request until the signature of the contract with the approval of an external loans taking longer (43 steps compared to 17). The complete list of steps can be found in Appendix K.

The first moment of negotiation of a new loan is the agreement between the state government and the financial institution. It is possible to access exactly which information each bank use to evaluate the contracts. The federal laws and regulations does not establish that governors should have the authorization of the state legislative (Assembleia Legislativa), but this authorization is required in all states. Each state has a constitution, subordinated to the 1988 Constitution, and the text of all of them express that the legislative should authorize the loans. The constitutions of Rio de Janeiro, Rio Grande do Sul, Santa Catarina, São Paulo, Sergipe and the Federal District mention only the need for the approval in external operations. In Roraima, the legislative has a proposition position in internal loans. Most of constitutions express the legislative can regulate the limits of state debt³⁷.

In Brazilian states, the relationship between Executive and Legislative is marked by the preponderance of the governors over the assemblies (SILVA; BARRIENTOS, 2012; LIMAS TOMIO; RICCI, 2012). The state executive has reactive powers (the veto) and proactive powers, such as the provisional measure and the delegated law³⁸ (SILVA; BARRIENTOS, 2012). At state level, the executive has an average approval rates about twice larger than the legislative(LIMAS TOMIO; RICCI, 2012). Governors also hold the

³⁷ In many different states, the text about debt regulation was written with the exactly same words and was very generic. For all states, other regulations can be detailed in law.

³⁸ They are both decrees or normative acts that can be converted in law.

budget initiative observed at the federal level by Figueiredo e Limong (1999), as pointed out by Silva e Barrientos (2012). There is no quantitative study of the approval of loans, but possibly the strength of governor is valid too in this issue³⁹.

After the approval of the state legislative, states request the loan authorization of STN. For internal contracts with guaranteed by the federal government, states must request from the National Treasury (or STN) a PVL (Request for Limits Verification) to proceed with the contract. The process can be paralyzed in several steps for correction and presentation of documents. In case of adjustments, states generally have sixty days to fix it, otherwise the contract is rejected. The National Treasury makes this technical analysis of the application while the final decision is from the Ministry of Economics. Since 2019, the special secretary of finance can authorize the contract on behalf of the minister⁴⁰.

It is possible to affirm that, in national indebtedness, the federal government is the only veto point, both in the technical and political steps of the authorization of the loan. This centralization is reinforced by the analysis presented in the data section, which shows that virtually 100% of internal credit comes from federal public banks.

For external loans, the number of steps is significantly higher. In these loans, one important veto point is the Senate, which is responsible, according to the 1988 Constitution, for regulating the external indebtedness of the states. After a request be initially evaluated by the STN, it is sent to the Senate, more specifically to the CAE (Economic Affairs Commission). In the commission, the contract receives a rapporteur who can not be from the same state that is requesting the loan. The members of the commission votes on the decision submitted by the rapporteur and sends it to the Senate floor, which approves or rejects the request.

³⁹ In this dissertation, it is impossible to deepen that analysis because of its scope. It focus on the rationality of the relation between the federal and state governments rather than between governor and state legislative.

⁴⁰ Ordinance 198 of 2019, from the Ministry of Economics

TABLE 7 – Institutions responsible for approving subnational loans

Institution	Internal	External
STN	Analysis	Analysis
PGFN	Analysis	Analysis
Min. Economy	Veto	Veto
Senate	-	Veto
Senate's CAE	-	Analysis and Veto

SOURCE: National Treasury.

TABLE 8 – Presidency and Senate's majority since 1995

Institution	Party	Period
Presidency	PSDB	01/1995 - 12/2002
Presidency	PT	01/2003 - 05/2016
Presidency	MDB	05/2016 - 12/2018
Presidency	PSL	01/2019 - 11/2019
Plurality	MDB*	whole period

SOURCE: Brazilian Senate. NOTE: MDB have held the position of largest party in the whole period but have never reached single majority. Since 1995, two parties had Senate's president: PFL/DEM (01/1997-02/2001, 09-2001, 01-2019-ongoing) and PT (10/2007-12/2007).

In the Lower-House⁴¹, Figueiredo e Limong (1999) changed the usual understanding of Brazilian politics showing that party loyalty was the rule and not the exception. In the Senate, it is possible to imagine a different dynamics, considering that the senators are elected by majoritarian vote⁴² and, differently to the Lower-House counterparts, that they can change parties whenever they want, without any risk of losing their seats. Despite of that, the strength of partisan bonds is also strong in the Senate. M. Arretche (2010) shows that partisan cohesion is higher than state cohesion, specially for leftist parties, and Neiva e Soares (2010) present that party's will is more influential over senator's vote than governor's will.

These findings can explain the only opportunistic behavior found in the Senate. According to Arvate, Biderman e Mendes (2008), the Senate, prior to the new framework, approved all loans and strategic political behavior was found only when the rapporteur

⁴¹ Brazilian Congress is bicameral, with the Upper-House being the Senate.

⁴² The district is the whole state, alternating the magnitude between one and two, in each quadrennial election. The term is eight years.

on the commission is from a state-level opposition party. In such cases, the number of days that the rapporteur takes to deliver the decision is higher. In their analysis, the study also points out that a contract stays in the Senate around 200 days, with 80 days of standard deviation.

It is worth mentioning that the authors' analysis was carried between 1989 and 2001, when all loans required the approval of the Senate, before the changes and before the growth of indebtedness observed after 2008. The authors also did not study the approval of loans inside the STN, only Senate. As the resources of the contracts with banking institutions increased after the new framework, it may altered the equilibrium in the Upper-House and it is a matter to be checked in another study.

If approved, the request for a loan will be converted into a Senate Resolution and will return to the technical guidance of the National Treasury. From an analysis of the resolutions between 2002 and 2015⁴³, no contract that was approved by the senators was rejected by the STN, indicating that this agency might exert control before the process is sent to the Senate.

Finally, regarding the technical criteria evaluated, it is possible to separate them in two, the moment after and before the official request (PVL). In the first moment, the negotiation is made by state directly with creditors and it is not possible to describe exactly which indicator each bank considers important to concede a loan.

In the following period, there is list of criteria provisioned by LRF, Senate Resolution 43 of 2001 and Senate Resolution 48 of 2008. Guaranteed resources can not surpass 60% of net current revenues (RCL), although the global limit of debt is 200%. In theory, states that are so heavily indebted can not access new loans, but in practice these limits were relaxed⁴⁴. Additionally, in 2017, a credit rating measure was adopted and states with grade C or D, in theory, can not get new loans **Ordinance 501 of 2017; sustained by Senate Resolution 43 of 2001**. And finally, there is now a limit of interest

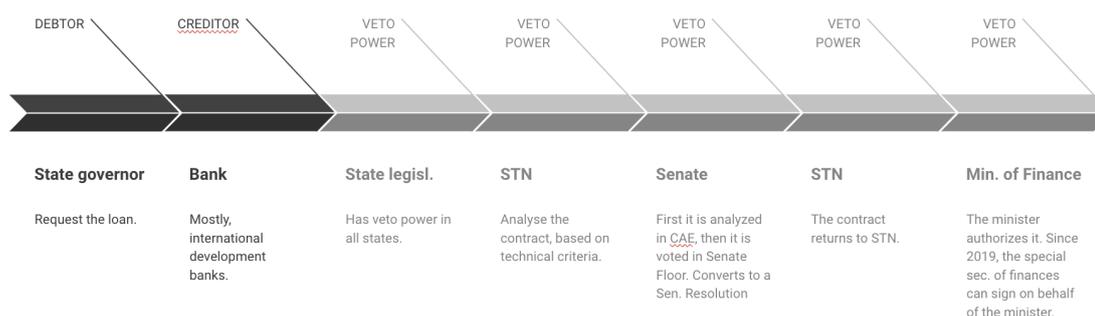
⁴³ Analysis done by the author, Carlos Goulart and Lorreine Messias, as part of the research project *As instituições políticas subnacionais: um estudo comparativo dos estados brasileiros*, funded by Fapesp under the process 13/15658-1.

⁴⁴ Detailed discussion of this topic in Debt Sustainability Indicators, in the next section of this chapter

rates, considered acceptable by STN, for internal and external loans ⁴⁵.

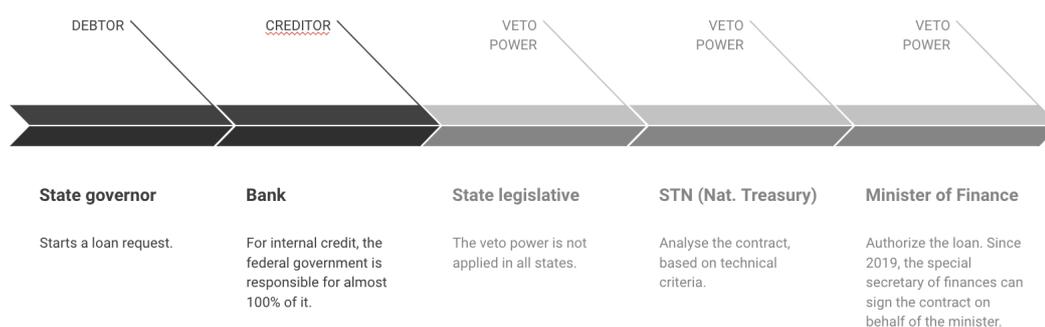
A visual representation of the actual framework is presented below in two figures, one for internal loans and another to external loans.

FIGURE 2 – THE FLUX TO CONTRACT AN EXTERNAL LOAN.



SOURCE: designed by the author with information collected from the National Treasury, states constitutions and the literature.

FIGURE 3 – THE FLUX TO CONTRACT AN EXTERNAL LOAN.



SOURCE: designed by the author with information collected from the National Treasury, states constitutions and the literature.

⁴⁵ Also regulated by Ordinance 501 of 2017

3.4 DATA AND TRENDS AFTER 2002

3.4.1 Debt ratio

The situation of state public accounts progressed in the years following debt renegotiation started in 1997. According to data provided by Central Bank, in 2003 the state net debt (excluding state companies debt and counting state credits) was 17.3% of the national GDP. In subsequent years, this number declined to less than 10% and achieved a record low of 7.9% in 2014. This decrease can be explained by the good economic performance of the period (average GDP growth of 4% between 2002 and 2008) and the debt restructuring (MORA, 2016). From 2015 and forward, state debt to GDP has risen again, but at a much slower rate than the federal, which more doubled. This data is presented below, in FIGURE 4.

FIGURE 4 – BRAZILIAN PUBLIC DEBT AS A PERCENTAGE OF NATIONAL GDP

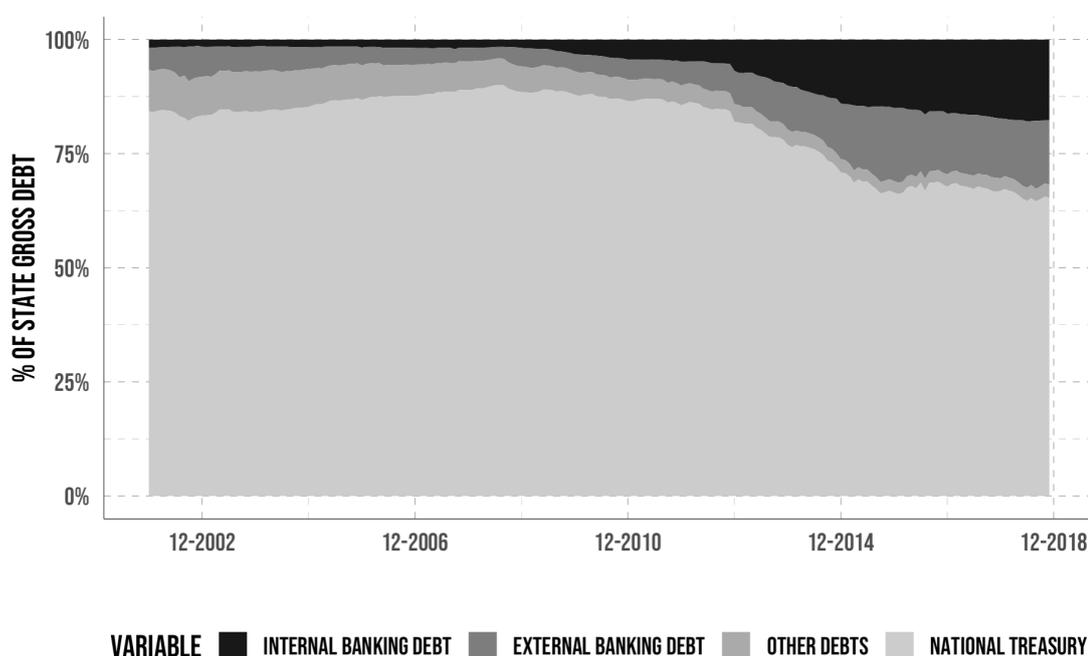


SOURCE: Central Bank of Brazil. Monthly data available from 12/2001 up to 11/2018

NOTE: the end of electoral years is marked in X axis labels. Data considers the aggregated result of the 26 states and the Federal District. Deflated using IPCA.

Looking at the composition of state debt, FIGURE 5 shows that the largest debt is committed to the National Treasury, which is originated from the renegotiations made during the decade of 1990. The amount of this debt in relation to GDP fell by almost 0.7 percentage points between 2003 and 2014. In the final years, there was an increase in state indebtedness with larger shares of debt with both external and internal financial institutions.

FIGURE 5 – COMPOSITION OF STATE TOTAL DEBT, BETWEEN 2002 AND 2018



SOURCE: data adapted from the Central Bank of Brazil

NOTE: the end of electoral years is marked in X axis labels. Data considers the aggregated result of the 26 states and the Federal District.

The cumulative change in indebtedness since December 2001 is shown in FIGURE 6. In this figure, 0% is the initial value. At the end of the time series, domestic bank debt grew more than 600%, while external bank debt grew by about 150%. The turning point is 2008, during Lula's (PT) second term, when the number of new loans contracted by states increased. In its turn, the debt committed to the National Treasury, resulting from all debt renegotiations, fell in relation to GDP in the period.

