UNIVERSIDADE DE SÃO PAULO
INSTITUTO DE RELAÇÕES INTERNACIONAIS

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# Foreign Direct Investments: Impact of party affiliation on the Brazilian subnational allocation of investments

São Paulo
2023

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# Foreign Direct Investments: Impact of party affiliation on the Brazilian subnational allocation of investments

Dissertação apresentada ao Programa de Pós-Graduação em Relações Internacionais do Instituto de Relações Internacionais da Universidade de São Paulo, para a obtenção do título de Mestre em Ciências.

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São Paulo
2023

**Catalogação na Publicação***

**Instituto de Relações Internacionais da Universidade de São Paulo**

Catalogação na publicação
Seção Técnica de Biblioteca
Instituto de Relações Internacionais da Universidade de São Paulo

Coury, Julia Reis
Foreign direct investments: impact of party affiliation on the Brazilian subnational allocation of investments / Julia Reis Coury ; orientador: Pedro Feliú Ribeiro, co-orientadora: Natalia Dus Poiatti. – São Paulo, 2023.
65 p.

Dissertação (Mestrado) – Instituto de Relações Internacionais. Universidade de São Paulo, São Paulo, 2023.

1. Investimento Estrangeiro Direto (IED) 2. Filiação partidária 3. Minas Gerais 4. Economia política I. Ribeiro, Pedro Feliú, orient. II. Poiatti, Natalia Dus, co-orient. III. Título.
.

CDD – 332.67

Responsável: Giseli Adornato de Aguiar - CRB-8/6813

**Abstract:** Is party affiliation an important aspect of the subnational allocation of Foreign Direct Investments (FDI) in Brazil? If important, would a governor from a more pro-business party affiliation attract more investments than a pro-labor one? Based on the availability of data from the Electronic Declaratory Registration - Foreign Direct Investment (EDR - FDI) and Quinquennial Census of Foreign Capital, both by the Brazilian Central Bank (BACEN), I examined FDI patterns from 2011 to 2016. More specifically, the research developed: a quantitative analysis of political and economic determinants for the subnational attraction of FDI; and a qualitative investigation of one state, Minas Gerais (MG), for a closer evaluation. Based on the results of the Arellano-Bond (1991) models, market size, service sector agglomeration, states' trade dimension, and partisan affiliation, especially if the governor is from PSDB (pro-business), are relevant factors for FDI subnational allocation. In turn, the results suggested that a higher cost of bureaucracy and alignment with the president's political party decrease FDI. The MG in-depth case refined the importance of pro-business party affiliation by characterizing the two administrations of PSDB (pro-business) and one administration of PT (pro-labor). Interviewees analyzed the role of different party affiliations in the state government, and a pro-business party impacted how the governor treated foreign investors. The party affiliation aspect was fundamental for consultants, civil servants, and lobbyists in FDI subnational allocation.

**Keywords:** foreign direct investment (FDI), party affiliation, Minas Gerais, political economy.

**Resumo:** A filiação partidária é um aspecto importante para a alocação subnacional de Investimentos Estrangeiros Diretos (IED) no Brasil? Se importante, um governador mais pró-empresarial atrairia mais investimentos do que um pró-trabalhista? Com base na disponibilidade de dados do Cadastro Declaratório Eletrônico - Investimento Estrangeiro Direto (EDR - IED) e Censo Quinquenal de Capitais Estrangeiros, ambos do Banco Central do Brasil (BACEN), os padrões de IED de 2011 a 2016 foram examinados. Mais especificamente, a pesquisa desenvolveu: uma análise quantitativa dos determinantes políticos e econômicos para a atração subnacional de IDE; e uma investigação qualitativa de Minas Gerais (MG), para uma avaliação mais detalhada. Com base nos resultados dos modelos de Arellano-Bond (1991), o tamanho do mercado, a aglomeração do setor de serviços, a dimensão comercial dos estados e a filiação partidária, principalmente se o governador for do PSDB (pró-negócios), são fatores relevantes para a alocação subnacional do IED. Por sua vez, os resultados sugeriram que um custo burocrático elevado e alinhamento com o partido político da presidência diminuem o IED. O caso aprofundado de MG caracterizou os dois governos do PSDB (pró-empresarial) e um governo do PT (pró-trabalhista) e refinou a importância de uma filiação partidária pró-empresarial. Os entrevistados analisaram o papel de diferentes filiações partidárias no governo estadual e um partido pró-empresarial impactou a forma como o governador tratou os investidores estrangeiros. O aspecto da filiação partidária foi considerado fundamental por consultores, funcionários públicos e lobistas na alocação subnacional de IED.

**Palavras-chave:** investimento estrangeiro direto (IED), filiação partidária, Minas Gerais, economia política.

**Résumé:** L'affiliation à un parti est-elle un aspect important pour la répartition régionale de l'investissement direct étranger (IDE) au Brésil ? Si cela a une importance, un gouverneur plus favorable aux entreprises attirerait-il plus d'investissements qu'un gouverneur favorable aux travailleurs ? Sur la base de la disponibilité des données du Registre déclaratif électronique - Investissement direct étranger (EDR - IED) et du Recensement quinquennal des capitaux étrangers, tous deux issus de la Banque centrale du Brésil (BACEN), nous avons examiné les modèles d´IDE de 2011 à 2016. Plus précisément, la recherche a développé : une analyse quantitative des déterminants politiques et économiques de l'attraction des IDE régionaux ; ainsi qu´une enquête qualitative de l´état de Minas Gerais (MG), pour une évaluation plus détaillée. Sur la base des résultats des modèles d'Arellano-Bond (1991), la taille du marché, l'agglomération du secteur des services, la dimension commerciale des États et l'affiliation à un parti, en particulier si le gouverneur est issu du PSDB (pro-business), sont des facteurs pertinents pour l'allocation régionale des IDE. À leur tour, les résultats suggèrent qu'un coût bureaucratique élevé et l'alignement sur le parti politique de la présidence diminuent les IDE. Le cas approfondi de MG a caractérisé deux gouvernements PSDB (pro-business) et un gouvernement PT (pro-travailleurs) et a précisé l'importance d'une affiliation à un parti pro-business. Les répondants ont analysé si le rôle des différentes affiliations partisanes au sein du gouvernement de l'État et un parti favorable aux entreprises ont eu un impact sur le traitement des investisseurs étrangers par le gouverneur. L'aspect de l'affiliation à un parti était considéré comme fondamental par les consultants, les fonctionnaires et les lobbyistes dans l'allocation régionale des IDE.

**Mots clés:** investissement direct étranger (IDE), appartenance à un parti, Minas Gerais, économie politique.

## I. Introduction

Economic globalization has contributed to increasing Foreign Direct Investment (FDI) flows, investments aimed directly at a country's productive sectors. They intensified the integration of global production processes and have caused continuous changes in developing countries' policies regarding their participation in the international market (Ribeiro and Silva Filho, 2013). Globally, the flow of FDI rose to US$ 1.58 trillion in 2021 (61%), up from 963 billion in 2020. Developing economies saw a considerable increase to 837 billion in 2021 (77%), up from 644 billion in 2020. In the developed world, countries achieved 746 billion in 2021 (119%), compared to 319 billion in 2020 (Unctad, 2022).

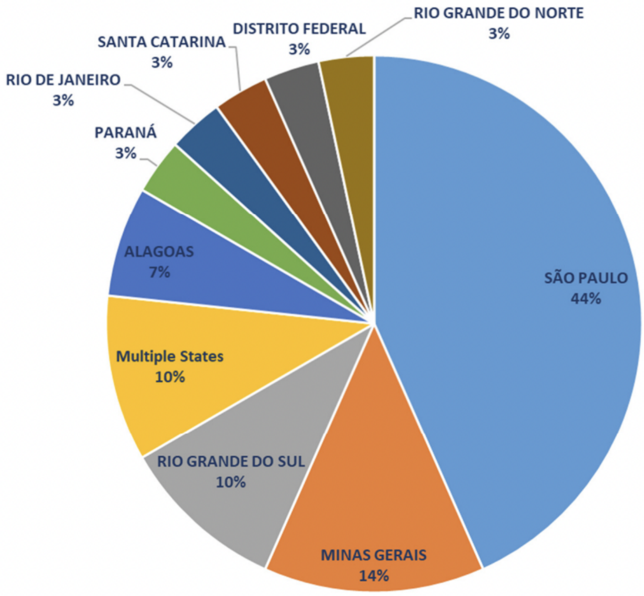
In Brazil, according to the Brazilian Central Bank (BACEN), direct investment is the most prominent investment category in the country's economic and financial relationship with the rest of the world. FDI is the largest category of foreign assets, even higher than international reserves (US$355.6 billion)[1]. The FDI stock stood at US$ 592.7 billion in 2021, 36.9% of the Brazilian Gross Domestic Product (GDP). Thus, analyzing FDI and understanding its patterns are very important to monitor Brazilian economic stability. Despite political turnovers and economic crises, since 2003, the country has conquered more investors. During the Covid-19 pandemic, foreign investment flows in Brazil rose from US$ 28 billion in 2020 to US$ 58 billion the following year (2021), representing a growth of 107% (Yazbek and Juliao, 2022).