FIGURE 6 – CHANGE IN COMPOSITION OF STATE GROSS DEBT, BETWEEN 2002 AND 2018



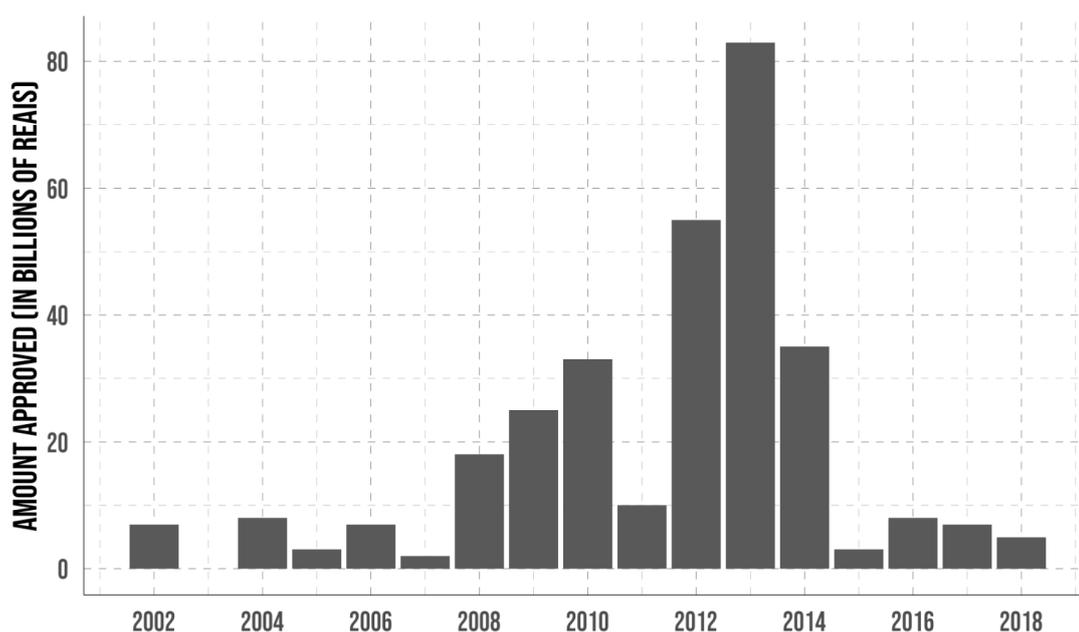
SOURCE: data adapted from the Central Bank of Brazil

3.4.2 New loans

Since 2002, the main instrument to raise new debt in Brazil is by contracting loans from banking institutions once authorization by the National Treasury has been obtained by the state. Regarding the approved amounts, the highest volumes were noted between 2008 and 2014, coinciding with the growth of banking debt in relation to GDP shown in FIGURE 5. The record high was registered in 2013, when R\$ 82.7 billions in loans were approved, 88.4% of which were with national banking institutions. This represents almost one-third of total approved loans between 2002 and 2018, which is R\$ 309 billions, in 2019 Reais.

Of this amount, 77% was contracted with Brazilian banks and 23% with foreign institutions. The share by origin of financial institution is shown in the FIGURE 8, which presents a trend of concentration in national institutions through the years. In 2003, 59.5% of credit came from external loans, compared to only 6.2% in 2017.

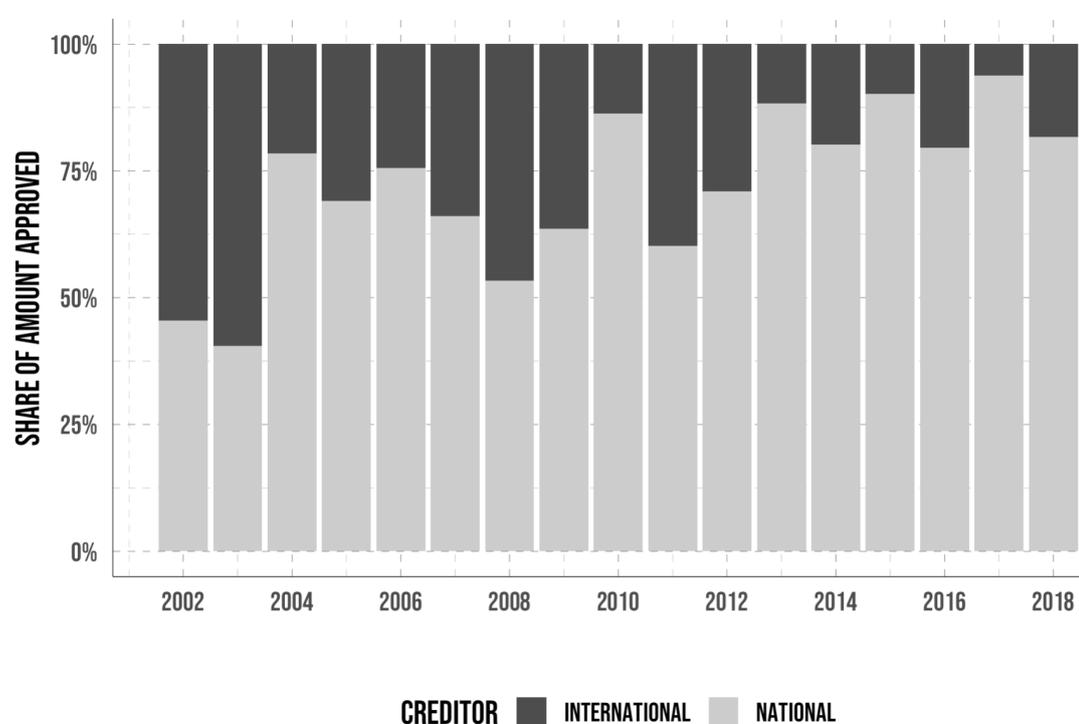
FIGURE 7 – APPROVED AMOUNTS OF NEW LOANS, BETWEEN 2002 AND 2018



SOURCE: Sadipem, National Treasury.

NOTE: deflated using IPCA to values of January, 2019. In billions of Reais.

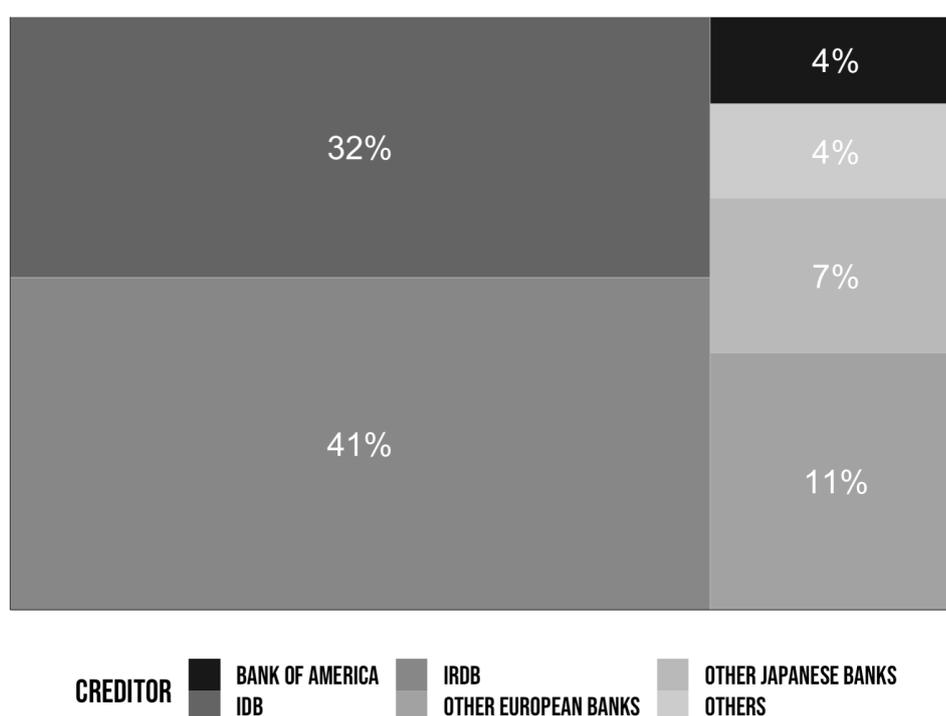
FIGURE 8 – SHARE OF NEW DEBT APPROVED BY ORIGIN OF FINANCIAL INSTITUTION, BETWEEN 2002 AND 2018



SOURCE: Sadipem, National Treasury.

The analysis of the institutions that lend to Brazilian states shows that few banks hold most debt. Although 28 banks have at least one contract in the period, five of them (Banco do Brasil, BNDES, Caixa, IBD and IRDB) hold 92.5% of the new state debt conceded between 2002 and 2018. Regarding external lenders, the international investment banks IBRD and IDB accounted for 73% of the approved credit by that way - 32.3% and 41.2%, respectively. European banks (Banca Mediocredito, BBVA, Credit Suisse, European Investment Bank, France Development Agency, KfW and MLW) represent 12.6% and Japanese banks (JBIC, DBJ and Sumitomo Mitsui) represent 6.9%. Among other banks, the Bank of America-Merrill Lynch has 3.9%, with loans conceded in 2012 and 2013 to Maranhão, Mato Grosso and Santa Catarina.

FIGURE 9 – SHARE OF TOTAL NEW DEBT HELD BY INTERNATIONAL FINANCIAL INSTITUTIONS, BETWEEN 2002 AND 2018

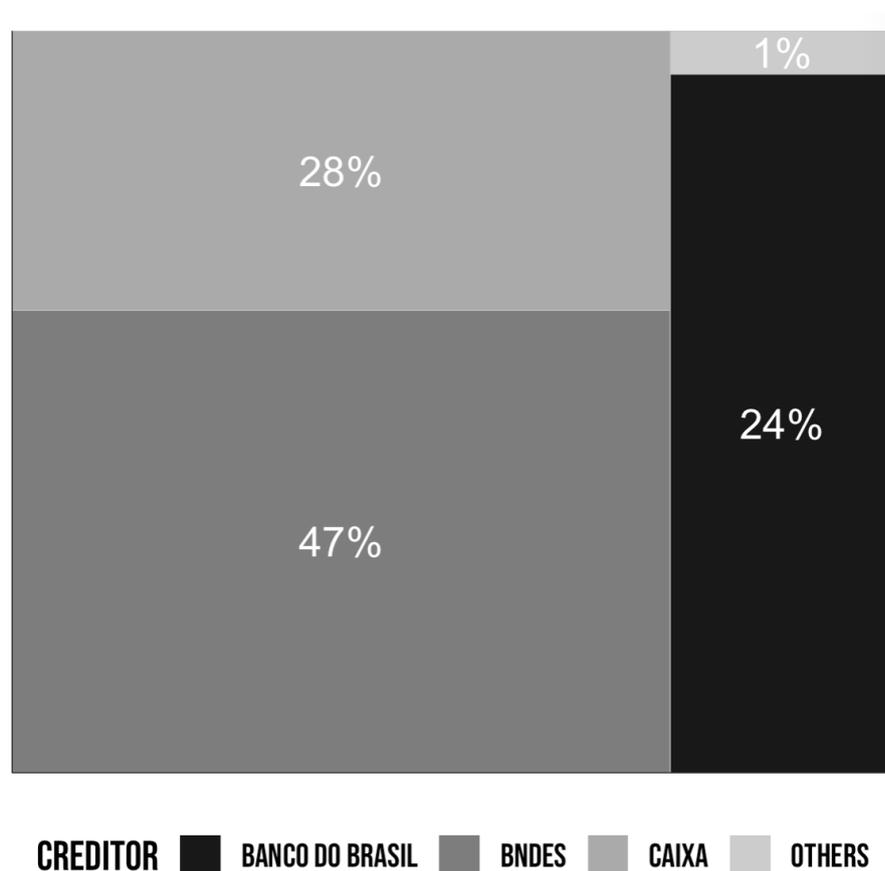


SOURCE: Sadipem, National Treasury.

In turn, among national creditors, three federal public banks (Banco do Brasil, BNDES and Caixa) accounted for 99% of the approved credit. BNDES has the largest share, of 46.5%, followed by Caixa (28%) and Banco do Brasil (23.9%). Including Banco

do Nordeste, the sum of all banks controlled by the Union is close to 100%. Part of these funds come from federal investment programs, such as PAC, PAF and Proinveste⁴⁶.

FIGURE 10 – SHARE OF TOTAL NEW DEBT HELD BY NATIONAL FINANCIAL INSTITUTIONS, BETWEEN 2002 AND 2018



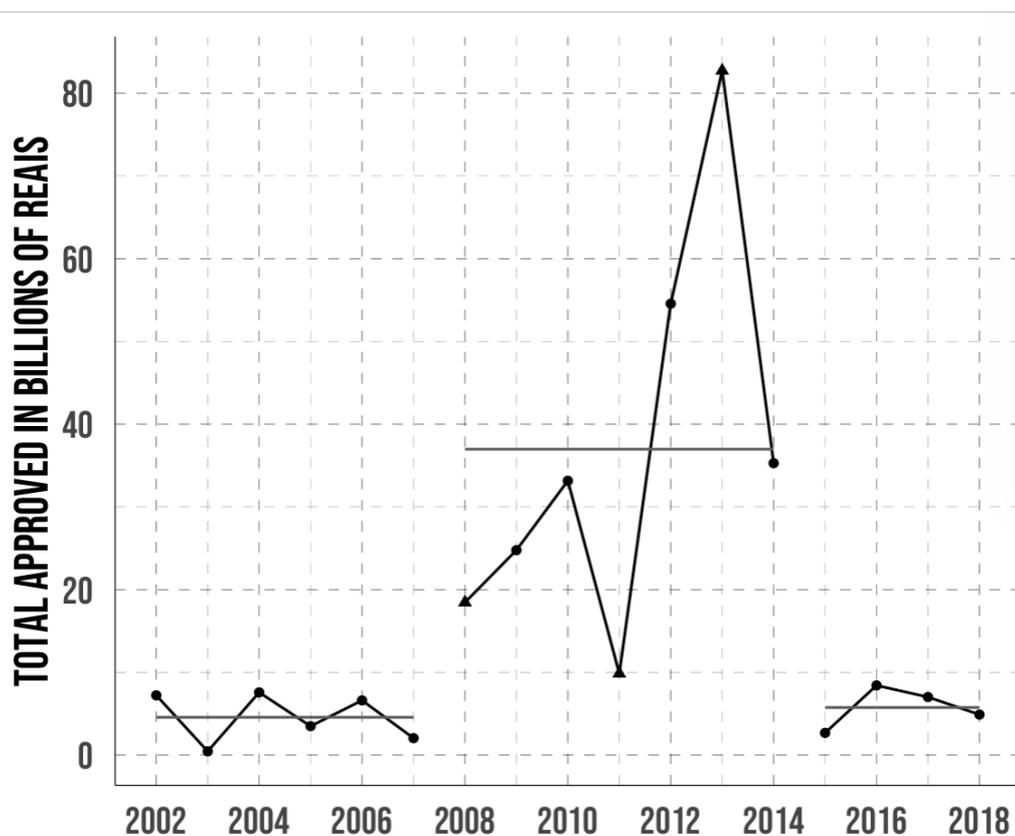
SOURCE: Sadipem, National Treasury.