According to the United Nations Conference on Trade and Development - Unctad report (2022), sectors that benefited from international investments generally include agribusiness, car manufacturing, electronics, information technology, and financial services. Therefore, when we supervise the implementation of these investments in the country, especially regarding the internal distribution of those resources, there is still a significant inequity in FDI concentration. For example, according to Figure 1, in the third quarter of 2019, 60 FDI projects from the United States, France, Italy, China, and Japan were identified in Brazil. Of the total projects, 44 confirmed investments worth approximately US $ 3 billion. The total value of the announced investments rises to approximately US$ 11 billion. Regarding the geographic destination of the projects, 13 of them will be implemented in São

[1] Foreign direct investment statistics in Brazil are compiled following the sixth edition of the International Monetary Fund (IMF) Balance of Payments and Position Manual (BPM6) and the fourth edition of the Benchmark Definition of Foreign Direct Investment (BD4) of the Organization for Economic Co-operation and Development (OECD).

Paulo, representing 44% of the confirmed investments. In Minas Gerais, four projects were confirmed. Rio Grande do Sul is the destination of 3 projects, and Alagoas of 2 projects. Paraná, Rio de Janeiro, Santa Catarina, Distrito Federal and Rio Grande do Norte are destinations of 1 project each. Finally, three projects were confirmed in more than one state (Multiple States) (Ministério da Economia, 2022)[2].

Figure 1. Distribution of investments by the number of confirmed projects by Brazilian states (3rd Quarter 2019) – Selected countries (United States, France, Italy, China, and Japan).
Source: Ministério da Economia, 2022.




Previous studies (Dunning and Lundan, 2008; Forssbæck and Oxelheim, 2011; Hymer, 1960; Krugman and Obstfeld, 2010; Nonnenberg and Mendonça, 2005; Nunnenkamp and Spatz, 2002) of FDI determinants have focused on cross-national research designs because investment decisions are linked to several national-level factors, such as exchange rates, capital controls, import/export policies, national political issues, and central government efficiency. However, other studies that include political and administrative factors (Amal e Seabra's, 2007; Dunning, 1993; Getz and Volkema, 2001; Jensen, 2006; Khan and Akbar, 2013; Madr and Kouba, 2016), which have clear subnational manifoldness, have also been assessed in cross-national analyses.

[2] South: Paraná, Santa Catarina e Rio Grande do Sul; Northeast: Bahia, Sergipe, Alagoas, Pernambuco, Paraíba, Rio Grande do Norte, Ceará, Piauí e Maranhão; Midwest: Goiás, Mato Grosso, Mato Grosso do Sul e Distrito Federal; North: Tocantins, Pará, Amapá, Roraima, Rondônia, Acre e Amazonas.

To address this gap, a growing literature in international political economy examines the determinants of FDI pull factors from a macro-perspective of subnational state characteristics (for review, see Owen, 2019). Especially when we consider state government officials, guided by their political parties' overall objectives. They may be primarily responsible for adjusting the state's conditions (or perceptions thereof) to attract FDI to their region (Choe, 2003; Owen, 2019; Samford and Gómez, 2012). Consequently, policymakers seeking to attract foreign investment know the different dynamics that motivate investors.

Therefore, assuming that the political action of governors is influenced by party affiliation (Loyola, 2014; Santos, 2013; Scully and Patterson, 2001; Smith, 1981; Speck et al., 2015; Tolentino, 2015), this study aims to investigate the following research question:

1. Is party affiliation an important political factor influencing the subnational allocation of FDI in Brazil?

Also, if party affiliation impacts the subnational attraction of FDI, the governor's party can determine if the state will be more open or closed to FDI (Pinto, 2013; Samford and Gómez, 2012). In order to grasp the direction of the flows of FDI in Brazil (growing or reducing), I will test the pro-business party rhetoric (Lu and Biglaiser, 2019; Milner and Judkins, 2004; Samford and Gómez, 2012), which states that governors from pro-business parties attract more FDI. As discussed in detail later, based on their trajectories and objectives [3], I categorized the Party of Brazilian Social Democracy (PSDB), as the most business oriented (Cardoso, 1990) and the Workers' Party (PT) as the most labor-oriented (Guidry, 2003; Samuels and Zucco, 2014), to check the party affiliation influence in FDI subnational allocation in Brazil.

Brazil, a federative presidential republic, is an interesting case for this subnational analysis. Brazilian subnational governments have primary responsibility for attracting investment through direct and indirect policy measures. The political macro-structure is similar: members are elected by the same proportional representation formula (the election of a representative also depends on the votes obtained by his or her party group) and governors

[3] They are the two most voted parties for presidential elections in the period analyzed (2011-2016).In the 2010 elections, in the first round, the PT had 46.91% of the valid votes in the first round, while the PSDB had 32.61%. In 2014, the PT obtained 41.59% of the valid votes and the PSDB had 33.55%.

are elected by majority system (absolute majority of votes) for four years, subject to re-election for a further four years. However, state-level legislatures diversify across the 27 Brazilian states (Souza, 2005). The governor will decide the size, priorities, and structures of the state's public administration and whether or not the state will have international investment attraction agencies. Besides, FDI is usually under the direct governability of the state governments and can be more influenced by its everyday issues (Owen, 2019; Samford and Gómez, 2012).

Overall, Brazil is interesting because the dynamics of foreign investment in the country are at least suggestive of other developing and medium-sized federated countries in the region (Mexico, Argentina) and abroad (India, Nigeria, Russia, Malaysia). The country is the sixth-largest recipient of FDI in the world and the first in Latin America (Unctad, 2022), and it is establishing itself as a significant attraction for investments in the region.

Mainly, this study is therefore unique as it interacts with the macroeconomic cross-national FDI literacy work (Dunning and Lundan, 2008; Forssbæck and Oxelheim, 2008; Hymer, 1960; Krugman and Obstfeld, 2010; Nonnenberg and Mendonça, 2005; Nunnenkamp and Spatz, 2002) while corroborating to the analysis of FDI attraction from a subnational and political perspective (Choe, 2003; Lu and Biglaiser, 2019; Owen, 2019; Samford and Gómez, 2012). In addition, it innovates when narrowing the scope of political factors to focus on political affiliation when studying FDI subnational attraction in Brazil.

Then, this research develops a quantitative analysis of the possible economic and, especially, political determinants for the attraction of FDI within the states in Brazil; and a qualitative investigation of Minas Gerais, a Brazilian state, for a closer evaluation. In the quantitative part, based on the availability of data from the Electronic Declaratory Registration - Foreign Direct Investment (EDR - FDI) and Quinquennial Census of Foreign Capital, both by BACEN, we examined investment patterns from 2011 to 2016. This temporal aspect is also important, as it allows the evaluation of two presidential periods, with president Dilma Rousseff (PT). Regarding the qualitative part, the in-depth case of Minas Gerais was based on semi-structured interviews with lobbyists, consultants, civil servants, scholars, and investors from the state.

I divided this study into six chapters. After the introduction, in the second chapter, I review the theoretical and empirical work in the FDI literature, focusing on explaining the aspects that affect the attraction of FDI to a location. First, I present the literature on the main economic factors of attracting FDI, followed by the literature on the impact of political, social, and administrative factors on the allocation of FDI. After, I continue to the literature defining the main Brazilian pro-business or pro-labor political parties (PSDB and PT) and their party affiliation impact on FDI. My purpose is to include the evolution of the FDI literature and highlight its gaps regarding cross-national analysis and disregard for political party factors. I hypothesize that the most pro-business-oriented party will attract more regional allocation of FDI.

In the third chapter, I introduce the data and the quantitative methodology. Initially, I used panel data to analyze the determinants of FDI distribution in Brazil. Its central purpose is to develop an econometric model in which I could insert control variables, mainly economic ones, in order to “isolate” the political and party-affiliation effects. Therefore, I also introduce and explain the choice of the Arellano-Bond (1991) methodology for the econometric models. In the next section, I analyze the results obtained in the two econometric models, as Arellano-Bond (1991) allowed the connection between the control variables and the theory, testing the hypothesis. The intention was to test variables with a large sample and then explore it with an in-depth case for a closer evaluation.

Therefore, in chapter five, by triangulating the results previously found in the econometric models, I selected Minas Gerais (MG), in Brazil, as an in-depth case. This chapter's main objective is to deepen further the political aspects that could not be analyzed only with quantitative data analysis. I discuss the quantitative and qualitative information obtained in the last substantive chapter.

## II. Literature

The literature will introduce the main concepts and the economic and political factors necessary for designing the quantitative methodological model and analyzing the in-depth case.