3.4.3 Three periods of state debt

The analysis of the previous figures can be further separated into three periods. The first, soon after the new regulation, extends until 2008. In that year, the amount of new loans increased significantly. However, in 2015, the country entered in a recession and the average amount loans approved fell to a level comparable to the average of the first period.

⁴⁶ Check list of abbreviations.

FIGURE 11 – APPROVED AMOUNTS OF NEW LOANS, BETWEEN 2002 AND 2018, BY THREE TIME PERIODS



SOURCE: Sadipem, National Treasury

NOTE: deflated using IPCA to values of January, 2019. in billions of Reais. Endogenous structural breaks are indicated by triangles. Straight lines are the mean of the period.

At the first period, until 2008, when the global crisis started, state indebtedness with banking institutions was marginal. On average, it was R\$ 4 billions in approved contracts each year, with 66% coming from national banks, mainly Caixa and BNDES, but not Banco do Brasil. Those loans were directed to projects in infrastructure (57 of 171) and basic sanitation (42 of 171).

In 2007, at the beginning of the second term of president Lula da Silva (PT), the government announced a major investment program to increase the growth rate of the Brazilian GDP, the PAC (Growth Acceleration Program). However, in 2007, just one loan contract was approved to PAC in states. In the following year, this number was 25. The program marked an intense policy to raise public investments and was renewed for

a second edition (PAC 2) in 2010, totaling 117 loans up to 2014 in the two editions.

The other two federal sponsored programs that are worth mentioning is the PEF I and II (States and Federal District Emergency Financing Program) and Proinveste (States and Federal District Investment Support Program). The first aimed to increase state investments and support state public accounts soon after the global crisis and the second was major policy of financing during the Dilma Rousseff (Workers Party) government. Proinveste consisted in subsidized loans provided by BNDES to states and was part of the expansionary economic policy of Rousseff's first term (2011-2014).

In this second period (2008-2014), a new state indebtedness cycle began, with shifts in tendency of both national and international sources of credit. The largest month-to-month variations in foreign debt occurred in 2008 (??). For domestic bank debt, it was at the end of 2012, following the launch of the Proinveste program by the federal government.

A third and last period begins in 2015, when new debt becomes stagnant. With the crisis in Brazil, which began in 2014⁴⁷, the fiscal situation of the country and the states deteriorated and the exchange rate increased, making it less attractive to lend money from foreign investors.

In 2015, only one contract was approved with a foreign institution. It was a contract between Espírito Santo and IRBD of R\$ 264 millions of Reais. Between 2015 and 2019, the state of Ceará was the one that received most credit from international banks (a total of R\$ millions of Reais). For the internal loans, the total amount dropped in 2017 to only 7% of the amount recorded in 2013.

⁴⁷ According to Comitê de Datação de Ciclos Econômicos (Codace), of Fundação Getúlio Vargas.

TABLE 9 – Amount approved in loans by origin of financial institution and year, between 2002 and 2018

Year	Total	International	National
2002	R\$7,222,884,730	54.5%	45.5%
2003	R\$453,056,483	59.5%	40.5%
2004	R\$7,578,638,431	21.5%	78.5%
2005	R\$3,491,684,529	30.9%	69.1%
2006	R\$6,610,165,096	24.4%	75.6%
2007	R\$2,044,814,673	33.9%	66.1%
1st	R\$27,401,243,940	33.6%	66.4%
2008	R\$18,448,435,582	46.7%	53.3%
2009	R\$24,765,105,232	36.4%	63.6%
2010	R\$33,157,806,640	13.7%	86.3%
2011	R\$9,851,793,412	39.7%	60.3%
2012	R\$54,557,586,171	29.0%	71.0%
2013	R\$82,729,532,269	11.6%	88.4%
2014	R\$35,287,534,589	19.9%	80.1%
2nd	R\$258,797,793,893	22.6%	77.4%
2015	R\$2,681,616,934	9.9%	90.1%
2016	R\$8,419,457,198	20.4%	79.6%
2017	R\$7,015,275,281	6.2%	93.8%
2018	R\$4,897,304,381	18.3%	81.7%
3rd	R\$23,013,653,793	14.4%	85.6%
Total	R\$309,212,691,627	23.0%	77.0%

SOURCE: data adapted from Sadipem, National Treasury. NOTE: Total amount in reais of 2019, deflated using IPCA.

3.4.4 Debt sustainability indicators

The official measure of sustainability of the subnational debt in Brazil is the ratio (DCL/RCL) between the Net Consolidated Debt (DCL) and Net Current Revenues (RCL). The RCL includes all current revenue, except transfers to municipalities and payments from public servants to their pension funds. On the DCL is a stock measure and includes all sorts of debt. It was established and regulated as a metric by the Senate Resolutions 40 and 43 in 2001, which also require states to report data on debt to the National Treasury, which compiles this information and has data available since 2000.

Resolution 40 also set a ceiling cap of 200% for this ratio. It means, in a simplified way, that the stock of debt can exceed only two times the annual revenue of a state. In theory, states above that margin can suffer fiscal restrictions, like the

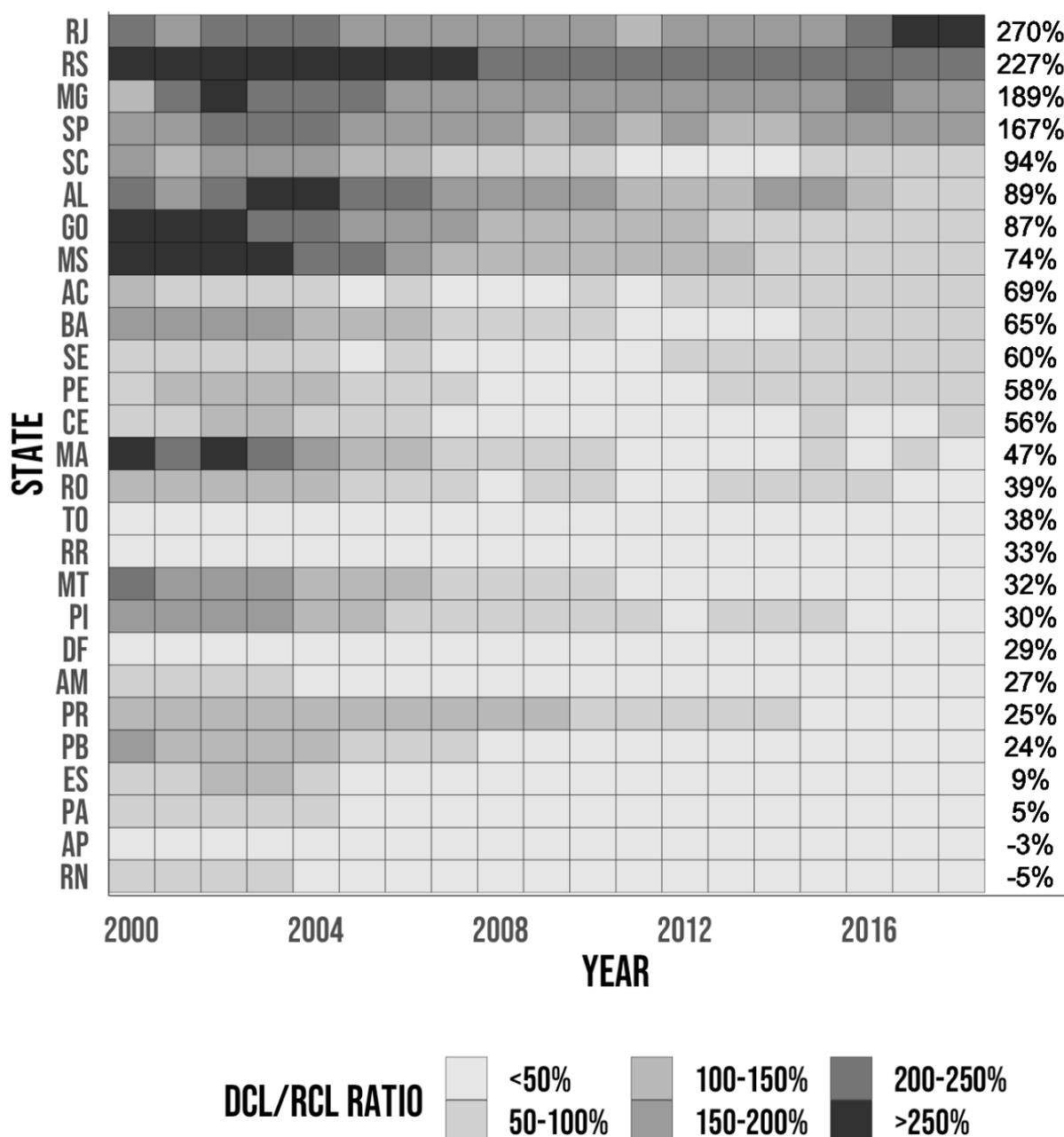
prohibition to contract new debt. However, further amendments made to this resolution relaxed the rules, excluding restrictions for new loans from federal banks and multilateral agencies (Senate Resolution 19 of 2003), for electricity investments (Senate Resolution 19 of 2003), for investment programs from BNDES (Senate Resolution 29 of 2009) and for projects associated with the 2014 World Cup and 2016 Olympic Games (Senate Resolution 45 of 2010).

In 2000, the first year with data available for this measure, eight states exceeded the cap of 200% (Alagoas, Goiás, Maranhão, Mato Grosso do Sul, Minas Gerais, Rio Grande do Sul, Rio de Janeiro and São Paulo) compared to only two in 2018 (Rio de Janeiro and Rio Grande do Sul). The median of indebtedness was 129%, in 2000, and is 47%, in 2018. Of the 27 states, 23 improved their ratios in the period. Nine of them (Mato Grosso do Sul, Goiás, Mato Grosso, Maranhão, Piauí, Alagoas, Paraíba, Paraná and Bahia) had an approximated absolute reduction of their DCL/RCL ratio of more than 100%. On the other hand, four states became more indebted, but only two of them, Rio de Janeiro and Minas Gerais, had significant absolute increases in indebtedness, of 63% and 48%, respectively.

More recently, in 2017, the National Treasury created another measure of sustainability, the Payment Capability of States and Municipalities, known by its acronym Capag. It works similarly to a credit score for subnational governments⁴⁸, considering factors not only debt and tax revenue to evaluate the fiscal accounts of local governments. The range of grades is between A and E. On October, 2019, only Espírito Santo has a grade A and Rio de Janeiro, Minas Gerais and Rio Grande do Sul were at the bottom of the list with a score D. Since the time-span of this measure it is too short, it will not be deeply evaluated here.

⁴⁸ It is important to note that private rating agencies usually peg subnational credit rating to the national. No substantial data, that captured the heterogeneity of the states, was found.

FIGURE 12 – RATIO BETWEEN DCL AND RCL, BETWEEN 2000-2017



SOURCE: National Treasury

NOTE: states are ordered by 2017 ratios. Data is monthly, but all values are in December of each year to avoid seasonality. Negative values indicate credit.

3.4.5 Threats to fiscal stability

In recent years, Brazilian states have come back to prominence in the national media because of the situation of their public accounts. Rio Grande do Sul had its accounts blocked by defaulting on its federal government debt, Minas Gerais had

difficulty paying civil servants, while Rio de Janeiro suffered a collapse of its public services. This reality is not just of the largest states. The small state of Roraima, which recently received a large influx of Venezuelan refugees, had no money to pay its employees and charges, and suffered a federal intervention, removing the governor from the office - which had never happened in recent Brazilian history. In 2016, all states reported economic difficulties⁴⁹.

Explanations for financial difficulties and fiscal deficits are complex and lack a single answer. But we can list some possible causes for this situation, such as increase in personnel expenses, fall in revenue collection and, for Rio de Janeiro, a mix of both with the fall of international oil prices.

It is important to mention that current revenues of Brazilian states are highly sensitive to economic fluctuation. The ICMS, which is the main source of income for most of states, is a tax on trade of goods and services. In downturns, the collection is affected since it charges directly the industry and the services. Moreover, even in those states that are less dependent on their own tax revenues, it is possible to feel the effects of economic crisis because the state transfers fund (FPE), is nourished by the IPI, the federal tax that is levied on industrial production.