### *FDI types*

First, this research will use the FDI concept by the sixth edition of the International Monetary Fund (IMF) Balance of Payments and Position Manual and the fourth edition of the Benchmark Definition of FDI of the Organization for Economic Co-operation and Development (OECD).

According to the international methodological standard:

> “A direct investment relationship is configured when an investor from one economy has voting power equal to or greater than 10% in a company or investment fund from another economy. Under these conditions, the direct investor participates effectively in the company's strategy and management decisions, maintaining, in general, long-term interest in the investee (Banco Central do Brasil, 2021, p.6; International Monetary Fund, 2009, p.101).”

The motivation of the direct investor differs from that of the portfolio investor, as the latter does not seek to influence the investee company's management. The direct investment relationship can occur immediately when the direct investor himself has voting power equal to or greater than 10% in the investee company and indirectly when, for example, a company has a subsidiary in another economy, which, in turn, has 10% or more of voting power in a third company. Although the first company does not have a direct interest in the capital of the third, it exerts influence or controls indirectly. Direct investment relationships, therefore, can be transmitted through a chain of holdings. There is also a direct investment relationship between companies with a shared investor but do not exercise control or influence over each other – they are sister companies. These three forms of direct investment relationship (immediate, indirect, and sisterly) represent the most general relationship between companies in the same economic group (Banco Central do Brasil, 2021).

Moreover, the FDI has two components: equity interests and intercompany operations. The equity interest component refers to the investment of non-residents allocated to the capital of companies resident in Brazil; intercompany transactions refer to loans, bonds, or trade credits granted to companies resident in Brazil by non-resident companies belonging to the same economic group. Naturally, if the companies involved do not belong to the same economic group, the transaction will not be considered intercompany, being classified in another investment category (Banco Central do Brasil, 2021).

In general, the FDI component comprises transactions and positions in which the direction of influence takes place from abroad to Brazil, including liabilities and reverse assets:

• participation in the capital of non-resident direct investors in a resident investee;

• intercompany credits granted by a non-resident investor to the resident investee company;

• intercompany credits granted by a resident investee company to a non-resident direct investor (reverse investment, direction against influence). It is a liability-reducing asset (Banco Central do Brasil, 2021).

Compared to short-term capital inflows, such as portfolio investments and credit, FDI is the most important external financing modality because it is more stable even during adverse changes in the country's economic environment (Ozturk, 2012). Thus, countries have highly disputed FDI since it can benefit the host economy. Among the benefits are trade surplus, increased employment, technological capacity, economic modernization, and economic growth (Bittencourt, 2016; Castro and Campos, 2018; Crespo and Fontoura, 2007).

Usually, FDI is established in the host country through mergers and acquisitions of companies (M&As) or greenfield investment[4] (Ribeiro and Nakabashi, 2020). M&As investments intend to transfer properties. However, the income from such transfers may not be reinvested in the host country. On the other hand, greenfields create or expand the productive capacity of foreign companies in Brazilian territory. Furthermore, its ability to generate technology and knowledge spillovers for domestic companies is remarkable because companies developing new plants can bring new technologies and qualified labor to the national territory. One of Brazil's most significant greenfield projects was the $4.4 billion project kick-off by US-based Bravo Motor to manufacture electric vehicles, batteries, and other components. Among the international project finance deals, the largest was the construction of an offshore wind farm for $5.9 billion, sponsored by Ocean Winds, an energy supplier based in Spain (Unctad, 2022).

As a matter of data availability, this research considers the two types of FDI since the 'Olinda' platform, the data source, does not differentiate between the two concepts.

***FDI scenario***

Since 1990, Brazil has adopted rules that made remittances of foreign capital even more flexible, and around 1994, the country consolidated its commercial opening. The FDI flow reached its peak in the 2000s. Since then, except for the post-crisis period in 2009 and

[4] Greenfield investment: when a company builds new facilities, through projects, outside its original country (Burger et al., 2015).

coronavirus pandemic in 2019, it has increasing trends. In addition, important adjustments were made after the Brazilian Constitution of 1988. It can be observed that between 1990 and 1992, the country adopted several measures to eliminate a few restrictions on foreign investments. These measures made it possible for Brazil to accept the commitments stated in the MERCOSUR Investment Promotion and Protection Agreement and inspired by the model of the Multilateral Investment Guarantee Agency (MIGA) guidelines (Rubbi, 2005).