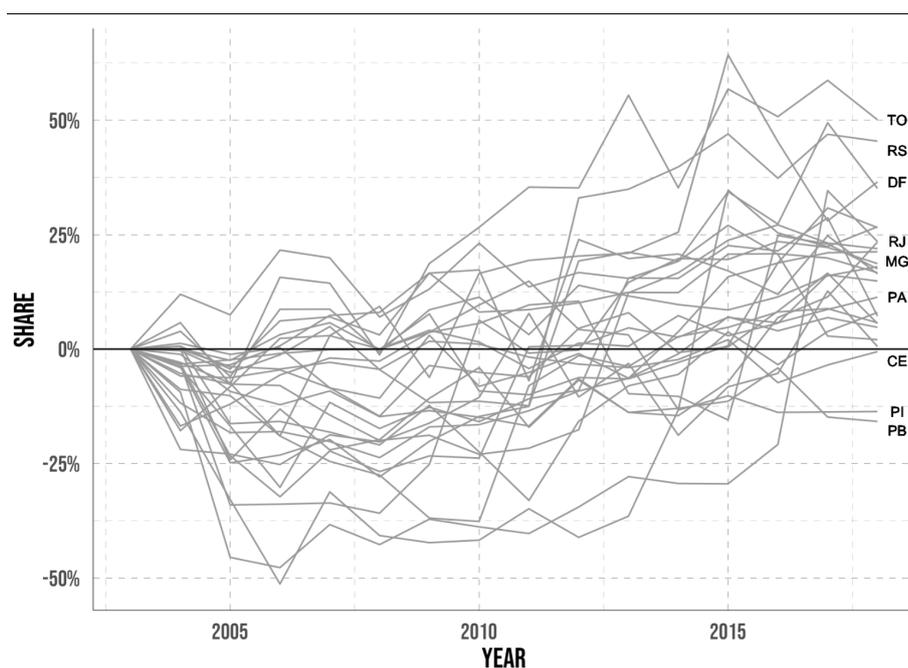
Cutting expenses is not an easy task considering the structure of public administration. Public servants, excluding some workers from semi-public companies and politically nominated servants, can not be fired. At the same time, the growth of personnel, both active and inactive, increased the expenses in 24 of the 27 states between 2002 and 2018, as shown in ??.

In the case of the royalties, they have been serving as an important source of revenue to states. This new source revenue has risen since the oil production of Brazil increased significantly in the early years of two thousands. According to EIA⁵⁰, Brazil

⁴⁹ Raio X da Crise nos Estados. **G1**. Lei de Responsabilidade Fiscal. Available in: <http://especiais.g1.globo.com/economia/2016/raio-x-da-crise-nos-estados/>. Accessed in: 02/Nov/2019.

⁵⁰ US Energy Information Administration

FIGURE 13 – VARIATION OF PERSONNEL EXPENDITURE BETWEEN 2002 AND 2018.



SOURCE: National Treasury.

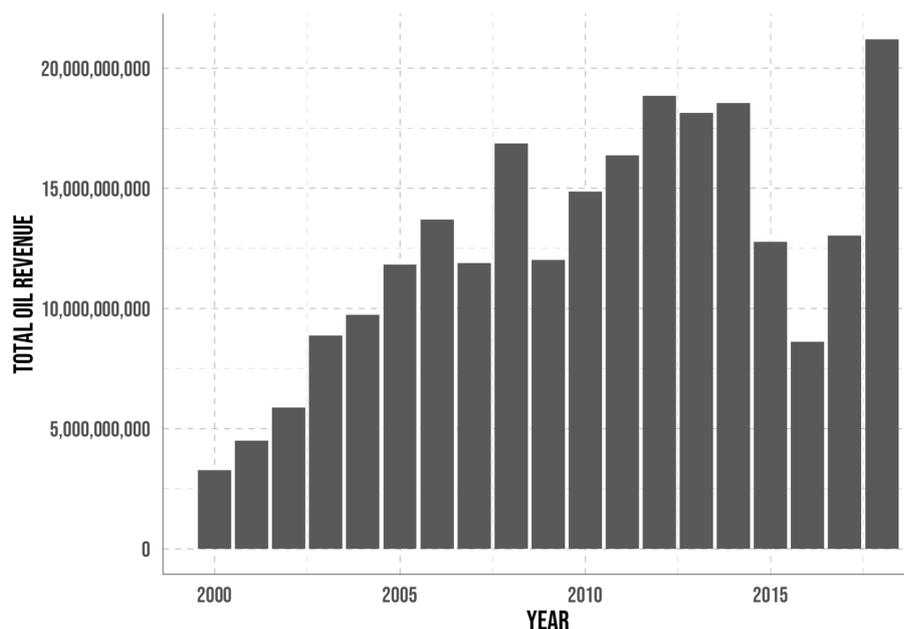
was the ninth largest oil producer in the world in 2018 (3,428 barrels per day), with amounts comparable to United Arab Emirates (3,791 bbl/day). In 2002, the country was fifteenth in the ranking and, since then, production grew by 95% up to 2018. Revenue from oil production, as well as from hydroelectric power generation and ores, is subject to the collection of royalties and compensations by the federal government that are then distributed mainly to states and municipalities.

In total, the revenue from oil in Brazil represents 2.2% of state revenues in 2018 compared to 0.7% in 2000. For some states, oil revenues have become very important. In 2018, in Rio de Janeiro and Espírito Santo, where large oil fields lie on the coast, 16.9% and 10.5% of current revenues came from royalties⁵¹.

Evidence from municipalities shows that oil royalties are associated with increased spending on civil servants without the same return on health and education Monteiro e Ferraz (2010). Another problem is the international oil price volatility may cut

⁵¹ Data from National Treasury.

FIGURE 14 – TOTAL ROYALTIES REVENUE FROM OIL PRODUCTION FOR BRAZILIAN STATES, BETWEEN 2000 AND 2018



SOURCE: National Treasury.

state revenues abruptly. When the barrel price dropped in 2014⁵², the state of Rio de Janeiro lost 65.8% of its oil revenues. Since the fiscal limits established by the LRF are attached to current revenues - and royalties are included, states can find their share of spending on personnel increasing as this exogenous revenue decreases. When the price drops, the current expenditure do not because states can not fire public servants. In addition to the state's fiscal indiscipline, the country's economic crisis, the end of the cycle of major tax events and tax cuts, Rio de Janeiro became the country's most indebted state in 2018 and underwent federal intervention.

3.4.6 Summarizing

Undoubtedly, the general condition of state public debt improved after the reforms and the new system of lending. However, the situation is still worrisome for three reasons. Firstly, the largest states (Rio de Janeiro, Rio Grande do Sul, Minas Gerais and São Paulo), in economic terms, are also the most indebted and the tendency of fiscal deficits in states can worsen their debt ratio, impacting the provision of public services.

⁵² West Texas Intermediate (WTI) crude oil dropped from 107 dollars per barrel in June, 2014 to less than 30 Dollars in the beginning of 2016.

Secondly, since the federal government holds the majority of state debt and it is its guarantor, any bailout is a major risk for national fiscal solvency. Considering the power distribution in Congress, bailouts tend to be extended to all states, not only the indebted. Lastly, the relaxing of rules over debt cap can stimulate opportunistic behaviour and break the credibility of fiscal rules in the long-term.

The purpose of this dissertation is not to suggest reforms or solutions to the problems mentioned in this chapter. Here, the current state indebtedness policy will be the subject of study and evaluation to identify if there are and what are the political factors that impact the way states get new debt, with a special attention will be directed to the relationship between the president and the governor. When these factors overlap with technical criteria, such as fiscal solvency, there is a risk, regardless of whether large or small, over fiscal stability and consequently over the deliver of public services.

4 EMPIRICAL FRAMEWORK AND RESULTS

4.1 HYPOTHESES

Since 1975, a number of federal-level regulations have been made to set limits on state borrowing (BEVILAQUA, 2002). These regulations were not enough to prevent states from becoming heavily indebted in the nineties. Successive bailouts and partial solutions opened space for states to enter into new debt cycles. In 1997, this situation led to a major institutional change in Brazilian federalism. Fiscal laws and centralized authority over loan mechanisms were introduced between 1997 and 2002. After that date, the level of state indebtedness dropped. Between 2008 and 2014, new loans were contracted after incentives provided by the federal government.

Top-down frameworks of subnational debt are essentially centralized and require that the rules governing debt policy must be credible and respected. The application of these rules must also be universal and not subject to political factors or absent from technical criteria. When political factors matter, noticeably the partisan alignment, electoral cycles and party ideology prevail, there is a tendency for federal governments to ignore technical criteria. This is also true when the debt policy benefits everyone, regardless of party, because the rules are relaxed. The presence of one or another is a sign that framework has weak rules and can fail in the long-term.

The major null hypothesis of this study is that the success of states in their ability to secure approvals for loans is exclusively motivated by technical criteria. In addition, it is expected that there are no differences between external and internal loans¹.

The main alternative hypothesis of this dissertation is to test if political factors continue to impact state debt policies even though Brazil has centralized the loan authorization in a technical institution, the National Treasury.

The federal government holds almost %100 of the internal credit and respon-

¹ It is possible that effect of currency can stimulate or discourage the contracting of external debt, but it may not affect success rates.

sible for the analysis of each contract. It can also establish new regulations, through ordinances, on the proceedings to difficult or to facilitate access to internal credit. One example of this is the introduction of the Capag as a score to grant or not a loan. Since the power over the internal credit is far more concentrated in the federal government than it is in the case of external loans - where the Senate and international banks are also important actors - we should expect that internal loans are more susceptible to political factors as compared to the external loans.

Vertical partisan alignment

In the past, bailout negotiations favored governors allied to the president (BEVILAQUA, 2002). Considering the new loan framework after 2002, a series of technical criteria were established to regulate the concession of new loans, such as the observance of the 200% cap of the ratio DCL/RCL. However, some important points of the process can still suffer interventions of the federal government. As Mora (2016) mentions, the subnational debt policy in Brazil is essentially defined by the federal government.

The vertical partisan alignment (VPA), measured here as the partisanship between the government and president, can influence positively the success of a state of secure a loan.

H1: State governors aligned with the president are more successful in getting new loans.

Electoral cycles

Budget electoral cycles assume that politicians, aiming to stay in office and thereby maintain power, would have incentives to skew the electoral process, alter fiscal policies, or increase public spending in the election year (ROGOFF, 1990). In this way, incumbent candidates seek to satisfy voters' short-term economic demands in order to show them that they are doing a good job.

The theory of economic voting has already emphasized the relationship between economics and electoral preferences showing that there are electoral cycles. In a classic

paper, Downs (1957) stated that voters act as consumers, meaning that they rationally choose the party that will most maximize their benefits over competitors. This idea was later developed, seeking to express the extent to which economic performance is related to government support (LEWIS-BECK; STEGMAIER, 2013).

In general, whenever possible, a ruler seeks to improve the economic results of his locality. The question that concerns us is another, although not contradictory with this first statement. Political cycles presume short-term opportunistic action on the economic condition of voters aiming at electoral benefits (ROGOFF; SIBERT, 1988; TUFTE, 1975).

For politicians to be able to influence the economy in such a way, some degree of discretion over fiscal policy or budget use is essential. Under this argument, this situation may exist at subnational level in other countries organized under federalism with relative autonomy of federated entities, such as the United States (ALT; S. S. ROSE, 2007). Evidence shows that electorally motivated budget cycles are reduced in presence of fiscal rules (S. ROSE, 2006) and checks-and-balances (STREB; LEMA; TORRENS, 2009), such as the approval of new debt by the legislature.

In the past, governors in Brazil used to have significant autonomy and little regulation to contract debt. The path to engage in electoral cycles, subsidised, in the last instance, by the federal government was available to governors. This path now is closed and the whole debt process is controlled by federal institutions, mainly the National Treasury. In theory, the Treasury should not approve loans in line with the electoral calendar, but since the federal government owns the lending institutions, it can increase credit flow over specific periods, either to benefit allies or generally benefit all governors, expecting returns in the form of political support or responding to political pressures. If this is valid, we can expect electoral cycles to be present in the process of approving domestic credit, but to not be something relevant considering the external one, since the local electoral calendar is of little importance to international banking institutions.

The electoral calendar can affect the strategy of state governors and federal government. Considering that usually the period of disbursement of loans is six months,

TABLE 10 – Table of proposed hypotheses

Hypothesis	Section	Proposition	Internal	External
H1	VPA	Aligned party	(+)	(.)
H2	Electoral cycles	Electoral calendar	(.)	(.)
H3	Market controls	DCL/RCL ratio	(-)	(-)
H4	Market controls	DCL/RCL ratio with VPA==1	(+)	(.)

NOTE: (+) means positively correlated, (.) no correlation and (-) negatively correlated.

states are more prone to secure new debt in the year of the election and the year before, and less inclined to obtain approval soon after the elections. Those loans can provide essential resources for incumbents aiming for reelection.

H2: Electoral years should not influence the credit concession.

Market conditions: debt sustainability

Debt sustainability is an important factor to consider in order to lend money. Legally, the debt sustainability measure established by the Senate can affect the success rate. Very indebted states could not borrow money in theory. If debt sustainability is not relevant, there are political factors in course. Additionally, Given the previous explanation of VPA, it is possible that this variable is somewhat interacted with the debt sustainability ratio, with a favoring bonus for the president's partisans.

H4: The debt sustainability measure established by the Senate affects the success rate of a loan approval.

H5: The debt sustainability measure established by the Senate affects the success rate of a loan approval depending on VPA.

4.2 EMPIRICAL STRATEGY

4.2.1 Definitions

To evaluate the hypothesis described in the previous section, the likelihood of approval of a new loan agreement will be tested. The final statement over the contract is given by the federal government no matter how long the review process lasts in the Senate. The data informed in Sapidem system presents the exact moment of this final decision. Since the final decision of the approval or rejection is not dependent on the Senate, technical staff of STN or creditors, the end date of the process captures the discretion of the federal government over the debt policy.

The dependent variable is a dichotomous variable (1 if the contract was approved and 0 otherwise) with a binomial distribution. A logit model will be used to estimate the factors that affect the likelihood of approval in this cross-sectional model, where each observation is a different contract. The model in its general form for the population is as follows²:

$$Prob(Y) = \alpha_i + \beta_1 * VPA + \beta_2 * ElecCycle + \beta_3 * MarketCtrl + \epsilon_i$$

Considering the distribution of the dependent variable, 87% of contracts were approved in the period between 2002 and 2018. This data brings an additional challenge. Contract rejection is a rare event and the usual logit distributions tends to underestimate this kind of event. Therefore, a correction will be made to the models, according to King e Zeng (2001) proposal to approach rare logits.

The problem with this approach with logit is to handle censored data. If a state knows in advance that its contract will not be approved, it is less likely that the governor would request a loan authorization to the National Treasury. Because of that, approval rates are generally higher than they should be if there is no censored data. Other

² Abbreviations: VPA is Vertical Partisan Alignment, ElecCycle is Electoral Cycles, MarketCtrl is Market Controls. Finally, Prob(Y) refers to the probability of Y.

model specifications can address this problem are possible, running additional models with different dependent variables. This topic is discussed more appropriately in the conclusion. The option for the logits were motivated because it captures the rationality of the president, rather than the governor.

Another possible situation is that the rejection rate may be due to the fact that a state governed by an opposition party to the president's party may request faithless loans expecting rejection in order to polarize with the president's party. It is not possible to determinate this behaviour with the approach adopted here, but it may reinforce the results we obtain for the effect of partisanship and coalition alignment.

Finally, the last methodological consideration is that two separate models will be run instead of adding a binary variable to differentiate contracts by type (external and internal). This allows to verify a interacted effect of the type of operation with the other variables, without inflating the variation of the coefficients - a situation caused by the high multicollinearity of interactive models³.

³ The VIF value for an intercatod (and usual) logit model with the same mode specification of the rare logit proposed here was 7 times higher than an additive model.

4.3 DATA

4.3.1 Dependent variable

The dependent variable of the rare logit model is the approval of a loan by the National Treasury, where 1 is considered success and 0 is failure (or the rejection of the contract). The data used is composed by 813 request of loans made by Brazilian states between 2002 and 2018⁴ after the approval the fiscal laws and the beginning of the supervision of lending process by the National Treasury. Of this total, 700 contracts were approved, and therefore the overall approval rate is 87.3%. For external loans it was 86.8% and for internal 88.3%, with totals of 250 and 530 approved in each way, respectively.

Across the years analyzed in this sample, the approval rate is also high, except for 2015, when 5 of 12 loans were rejected (41.7%). Considering the simple frequency of the approval and vertical partisan alignment, aligned states (where the governor belonged to same party of the president) had a 93.4% success rate, compared to a 86.2% in states ruled by other parties. Considering the party of the president, this percentage is 94.5% success for the PT (156 approved of 165), 70% for the MDB (7 of 10) and 100% for PSDB (7 of 7).

These loans classified as 1 included the categories Deferred, Regularized, and Forwarded to PGFN with favorable technical opinion. Eight loans (five external e three internal) were approved by judicial sentence in 2018⁵. In the data section, of the last chapter, they were included in approved loans sample. However, here in the logit test, they were classified as 0. This is necessary to avoid introduction of noise in the model because, without judicial interference, these contracts would have been rejected. Finally, loans withdrawn by the states (category Filed on request) were not included, since it is not possible to presume the rationality of that decision. All other categories were classified as rejected.

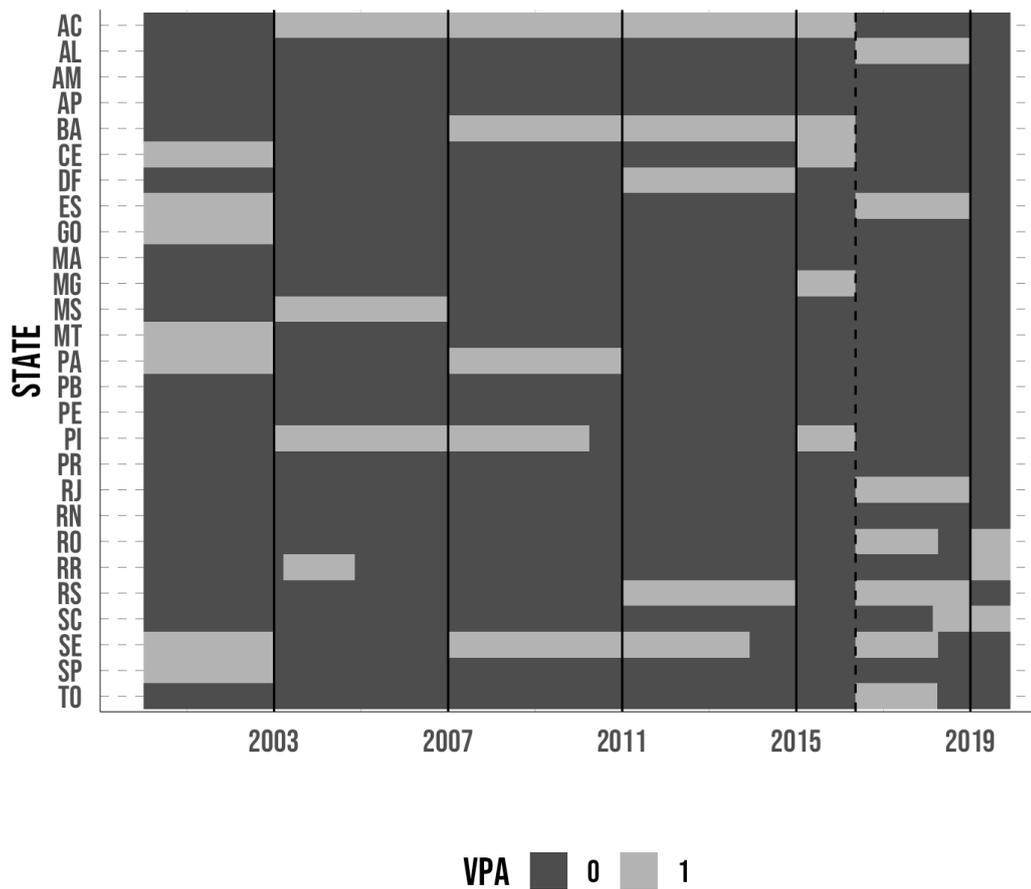
⁴ Loan requests from 2019 were excluded from the sample because of the unfinished status of some contracts.

⁵ Four of them were from Pará and four (one each state) from Alagoas, Maranhão, Paraíba and Pernambuco

4.3.2 Control variables

To test the partisanship hypothesis, the variable is used is a categorical binary variable that captures alignment between the governor and the president. It is defined as 1 if the governor and the president are from the same party in the day the contract was signed, and 0 otherwise. A daily data set, with more than 300,000 observations, containing governor’s and president’s party each day since 1980 was constructed by the author to verify this alignment. A visual representation of that variable, for the tested time-span, is presented below.

FIGURE 15 – PARTY ALIGNMENT BETWEEN STATE GOVERNOR AND PRESIDENT, FROM 2000 TO 2019.



SOURCE: Based on data from TSE, CPDOC/FGV, newspapers and official documents from states.

NOTE: Daily data. Solid lines represent the beginning of each term. The dashed line is the beginning of Temer’s government, after the removal of Dilma Rousseff.

This variable aims to measure the effect of the VPA (Vertical Partisan Alignment) on the probabilities of getting a new loan. If it is positive correlated with $P(Y)$, it presents evidence that political factors are present.

Although it would be very important to control president's party interactively with VPA - to account whether VPA was practiced by one party but not another - for now is not an ideal option. The ruling party from 2003 to 2016 (PT) spent 79% of the time-span tested in the office. The variation is restricted to the beginning and to the end of the time-span.

The debt sustainability ratio (DCL/RCL), mentioned in the previous sections, is the official measure used by the National Treasury to evaluate indebtedness of states. In theory, governors can face restrictions to contract new loans if their ratio surpass 200%, but these requirements were relaxed. It is expected that higher indebtedness affects negatively the probabilities of approval, but just in case that rules matter.

This metric is preferable, among others, because there is no alternative consistent through time and private credit score of states classify them relatively to the national score - no state can have a higher score than the Brazilian as a whole. A public rating, Capag (States Payment Capability), was created in 2017 by the National Treasury and states that have grade C or D are vetoed to get new loans. Unfortunately, the time-series was not retroactively created and this variable could not be included in the test.

The Dollar price to Real is an important measure to control the probability to request external loans. If the currency is not favourable, it is expected that the loans will decrease. However, it may not affect the success rates. A possible relationship should be valid only for external loans, since internal credit is not funded by external lenders. The source of data is FED Saint Louis. The currency value was deflated using IPCA. In general, disbursement of a loan lasts around six months. A governor that aims to use the loans to engage in political cycles may request a loan in the year of election or in the year before. Therefore, it is expected a higher frequency of opportunistic loans in those years - and a negative relationship of the dependent variable if the rules are consistent. A dummy for the electoral year (2002, 2006, 2010, 2014, 2018) and one for

the year before (2005, 2009, 2013, 2017) was included⁶.

Another time-related variable is a dummy to control if the state received a loan in the last 180 days (equivalent to six months). The inclusion of this variable was motivated by the findings of Arvate, Biderman e Mendes (2008). In their study, the authors present that if a state received a loan in that time-period of six months, it was less likely that the Senate will approve another. The difference here is that behavior of the federal government is being tested, not the Senate.

The current revenue of states was included as a metric of control to consider the high diversity of Brazilian states in terms of size of economy. Although it is more relevant to explain the amounts contracted, it is expected that states like São Paulo can have higher success rates. It can occur not only because the complex economy of large states. The variable also serves as a proxy for higher administrative efficiency in states with larger personnel and resources in their financial secretaries.

Current revenue includes mainly tax collection, transfers (both mandatory, such as the State Transfers Fund and Fundeb, and voluntary) and resources from oil royalties. It does not include capital resources originated from the new loans. The data until 2017 was collected from different sources in STN by my research colleague, Victor Shin⁷. The last year (2018) data came from Siconfi, the national accounting system for states and municipalities, organized also by STN⁸.

In 2014 and 2016, Brazil hosted the two biggest sports events in the world, the Olympic Games, in Rio de Janeiro, in 2016, and Soccer's World Cup, in 2014, in 12 cities. There is no contract directly mentioning the Olympic Games but there are loans in which the destination was to provide funds to finance the building of the venues and improving of the infrastructure for the World Cup. In this period 17 of 20 loan contracts were approved, under the PAC. The data is presented in chap:dest. A control dummy for these contracts was inserted.

⁶ It considers just general elections and not municipal elections.

⁷ PhD student, University of Missouri.

⁸ Though it was not used, it was collected more than one year from Siconfi to check the consistency with the overlapping period with Shin's series.

4.4 RESULTS

The results of the test are presented in TABLE 11. In that table, there are two models, the first for external and second for internal loans. The coefficient values refers to estimated log-odds. The estimated confidence interval of the coefficients, at 95%, is presented in the square brackets, and the p-values are indicated by the stars.

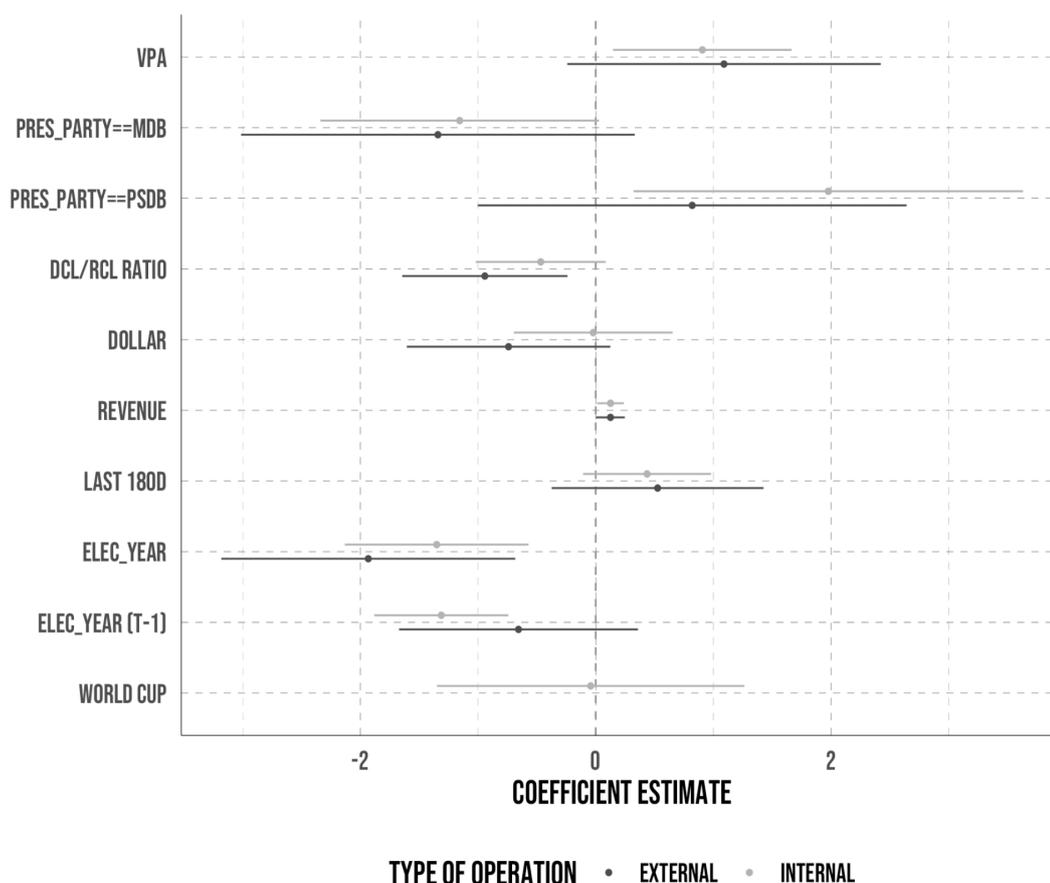
TABLE 11 – Log-odds estimation for external and internal loans

Variable	External	Internal
(Intercept)	4.20 *** [1.73, 6.67]	2.17 ** [0.66, 3.68]
VPA	1,09 [-0.24, 2.42]	0.91 * [0.15, 1.66]
PRES_PARTY == MDB	-1,34 [-3.01, 0.33]	-1,16 * [-2.34, 0.03]
PRES_PARTY == PSDB	0,82 [-1.00, 2.64]	1.98 * [0.32, 3.63]
DCL/RCL RATIO	-0.94 ** [-1.64, -0.24]	-0,47 ° [-1.02, 0.09]
DOLLAR	-0,74 ° [-1.61, 0.12]	-0,02 [-0.70, 0.65]
CURR. REVENUE	0.13 * [0.00, 0.25]	0.13 * [0.01, 0.24]
LAST_180D	0.52 [-0.37, 1.43]	0,44 [-0.11, 0.98]
ELEC_YEAR	-1.93 ** [-3.18, -0.68]	-1.35 *** [-2.13, -0.57]
ELEC_YEAR (t-1)	-0,66 [-1.67, 0.36]	-1.31 *** [-1.88, -0.74]
WORLD CUP		-0,04 [-1.35, 1.26]
N. OBS.	283	610
Accuracy	88.3%	86.4%
Precision	90.3%	87.1%
Recall	97.2%	99.0%
F-Score	93.6%	92.7%

NOTE: *** $p < 0.001$; ** $p < 0.01$; * $p < 0.05$; ° $p < 0.1$. Confidence intervals (2.5% and 97.5%) in square brackets. Model metrics consider estimated probabilities $> .5$ as a positive case.