At the beginning of the 20th century, Brazil was one of the most important recipient countries for capital among emerging markets. According to Barreto Filho (1999), the country has relatively open legislation, based on the 1960s through Brazilian Law No. 4,131/64. Thus, since the 1988 Constitution, the country has been adopting rules that have made settlements of foreign capital even more flexible, such as the Principle of Fiscal Federalism, giving States the right to create their policies for attracting investments in general and FDI in particular. Previously, industrial policy was exercised by the federal government, which determined locational advantages (Import Substitution Industrialization cycle). With the 1988 Constitution of Brazil, the states and the Finance Policy Council became responsible for setting the Goods and Services Tax (ICMS) rates. Furthermore, with the introduction of the Real Plan in 1994, the flow of foreign investment to the country intensified considerably. Measures such as the search for fiscal balance and a low and stable inflation rate were decisive for the resumption of the attraction of FDI (Rubbi, 2005), as they are still important nowadays. In summary, Table 1 shows the various laws that affect FDI regulation in Brazil.

Table 1. Brazilian laws that directly affect FDI regulation. Source: Canuto, O., 1993; Comin, A., 1998; República Federativa do Brasil, 1988.

| Year | Regulation | Description |
|---|---|---|
| **1962** | Law No. 4,131 | Regulates operations with foreign capital. |
| **1965** | Law No. 4,728 | Restriction on foreign capital in balance sheet payments crisis periods. |
| **1965** | Taxes | Creation of the Goods and Services Tax (ICMS). |
| **1966** | Taxes | Creation of the Tax on Industrialized Products (IPI). |
| **1970** | Public Programs | Social Integration Program (PIS);<br>Social Investment Fund (Finsocial). |
| **1982** | Decree-Law No. 1986 | Permission for different treatment of foreign investments in |

| | | |
|---|---|---|
| | | the capital market. |
| **1986** | Public Policies | Compulsory deposit;<br>Contribution to Social Security Financing (Cofins). |
| **1988** | Constitution of 1988 | Favors federal money and companies (art.171): Monopoly of oil exploration; restrictions on mining and hydraulic energy, fishing, financial, capital and insurance markets, maritime and land transport (by air only with authorization from the Ministry of Aeronautics), information technology (end in 1994), purchase of rural property (except for approved agricultural projects by the Ministry of Agriculture). |
| **1991** | Commercial and Industrial, Policy / Financing, Technology transfer, and Privatizations | National Bank for Economic and Social Development (BNDES): financing of projects by foreign companies with resources from the World Bank, Inter-American Development Bank (IDB) and Japanese Eximbank; and Creation of the National Institute of Industrial Property (Inpi). |

Through the National Bank for Economic and Social Development (BNDES), the Brazilian government encourages and promotes FDI. Most barriers to the activity of foreign investors have been removed, especially in the stock markets. Many public companies have been privatized, and many areas have been deregulated over the past fifteen years. The Brazilian government also follows a strategy of macroeconomic reforms, aiming to rationalize the Brazilian tax system. Besides, Brazil has signed bilateral conventions to protect foreign investments with 14 countries, but Congress still needs to ratify seven. (Santander Trade Markets, 2022)

Knowing the general Brazilian context of FDI attraction is interesting because, as the present research focuses on the subnational analysis in a defined time, the national context is the same and provides a "controlled" environment for state governments' factors to stand out.

***Economic factors for FDI attraction***

The literature contains diversified statements when debating the theoretical foundations of FDI economic determinants. Some scholars focus on the multinational firms' decision-making process for choosing a location (for review, see Jensen, 2017), or in the case of Brazil specifically (Rodríguez-Pose and Arbix, 2001), as the dependent variable to understand FDI attraction. Other scholars (Broadman and Sun, 1997; Guimarães, Figueiredo, and Woodward, 2000; Hsiao and Shen, 2003; Bortoluzzo, Sakurai, and Bortoluzzo, 2013; Mukherjee, 2011; Nonnenberg and Mendonça, 2005; Nunnenkamp and Spatz's, 2002;

Pattayat, 2016; Samford and Gómez, 2012; Silva, Almeida, and Oliveira, 2007; Sun, Tong, and Yu, 2002), on the other hand, focus more on the country, or in our case subnational, characteristics as the dependent variable. In this research, I chose the second perspective and focused on the states' subnational characteristics to analyze the FDI pull factors. However, both views complement each other and are presented in this section. Companies evaluate state characteristics to decide where to allocate their investments. In contrast, states consider companies' internal decision-making process to implement FDI attraction policies or adapt the state's characteristics.

Tinbergen (1962), Bergstrand (1985), and Kleinert and Toubal (2010) connect FDI with the size of the economy and the countries involved in the negotiation by using the gravitational model. Some approaches consider the spatial location of investments (Chakrabarti, 2003), market imperfections such as information asymmetry and transaction costs, and strategic management (Dunning and Lundan, 2008; Hymer, 1960; Krugman and Obstfeld, 2010). Other theories focus on the motivations for the commitment to the placement of the investments (Dunning and Lundan, 2008; Moosa, 2002), the presence of agglomeration economies (Du, Lu, and Tao, 2008), or countries' trade-off dynamics between attracting new direct external investments and extracting tax revenue from existing assets for the attraction of FDI (Konrad and Kovenock, 2009).

Furthermore, some empirical studies were developed based on the distribution of FDI between different countries. That is the case of Nunnenkamp and Spatz's (2002) study, which correlated FDI and the variables of GDP per capita, risk factors, years of schooling, restrictions on foreign trade, complementary aspects of production, administrative bottlenecks, and cost factors when addressing 28 developing countries since the late 1980s. Nonnenberg and Mendonça (2005) focused on variables such as size and pace of growth of economic activity, the level of labor qualification, friendly policies towards foreign capital, country risk, and stock market performance to explain the main determinants of FDI based on a data panel of 33 developing countries. Forssbæck and Oxelheim (2008), using a sample of European firms' cross-border acquisitions, and controlling for traditional firm-level determinants of FDI, found strong evidence favoring a cost-of-equity effect. In contrast, the impact of debt costs is indeterminate. However, even with these factors' relevance, they will not be included in the study because no database is available at the firm level, only data aggregated by state.

Concerning the literature on the regional allocation of investments, Guimarães, Figueiredo, and Woodward (2000)'s meta-analysis finds agglomeration economies decisive for subnational FDI distribution. Also, it states that a service agglomeration has a notably strong effect. Simultaneously, industry-level economies and urbanization externalities are verifiable location determinants, and distance from the principal cities is statistically significant.

Some studies about China's and India's internal FDI allocations are also important. For example, in China, Broadman and Sun (1997) identified GDP, transport infrastructure, labor quality, and geographic location (coastal region) as important factors in attracting FDI to the provinces. On the other hand, Sun, Tong, and Yu (2002) stated that the factors attracting FDI were GDP, labor quality, and good infrastructure in the province (measured as the mileage of highways and railways per $km^2$), while higher wages and agglomeration repel investment. Hsiao and Shen (2003) found infrastructure development and ease of access to the market as significant determinants of FDI and cost and quality of labor based on panel data for 31 regions of China. In India, Mukherjee (2011) reported that market size, agglomeration effects, and size of manufacturing and services based in a state significantly positively impact FDI flows. On the other hand, higher wages and higher tax rates harmed FDI flows. Also, Pattayat (2016) added that the influence of GDP on inward FDI is the highest, indicating the market size's role in attracting foreign capital flow.

Some studies on the Brazilian scenario exist. The first one was developed by Silva, Almeida, and Oliveira (2007) to analyze the border effect, comparing Brazilian domestic trade with existing international trade in 1999. The second major study was developed by Bortoluzzo, Sakurai, and Bortoluzzo (2013). The research investigates the determinants of the location of FDI among Brazilian states based on panel data for the years 1995, 2000, and 2005. They show that investments can respond positively to the size of the market, the quality of the workforce, and the transport infrastructure and negatively to the cost of labor and the high tax burden.

***Political factors for FDI attraction***

The claim that economic factors impact the investment in operations in one country or another is relatively non-controversial. However, political factors directly impact economic ones and can harm or benefit any economy (Jensen, 2006). While the impact of economic aspects has been broadly studied to explain FDI allocation, political ones, especially partisan affiliation, have not been as thoroughly investigated by scholars, mainly because of a lack of data (Khan and Akbar, 2013).

Amal e Seabra's (2007) empirical findings indicated that, under a perspective of a local or regional market-seeking strategy, institutional factors – as the degree of economic freedom and political stability and also state's FDI promotion agencies – are statistically significant to explain FDI attraction. Moreover, empirical studies determined that market size, wages, and political stability affect the location decisions of FDIs (Dunning, 1993).

Further, corruption has a disincentive effect on investment since it increases the risk and uncertainty encountered by potential investors (Getz and Volkema, 2001). Madr and Kouba (2016) evaluated the political environment based on three dimensions: quality of democracy, political instability, and corruption. From a subnational perspective, Garriga and Phillips (2022) explained how organized crime competition in Mexico, as opposed to crime generally, shaped investors' decisions, finding that higher numbers of criminal groups are associated with lower levels of new FDI. However, other crime measures, such as homicide or crime rates, were not associated with foreign investment.