Before discussing the results, in the figure below, there is a comparison between the coefficients of the two models, as presented in the previous table. For most the variables, the two models are similar, but they also present crucial differences.

FIGURE 16 – COMPARISON BETWEEN THE NULL HYPOTHESIS ($B=0$) AND THE LOG-ODDS OF THE COEFFICIENTS



SOURCE:

NOTE: there is no external loan to finance PAC's World Cup program. 95% confidence interval.

The VPA is only significant in the internal loan's model. In the external, it is only relevant when lowering the confidence intervals to 90%. It shows a possible evidence of political factors affecting internal credit, reinforcing the hypothesis 1. The DCL/RCL ratio (H3) is salient only in the external model, indicating that the punishment to indebtedness is relaxed for internal loans. The market control variables of revenue and electoral year present significance in both models.

In electoral years (H2), the success rates of the new loans is lower, when compared to other years. This finding alone is not an evidence of electoral cycles, but present that some process may be occurring, be it an electoral cycle, opposition asking faithless loans or other politically motivated process.

Regarding president's party, the category excluded is PT. There is a small

significant effect compared to PSDB but this relationship is weak since PSDB ruled just in the first year of the time-span. It was also an electoral year and the first year after the new rules. For internal loans, MDB is less likely to approve loans than PT. It may be related to ordinances issued in 2017 by the National Treasury during Michel Temer's government, that established a credit rating and limits for interest rates. In this period there were eight contracts judicially approved.

The models have different number observations that can, relatively, enlarge the significance of the coefficients from the model with more observations. In , there is a comparison of the models presented here with a simulated model of External loans with 610 observations (the same as the internal loans). To do this simulation, the external data set was randomly sampled one thousand times and regressed. The results were aggregated by the mean. The major differences observed is that the VPA effect became slightly significant and the current revenue and electoral year coefficients strengthened. All other variables⁹ preserved the direction of the coefficients.

In the , the results with fixed-effects are presented. Both models for internal and external loans were tested using fixed-effects for regions. This regions¹⁰ were choose instead of states to avoid multicollinearity mainly with VPA variable. In that models, there is no significant effect for VPA in both models, but the indebtedness ratio is preserved as an important metric for just for external loans. The results of these models can be accessed in ??.

In the Appendix, there is also table with definitions and measurements of the variables used here (see Appendix J). The hypotheses, as presented in , associated with each variable is signaled in this table.

4.4.1 Predicted probabilities

To go forward with the VPA related to indebtedness hypothesis (H4), the probabilities of approval of the loans were predicted given the level indebtedness. The

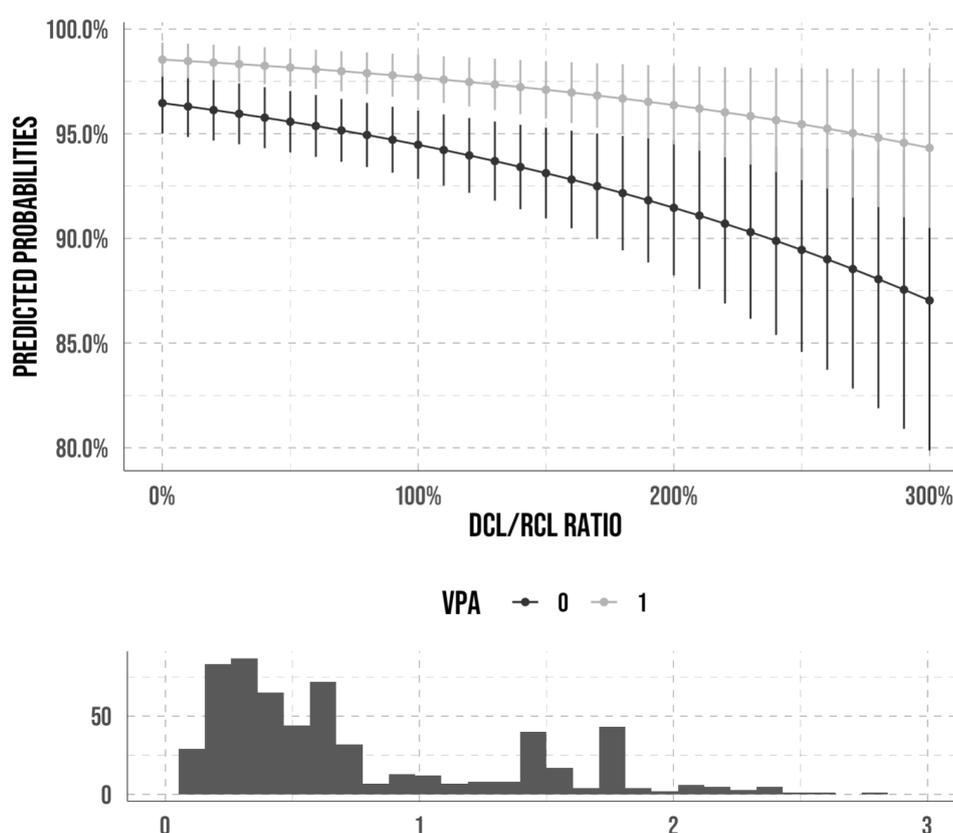
⁹ Except $PRES_{PARTY} == PSDB$, that represents a very small portion of the observations.

¹⁰ In the Appendix, there is a table with basic geographic information of states.

DCL/RCL ratio is expressed in the law as criteria to concede loans and its relationship with the the predicted probabilities should not be dependent on the alignment with president.

The predicted probabilities of each model, given indebtedness and VPA, is presented in figures FIGURE 17 and FIGURE 18. To estimate them, the continuous variables were set to the mean and the binary to the modal value. The confidence intervals consider a level of 95%.

FIGURE 17 – PREDICTED PROBABILITY FOR INTERNAL LOANS, GIVEN LEVELS OF DCL/RCL RATIO AND VPA

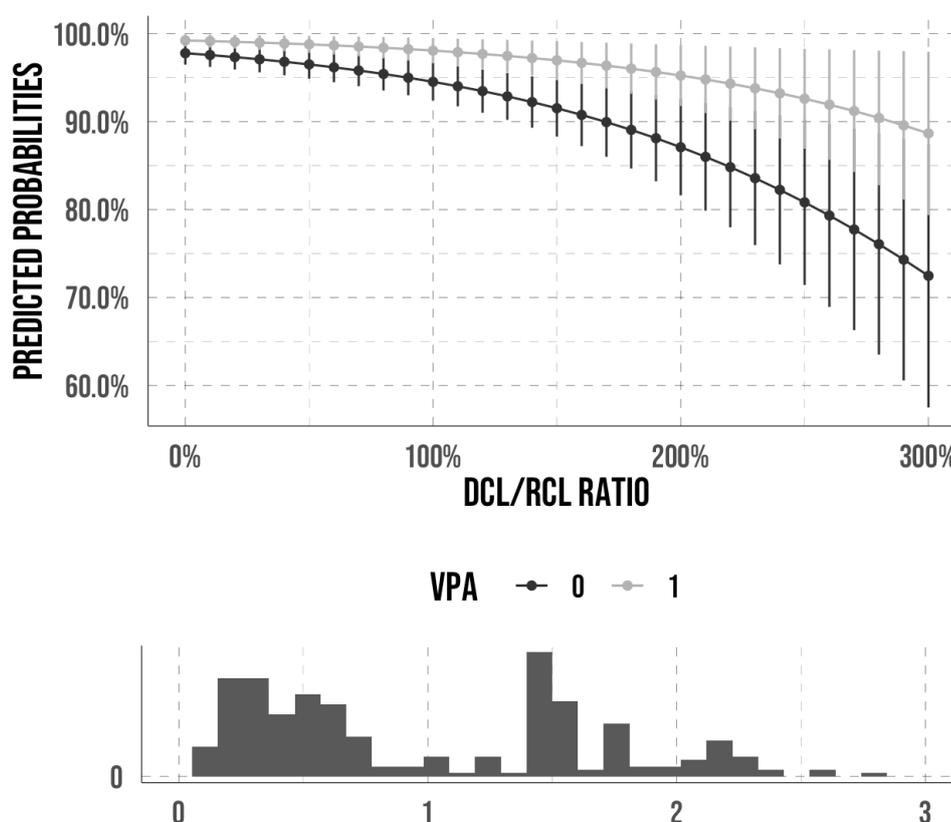


SOURCE: made with data compiled by the author
NOTE: 95% confidence interval.

In FIGURE 18, it is possible to observe that the confidence intervals of the estimates for external loans overlaps, though their point estimates differs substantially. We can not reject that effect of DCL/RCL ratio on Prob(Y) is either dependent or

independent of VPA. The situation is different for internal loans. In the range between 40% and 180%, the confidence intervals of partisan and non-partisan estimation given indebtedness differ. The probability of approval of partisan's contract is higher. In this range, where the differences are relevant, lies 61% of the observations (372 loans of 610).

FIGURE 18 – PREDICTED PROBABILITY FOR EXTERNAL LOANS, GIVEN LEVELS OF DCL/RCL RATIO AND VPA



SOURCE: made with data compiled by the author.
NOTE: 95% confidence interval.

Although the findings are statistically significant, one issue of the models is their low correction of the naive model. The naive model predicts the modal category to every observation (KELLSTEDT; WHITTEN, 2018). In fact, the naive model has a higher accuracy¹¹ due the rareness of contract's rejection (almost all loans are approved, tending to the naive assumption).

¹¹ $(\text{True positive} + \text{True negative}) / (\text{True positive} + \text{True negative} + \text{False positive} + \text{False negative})$

5 CONCLUSION

5.1 IMPLICATIONS

The subnational debt policy, specially in federative countries, is a very sensitive question among scholars in Public Administration, Government and Economics. In Brazil, where the subnational debt was a major economic issue, it is a well-known matter in these areas. Differently, this dissertation aimed to study the subnational debt under a Political Science's framework, bringing politics, in the classical definition of Max Weber as politics as the struggle for distribution of power. Even if there is laws and technical criteria that guides the process of getting new debt, the procedure is essentially political. The decision of approving or not a loan is, in the last instance, in the hands of the federal government. Moreover, minor regulations of the debt policy can be issued by ordinances from Ministry of Economics and the internal credit is dominated by federal public banks, making the influence of the Union even higher.

The results of the models show that the Vertical Partisan Alignment increase the chances of getting a loan approved for internal operations. It was not studied in which extent this difference can threat the fiscal stability of states, but is an evidence that there is room for opportunistic behavior in a top-down system, designed to be isolated from politics.

Here, it has been made considerable progress in presenting robust evidence that politics influences subnational debt, but there are undoubtedly some topics that need to further explore in future research. These questions could not be analyzed here either due to the absence of data or to not broaden too much the scope of what was exposed in a Master's dissertation. In the next and final section, some topics for future research are presented.

5.2 FURTHER RESEARCH

Party's president influence over subnational debt policy

One of the issues that is important for further research refers to the different strategies used by the incumbent party at national level for subnational debt. As shown in the data section, the largest volumes of new loans to Brazilian states occurred between 2008 and 2014 based on public investment policies encouraged by the federal government. At the time, the government was led by a center-left coalition led by the Workers' Party (PT). One possible hypothesis is that the ideological of the President (in the dimension left and right) is relevant to explain possible changes indebtedness. In the past, a vast literature since Hibbs (1977) and Alesina (1987) associated left parties with expansionary politics and, by consequence, with debt raising. However, it may be not conclusive, as show Benton e Smith (2017).

Although it is possible to make this relationship between increasing debt with the president's party, from a descriptive point of view, there is still not much variation for inferential comparisons. The data begins in 2002 with a center-right government, led by PSDB. In this first year, it can be argued that debt policy was still in its infancy and subject to other factors at this time of transition. From May 2016, there is a return to a right-wing coalition in charge of the federal government, but in a situation of high fiscal restriction. Although the government issued ordinances increasing requirements to contract new debt, it is not possible to isolate the drop in loan approvals unique to the change of government.

Why private national banks are out of the game?

Regarding the absence of participation of private banks in domestic credit, there is currently no room for this to happen, as the interest rates charged by public banks are lower than market rates. Any change in public policy toward decreasing state-bank loans and encouraging market-based interest rates will have to deal with the political resistance of the governors, whose access to credit would be more expensive. Further research is necessary to evaluate interest rate of the contracts. This data is available

in Sadipem's platform, but the information was manually inputted, without any kind of standardization. A process of categorization of this data demands more time.

The role of the Senate

In the Senate, it would be important to redo Arvate, Biderman e Mendes (2008) analysis with more recent data, assessing the new framework, mainly political intervention points after 2008. The analysis presented by M. Arretche (2010) and Neiva e Soares (2010), of the party loyalty dominance over federative loyalty, could be extended considering uniquely the process of loan's approval, which is a very sensitive matter for state governors.

The economic voting under fiscal restrictions

Regarding the elections, the effects of fiscal laws and the restrictions over the subnational debt policy could have affected incumbents' outcome. Barberia, Avelino e Zanlorenssi (2018) found that unemployment is a relevant variable to explain in labor-intensive states, where the economy is concentrated in industry and commerce rather than agriculture and industry. These states, like São Paulo, Minas Gerais, Rio de Janeiro and Rio Grande do Sul, are also the most indebted in Brazil. With the restrictions, running deficits became harder, and engagement in electoral cycles could have been decreased. With less scope, it is possible that governors in indebted states now have lower predicted vote share. If they want to preserve their offices avoiding the sanctions of the LRF, they may cut public services or delay personnel's payments.

Limits on official's accounting

The new framework of subnational debt and the fiscal rules brought important changes in order to guarantee balanced budgets in state-level, in Brazil. The access to many resources is conditioned to compliance to financial indicators and opportunistic behavior can be punished by law. One side effect of it is the manipulation of accounts, when states include a revenue or an expense in a different category to avoid restrictions. For example, one state can include a current expense as a capital expense in order to apparently succeed in having fiscal surplus. The data in ?? shows a strange behavior of

primary and total revenues and expenditures. Research is needed to identify if this is a case of opportunistic classification and, if affirmative, to introduce a routine to correctly evaluate state accounts.

Other model specifications

One major issue of the model used here is the censored data since states may not request a PVL if they know in advance if this will not be approved. Therefore, there is selection bias in the sample used to verify the probabilities of approval. One solution is to test the assumptions with different dependent variables, with different aggregations and model specifications. One refers to the number of contracts that have been approved for the state each year, controlling for loan amounts. This count model could assume a Poisson distribution for the data. For this, it is necessary to use Poisson Auto-Regressive models of order p , which, unlike a traditional Poisson, does not assume independence between events in time.

Other good option could be a time-series cross section model, where the dependent variable is the amounts approved in new debt, each year for each state. This model would be great to test who is prone to indebt. The left-right ideological dimension could be tested, to verify if leftist governors tend to contract more debt. The model would also be appropriate to test effect of the electoral calendar in debt activity, aiming to find signs of electoral cycles.

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APPENDIX

APPENDIX A – DEFLATOR MEASUREMENT

In Brazil, there are two main inflation deflators, the IGP-DI, organized by Fundação Getúlio Vargas, and the IPCA, by IBGE, the national statistics institute. IGP-DI is a mix of consumer price index (CPI) and market price index and IPCA is only a CPI. The IPCA is the official inflation metric used by the government in its accounts and IGP-DI is more often used in private contracts, mainly rents.

In this dissertation, since most of data is from public sector, monetary values were corrected to Reais of January, 2019, using IPCA. The only exception is when deflated values were already deflated by IGD-DI by other author. These values came from Bevilaqua (2002) and Mora (2002).

APPENDIX B – STATES BASIC INFORMATION

State code, abbreviation and regions

IBGE Code	State	State Abbreviation	Region	Region Abbreviation
11	Rondônia	RO	North	N
12	Acre	AC	North	N
13	Amazonas	AM	North	NE
14	Roraima	RR	North	N
15	Pará	PA	North	N
16	Amapá	AP	North	N
17	Tocantins	TO	North	N
21	Maranhão	MA	Northeast	NE
22	Piauí	PI	Northeast	NE
23	Ceará	CE	Northeast	NE
24	Rio Grande do Norte	RN	Northeast	NE
25	Paraíba	PB	Northeast	NE
26	Pernambuco	PE	Northeast	NE
27	Alagoas	AL	Northeast	NE
28	Sergipe	SE	Northeast	NE
29	Bahia	BA	Northeast	NE
31	Minas Gerais	MG	Southeast	SE
32	Espírito Santo	ES	Southeast	SE
33	Rio de Janeiro	RJ	Southeast	SE
35	São Paulo	SP	Southeast	SE
41	Paraná	PR	South	S
42	Santa Catarina	SC	South	S
43	Rio Grande do Sul	RS	South	S
50	Mato Grosso do Sul	MS	Center-West	CW
51	Mato Grosso	MT	Center-West	CW
52	Distrito Federal	DF	Center-West	CW
53	Goiás	GO	Center-West	CW

SOURCE: IBGE.

APPENDIX C – STATES ECONOMIC AND POLITICAL INFORMATION

Comparison between economy, population and political representation of Brazilian States in 2010

State	Region	Population	GDP	Senate	Congress
DF	CW	1.3%	3.7%	2.5%	1.6%
GO	CW	3.1%	2.8%	2.5%	3.3%
MT	CW	1.6%	1.5%	2.5%	1.6%
MS	CW	1.3%	1.3%	2.5%	1.6%
Center West		7.4%	9.3%	9.9%	8.0%
AC	N	0.4%	0.2%	2.5%	1.6%
AP	N	0.4%	0.2%	2.5%	1.6%
PA	N	4.0%	2.3%	2.5%	3.3%
RO	N	0.8%	0.6%	2.5%	1.6%
RR	N	0.2%	0.2%	2.5%	1.6%
TO	N	0.7%	0.4%	2.5%	1.6%
North		8.3%	5.5%	17.3%	12.7%
AL	NE	1.6%	0.7%	2.5%	1.8%
AM	NE	1.8%	1.5%	2.5%	1.6%
BA	NE	7.3%	4.1%	2.5%	7.6%
CE	NE	4.4%	2.1%	2.5%	4.3%
MA	NE	3.4%	1.2%	2.5%	3.5%
PB	NE	2.0%	0.9%	2.5%	2.3%
PE	NE	4.6%	2.5%	2.5%	4.9%
PI	NE	1.6%	0.6%	2.5%	1.9%
RN	NE	1.7%	1.0%	2.5%	1.6%
SE	NE	1.1%	0.7%	2.5%	1.6%
Northeast		27.8%	13%	22.2%	29.4%
PR	S	5.5%	5.8%	2.5%	5.8%
RS	S	5.6%	6.2%	2.5%	6.0%
SC	S	3.3%	4.0%	2.5%	3.1%
South		14.4%	16.0%	7.4%	15.0%
ES	SE	1.8%	2.1%	2.5%	1.9%
MG	SE	10.3%	9.2%	2.5%	10.3%
RJ	SE	8.4%	11.5%	2.5%	9.0%
SP	SE	21.6%	32.5%	2.5%	13.6%
Southeast		42.1%	55.3%	9.9%	34.9%
TOTAL		190.7 mi	R\$ 3,302 bi	81 seats	513 seats

SOURCE: IBGE for population and GDP and TSE for representation.

APPENDIX D – STATES ELECTORAL HISTORY

Elected party in each state since 1982

State	1982	1986	1990	1994	1998	2002	2006	2010	2014	2018
AC	MDB*	MDB*	PP*	PP*	PT	PT	PT	PT	PT	PP*
AL	PP*	MDB*	PSC	MDB*	PSB	PSB	PSDB	PSDB	MDB*	MDB*
AM	MDB*	MDB*	MDB*	PP*	DEM*	PPS	MDB*	PMN	MDB*	PSC
AP			DEM*	PSB	PSB	PDT	PDT	PSB	PDT	PDT
BA	PP*	MDB*	DEM*	DEM*	DEM*	DEM*	PT	PT	PT	PT
CE	PP*	MDB*	PSDB	PSDB	PSDB	PSDB	PSB	PSB	PT	PT
DF			PTR	PT	MDB*	MDB*	DEM*	PT	PSB	MDB*
ES	MDB*	MDB*	PDT	PT	PSDB	PSB	MDB*	PSB	MDB*	PSB
GO	MDB*	MDB*	MDB*	MDB*	PSDB	PSDB	PP*	PSDB	PSDB	DEM*
MA	PP*	MDB*	DEM*	DEM*	DEM*	DEM*	PDT	MDB*	PCdoB	PCdoB
MG	MDB*	MDB*	PRS	PSDB	MDB*	PSDB	PSDB	PSDB	PT	NOVO
MS	MDB*	MDB*	PTB	MDB*	PT	PT	MDB*	MDB*	PSDB	PSDB
MT	PP*	MDB*	DEM*	PDT	PSDB	PPS	PPS	MDB*	PDT	DEM*
PA	MDB*	MDB*	MDB*	PSDB	PSDB	PSDB	PT	PSDB	PSDB	MDB*
PB	PP*	MDB*	MDB*	MDB*	MDB*	PSDB	PSDB	PSB	PSB	PSB
PE	PP*	MDB*	DEM*	PSB	MDB*	MDB*	PSB	PSB	PSB	PSB
PI	PP*	MDB*	DEM*	MDB*	MDB*	PT	PT	PSB	PT	PT
PR	MDB*	MDB*	MDB*	PDT	DEM*	MDB*	MDB*	PSDB	PSDB	PSD
RJ	PDT	MDB*	PDT	PSDB	PDT	PSB	MDB*	MDB*	MDB*	PSC
RN	PP*	MDB*	PP*	MDB*	MDB*	PSB	PSB	DEM*	PSD	PT
RO		MDB*	PP*	MDB*	DEM*	PSDB	PPS	MDB*	MDB*	PSL
RR			PTB	PTB	PPB	PSL	PSDB	PSDB	PP*	PSL
RS	PP*	MDB*	PDT	MDB*	PT	MDB*	PSDB	PT	MDB*	PSDB
SC	PP*	MDB*	DEM*	MDB*	PPB	MDB*	MDB*	DEM*	PSD	PSL
SE	PP*	DEM*	MDB*	PSDB	PSDB	DEM*	PT	PT	MDB*	PSD
SP	MDB*	MDB*	MDB*	PSDB	PSDB	PSDB	PSDB	PSDB	PSDB	PSDB
TO			MDB*	PP*	DEM*	DEM*	MDB*	PSDB	MDB*	PHS

SOURCE: TSE and Cepesp. NOTE: parties marked with a "*" changed their name during the period. In the table, it is shown the most recent abbreviation.

APPENDIX E – LIST OF POLITICAL PARTIES

List of registered political parties in Brazil, between 1980 and 2019

Code	Abbreviation	PartyName	Ballot Number	Active	Year
0001	MDB	Movimento Democrático Brasileiro	15	1	2017
0001	PMDB	Partido do Movimento Democrático Brasileiro	15	0	1980
0002	PT	Partido dos Trabalhadores	13	1	1980
0003	PDS	Partido Democrático Social	11	0	1980
0003	PP	Partido Progressista	11	0	2003
0003	PP	Progressistas	11	1	2017
0003	PPB	Partido Progressista Brasileiro	11	0	1995
0003	PPR	Partido Progressista Renovador	11	0	1993
0004	PDT	Partido Democrático Trabalhista	12	1	1980
0005	PTB	Partido Trabalhista Brasileiro	14	1	1980
0006	DEM	Democratas	25	1	2007
0006	PFL	Partido da Frente Liberal	25	0	1985
0007	PCDOB	Partido Comunista do Brasil	65	1	1987
0008	PJ	Partido da Juventude	36	0	1987
0008	PRN	Partido da Reconstrução Nacional	36	0	1989
0008	PTC	Partido Trabalhista Cristão	36	1	2001
0009	PSC	Partido Social Cristão	20	1	1987
0010	PL	Partido Liberal	22	0	1987
0010	PL	Partido Liberal	22	1	2019
0010	PR	Partido da República	22	0	2006
0011	PSB	Partido Socialista Brasileiro	40	1	1987
0012	CIDADANIA	Cidadania	23	1	2019
0012	PCB	Partido Comunista Brasileiro	23	0	1987
0012	PPS	Partido Popular Socialista	23	0	1992
0015	PSDB	Partido da Social Democracia Brasileira	45	1	1988
0016	PMN	Partido da Mobilização Nacional	33	1	1988
0017	PASART	Partido Socialista Agrário Renovador Trabalhista	30	0	1988
0018	PV	Partido Verde	43	1	1988
0019	PRP	Partido Republicano Progressista	44	1	1988
0020	PRONA	Partido de Reedificação da Ordem Nacional	56	0	1989
0021	AVANTE	Avante	70	1	2017
0021	PTDOB	Partido Trabalhista do Brasil	70	0	1989
0022	PRT	Partido Revolucionário dos Trabalhadores	16	0	1993
0022	PSTU	Partido Socialista dos Trabalhadores Unificado	16	1	1993
0023	PRTB	Partido Renovador Trabalhista Brasileiro	28	1	1995
0024	PCB	Partido Comunista Brasileiro	21	1	1993
0025	PSL	Partido Social Liberal	17	1	1994
0026	PCO	Partido da Causa Operária	29	1	1995
0027	PHS	Partido Humanista da Solidariedade	31	1	1998
0027	PSN	Partido da Solidariedade Nacional	31	0	1998
0027	PSN	Partido Solidarista Nacional	31	0	1995
0028	DC	Democracia Cristã	27	1	2018
0028	PSDC	Partido Social Democrata Cristão	27	0	1995
0029	PAN	Partido dos Aposentados da Nação	26	0	1995
0030	PODE	Podemos	19	1	2017
0030	PTN	Partido Trabalhista Nacional	19	0	1995
0031	PSOL	Partido Socialismo e Liberdade	50	1	2005
0032	PMR	Partido Municipalista Renovador	10	0	2005
0032	PRB	Partido Republicano Brasileiro	10	0	2006
0032	REPUBLICANOS	Republicanos	10	1	2019
0033	PPL	Partido Pátria Livre	54	0	2011
0034	PSD	Partido Social Democrático	55	1	2011
0035	PEN	Partido Ecológico Nacional	51	0	2012
0036	PATRI	Patriotas	51	1	2018
0037	PROS	Partido Republicano da Ordem Social	90	1	2013
0038	SD	Solidariedade	77	1	2013
0039	PMB	Partido da Mulher Brasileira	35	1	2015
0040	NOVO	Partido Novo	30	1	2015
0041	REDE	Rede Sustentabilidade	18	1	2015
0043	PP	Partido Popular	-	0	1980

APPENDIX F – STATE DEBT IN FEDERATIONS

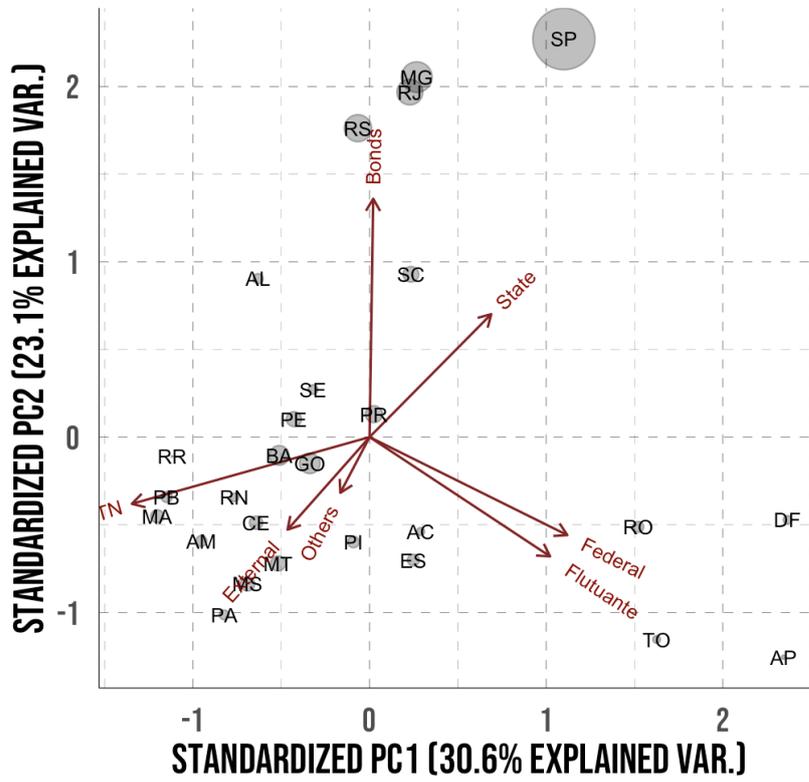
State total debt and financial charges as a share of GDP in latest year available

Country	State debt	Financial Charges
Canada	56.9%	1.7%
United States	31.6%	1.0%
Germany	28.9%	0.4%
Spain	27.3%	0.4%
India	21.3%	
Belgium	16.2%	0.3%
Switzerland	12.3%	1.4%
Brazil	11.4%	1.2%
Australia	10.9%	0.7%
Austria	7.9%	0.1%
Argentina	5.6%*	0.3%
Russia	3.5%	0.2%
Mexico	3.5%	0.1%
South Africa	0.0%	0.0%

SOURCE: OECD-UCLG World Observatory on Subnational Government Finance and Investment, latest year available. NOTE: There is no data for state government debt in India. Argentina state debt includes all subnational debt.

APPENDIX G – PCA OF STATE DEBT IN 1996

FIGURE 19 – PRINCIPAL COMPONENT ANALYSIS (PCA) OF DEBT COMPOSITION IN 1996



SOURCE: Data compiled by Mora (2002) and originally from National Treasury.

APPENDIX H – MODELS: SIMULATED OBSERVATIONS

Log-odds estimation for external (original data and simulated data) and internal loans

Variable	External 1	External 2	Internal
(Intercept)	4.20 *** [1.73, 6.67]	4.44 *** [3.53, 5.35]	2.17 ** [0.66, 3.68]
VPA	1.09 [-0.24, 2.42]	1.30 * [0.80, 1.80]	0.91 * [0.15, 1.66]
PRES_PARTY == MDB	-1.34 [-3.01, 0.33]	-1.38 [-2.00, 0.76]	-1.16 * [-2.34, 0.03]
PRES_PARTY == PSDB	0,82 [-1.00, 2.64]	-602 [601, 603]	1.98 * [0.32, 3.63]
DCL/RCL RATIO	-0.94 ** [-1.64, -0.24]	-1.04 *** [-1.30, -0.78]	-0.47 ° [-1.02, 0.09]
DOLLAR	-0.74 ° [-1.61, 0.12]	-0.80 ° [-1.12, -0.49]	-0,02 [-0.70, 0.65]
CURR. REVENUE	0.13 * [0.00, 0.25]	0.16 *** [0.12, 0.21]	0.13 * [0.01, 0.24]
LAST_180D	0.52 [-0.37, 1.43]	0.26 [0.20, 0.85]	0,44 [-0.11, 0.98]
ELEC_YEAR	-1.93 ** [-3.18, -0.68]	-2.06 *** [-2.52, -1.60]	-1.35 *** [-2.13, -0.57]
ELEC_YEAR (t-1)	-0.66 [-1.67, 0.36]	-0.715 [0.20, 0.85]	-1.31 *** [-1.88, -0.74]
WORLD CUP			-0.04 [-1.35, 1.26]
N. OBS.	283	610	610

*** p <0.001; ** p <0.01; * p <0.05; ° p <0.075

Model External 2 was simulated one thousand times with 610 observations and aggregated using the means, while model External 1 is the original data.

APPENDIX I – MODELS: FIXED EFFECTS

Regression models with fixed effects by region

Term	External		Internal	
	Coef.	SE	Coef.	SE
(Intercept)	4.78***	1.391	2.207	0.807
VPA	1.28	0.731	0.919	0.39
DCL/RCL RATIO	-1.341***	0.451	-0.485	0.305
DOLLAR	-0.796	0.466	-0.035	0.347
ELEC_YEAR	-2.159***	0.687	-1.363	0.401
ELEC_YEAR (t-1)	-0.645	0.535	-1.31	0.292
LAST_180D	0.525	0.473	0.429	0.278
PRES_PARTY == MDB	-1.099	0.901	-1.121 °	0.607
PRES_PARTY == PSDB	1.15	0.984	2.003**	0.853
NORTH	-1.017	0.635	-0.143	0.332
SOUTHEAST	1.296	0.987	-0.323	0.55
SOUTHEAST	0.39	0.803	0.078	0.589
CENTER-WEST	0.144	0.806	0.093	0.409
CURR. REVENUE	0.05	0.074	0.144*	0.073
WORLD CUP			-0.11	0.673
N.OBS.		283		610

The excluded category is the Northeast region.

APPENDIX J – MEASUREMENT OF THE VARIABLES USED IN THE MODELS

Definitions and measurements of variables used in the models

Variable	Description	Hypothesis	Time Meas.	Source
STATUS	Final status of the contract: 1 if approved, 0 if judicially approved or rejected.	DV	Daily	Sadipem, STN
VPA	Vertical partisan alignment: 1 if governor and president are from the same party, 0 otherwise.	H1, H4	Daily	Mainly TSE
PRES_PARTY	Categorical variable indicating president's party. 'PT' is the excluded category.	control	Daily	TSE
DCL/RCL RATIO	Ratio between Net Consolidated Debt and Net Current Revenue. Indicator of indebtedness.	H3, H4	Monthly	STN
DOLLAR	Dollar currency deflated to values of 01/2019, using IPCA	control	Monthly	FED Saint Louis
CURR. REVENUE	Current revenue of states deflated to values of 01/2019, using IPCA	control	Annual	Sicorfi, STN
LAST_180D	Dummy variable indicating if the state received a loan in the past six months. Dummy variable indicating electoral years (2002, 2006, 2010, 2014, 2018)	control	Daily	Sadipem, STN
ELEC_YEAR		H2	Annual	-
ELEC_YEAR (-1)	Dummy variable indicating the year before the election (2005, 2009, 2013, 2017)	H2	Annual	-
WORLD CUP	Dummy variable indicating if the loan was assigned in PAC's World Cup funding.	.	-	Sadipem, STN

APPENDIX K – STEP-BY-STEP TO GET A LOAN APPROVED

The following steps were translated and adapted from the National Treasury's manuals on November, 2020. These documents are used by states as guide to request a loan. They can change over time if the federal government issues new rules. The number of steps of external credit operations is relatively higher as also is higher the number of institutions that participate in the credit concession.

INTERNAL CREDIT

1. The financial institution send, through Sadipem, the Request for Verification of Limits and Conditions (PVL) and the request for the granting of the Union guarantee, after a digital signature of the governor, made in that same system.

2. The PVL and the Union guarantee grant request are pending review in a single queue.

3. Review of the PVL and the conditions for granting the Union guarantee.

4. If the requested credit operation is not eligible for Union guarantee, the claim is rejected and **the request is rejected**.

5. If the documents and information sent are correct, the credit operation is eligible to obtain a guarantee from the Union (according to criteria defined by Senate Resolution 43 of 2001, Senate Resolution 48 of 2007 and Ordinance 501 of 2017) and there is no legal questioning, proceed to step 9. If the documents and information submitted are not correct or there is a legal questioning, proceed to step 6.

6. A letter of requirement is sent to the financial institution and, if there is a legal questioning, the PGFN is consulted. The financial institution is informed of any consultation.

7. After the new documents and information are uploaded in Sadipem by the entity and the financial institution, and, if applicable, after the PGFN's response to the legal inquiry, the process returns to the single file of claims. If the entity does not send

the requested documents within 60 days, **the request may be rejected** .

8. The lawsuit is filed (**rejected**).

9. STN issues a technical opinion verifying if the limits and conditions set in Article 32 of the LRF, Senate Resolution 43 of 2001 and Senate Resolution 48 of 2007 were fulfilled.

10. The process is sent to PGFN.

11. If any document or information is past due, the process returns to STN (proceed to step 12). If no expiration has occurred, proceed to step 16.

12. STN reviews the process of the Union guarantee. If the documents are correct, go to step 15, otherwise to step 13.

13. A letter of requirement regarding the guarantee of the Union is sent to the subnational unit.

14. After the new documents are inserted into Sadipem by the state, the process returns to the single queue and then goes on for further analysis (return to step 12). If the state does not send the requested documents within 60 days, **the request may be rejected**. In this case, go to step 8.

15. STN issues a supplementary technical opinion on conditions for receiving a guarantee from the Union. Return to step 10.

16. PGFN issues an opinion and, based on Ordinance 198 of 2019, the process is sent to the Special Secretary of Finance. The aforementioned Ordinance dismiss the need of the direct approval of the Minister of Economy.

17. The Special Secretary of Finance authorizes the signing of the contract and the process goes to the PGFN. **The contract is approved.**

EXTERNAL CREDIT

1. Presentation of consultation letter to GTEC COFIEX, the technical group inside SAIN (Secretary of International Issues), that evaluate external financing.
2. There is a COFIEX meeting to discuss the letter.
3. The state sends the Request for Verification of Limits (PVL) and the request for the granting of Union guarantee to STN through SADIPEM.
4. The PVL and the guarantee request go to a single queue analysis.
5. Analysis of the request is done. The deadline for the conclusion of the analysis by the Ministry of Economy and for subsequent submission to the Senate is 30 working days (Senate resolution 43/2001).
6. If the documents are correct and there is no legal question, go to step 10. If they are not, go to step 7.
7. Letter of requirement is sent to the state and, if there is legal questioning, the PGFN is consulted. The state is also informed about any consultation for more information.
8. After the new documents are attached to SADIPEM, the process returns to the single queue (return to step 4).
9. If the state does not send the requested documents within 60 days, **the claim is filed.**
10. STN requests from SAIN to schedule a negotiation.
11. SAIN schedules the negotiation.
12. The negotiation is completed.
13. The state includes the data for accreditation purposes in the Register of Financial Operations (ROF).
14. STN verifies the consistency of the information included. If they are correct, proceed to step 15. If they are incorrect, STN asks the state to make the necessary

adjustments. In this case, return to step 13.

15. Post-negotiation analysis of the request is performed by STN.

16. If the documents are correct and there is no legal question, proceed to step 19. If they are not or there is a legal question, proceed to step 17.

17. A letter of post-negotiation requirement is sent to the state and, if there is legal questions, the PGFN is consulted. The state is also informed about any consultation.

18. After the new documents are attached to SADIPEM, the process returns to the single queue and then goes back for further analysis (step 15). If the state does not send the requested documents within 60 days, **the request may be filed**. In this case, go to step 9.

19. STN issues a report verifying the limits and conditions set in the LRF and in the Senate resolutions 43, of 2001, and 48 of 2007.

20. The process is forwarded to PGFN.

21. If any document or information is past due, PGFN returns the process to STN (step 22). If no expiration has occurred, proceed to step 26.

22. STN reviews the process. If the documents are correct, go to step 25. If they are incorrect, go to step 23.

23. A letter of requirement regarding the guarantee of the Union is sent to the state.

24. After the new documents are attached to SADIPEM, the process returns to the single queue and then goes back for further analysis (step 22). If the entity does not send the requested documents within 60 days, **the claim may be filed**. In this case, go to step 9.

25. STN issues a supplementary opinion on conditions for receiving a guarantee from the Union.

26. PGFN issues an opinion and, based on Ordinance 198 of 2019, forwards

the request to the Special Secretary of Finance.

27. If attesting to the fulfillment of the requirements of Ordinance 198 of 2019, the Special Secretary of Finance forwards the process to the Presidency.

28. The process is also sent to the Senate. In the Senate, it will receive a rapporteur in CAE. The report is voted in the commission but the final decision is made by Senate's floor.

29. If the Senate authorizes, the process is forwarded to PGFN.

30. In PGFN, if any document or information is past due, PGFN returns the process to STN, then proceed to step 31. If no expiration has occurred, proceed to step 36.

31. STN reviews the process. If the documents are correct, go to step 34. If they are incorrect, go to step 32.

32. A letter of requirement regarding the guarantee of the Union is sent to the state.

33. After the new documents are attached to SADIPEM by the state, the process returns to the single queue of claims and then goes back for further analysis (return to step 31). If the state does not send the requested documents within 60 days, **the claim may be filed**. In this case, go to step 9.

34. STN issues a supplementary opinion on conditions for receiving a Union guarantee.

35. The PGFN issues another opinion and forwards the matter to the Special Secretary of Finance.

36. The Special Secretary of Finance authorizes the signing of the contract.

38. The contract is approved and signed.

39. If the state want to make a contract change, it must submit a request to SAIN.

40. GTEC Execution of SAIN discusses the request. If the recommendation is unfavorable, **the claim must be amended, postponed or filed.**

41. STN analyzes the claim for contract change and forwards it to PGFN. The PGFN analyzes the claim and forwards it to the Special Secretary of Finance.

42. The Special Secretary of Finance authorizes the signature of the additive.

43. The contractual amendment is signed. **The contract is approved.**