As state governments themselves engage in attracting FDI, subnational analyses become increasingly important. By analyzing the mayoral election in Brazil, Owen (2019) used new project-level greenfield FDI data to find that announcing a new investment project increased the probability that the incumbent party won reelection. The findings suggested a channel through which globalization directly affects mass politics at the subnational level. Also, according to Samford and Gómez (2012), state lawmakers have incentives to encourage foreign investment within their borders because political and administrative factors vary at the federal level. By studying the 32 Mexican states, they find that the predictors of subnational variation in investment include factors such as local political party control, social stability, and the perceived effectiveness of state authorities. Moreover, they affirm that adopting a government colligated with the president's party, especially correlated to business-friendly rhetoric, helps raise investment of this sort (Samford and Gómez, 2012).

Going further on the influence of party affiliation literature for attracting FDI, Pinto (2013) develops a partisan theory of FDI to explain cross-country and temporal variance in the regulation of foreign investment and the amount of FDI inflows that countries receive. The author explores the host governments' partisan alignment, whether pro-labor or pro-business, to determine if they will be more open or closed to FDI. The author argues that labor-based governments welcome foreign investment, whereas governments catering to domestic business interests oppose it. Therefore, FDI could affect the relative demand for labor and business services: FDI inflows were likely to decrease the return to capital and increase the return to labor.

On the other hand, a subnational theory about unequal Chinese investments in the US states found that Chinese firms were more attracted to states where Republican governors hold office. Republican-governed states particularly attracted greenfield investments from Chinese firms, suggesting that job creation is just as important to Republicans as it is to Democrats but in a lower-cost environment. Thus, Chinese firms would seek the lower costs associated with Republican-governed states, while Republicans still want jobs from the Chinese FDI (Lu and Biglaiser, 2019).

Lu and Biglaiser (2019) anticipate that a common bond exists between foreign investors seeking high returns on their capital and politically driven state governments, who favor policies that advance the interests of their core constituents. According to them, the business-friendly rhetoric of a political party influences the attraction of FDI.

Besides, Henisz and Williamson (1999) argue that investors worry about policy changes, especially after deploying their assets abroad. These authors contend that veto players crystallize the status quo, making policies more stable (Jensen et al., 2012) and reassuring foreign investors better. Considering those investors as an interest group (Jensen et al., 2012), how parties' organization behaves towards them indicates whether political parties are embedded in the organized parts of civil society. In addition, it also tells us what kinds of interests and constituencies they primarily represent (Allern, 2010). According to Milner and Judkins (2004), right parties consistently take more free trade stances than left ones. Globalization and other international forces shape the nature and the extent of the domestic debate over exposure to international trade.

Considering Brazil's political and economic context during the analyzed period (2011-2016), the same two major parties - in terms of percentage of votes - competed for the presidency in the second round in the electoral period (2010 and 2014), PSDB and PT. Of all the parties that competed in the elections, these were the only two with real chances of winning the presidency. Since their creation, these two parties have represented different interests, the PSDB is commonly associated with business interests (Goldstein, 2012), and the

PT has a long history related to trade union movements (Guidry, 2003). The next sections will present their main characteristics.

### *Party of Brazilian Social Democracy (PSDB)*

PSDB emerged as a split from the PMDB in 1988 and intended to unite a social democratic agenda with a liberal agenda in Brazil (Goldstein, 2012). In 1989, Fernando Henrique Cardoso (FHC) and Serra wrote a document called “Brazil needs a shock of capitalism” where they pointed out "the verification that the development model by substitution of imports, based on the closed economy and centered on the State, had reached the end, so the economic reforms were important and inevitable (...)”. That somehow brought the PSDB closer to a more liberal platform while defending the construction of a Social Welfare State in Brazil (Goldstein, 2012).

Since its founding, the PSDB has been a party of parliamentary leaders. These leaders had a low insertion in organized civil society but an important influence in public opinion and the media, where politicians like Serra and FHC had and have meaningful participation and relevance. This social democratic definition of the PSDB formed a "progressive" agenda of partisan competition with the PT (Goldstein, 2012; Power and Zucco, 2014).

Although it has the term social democracy, the party has a parliamentary origin that emerged without ties to social movements or European social democratic parties. From the beginning, professional politicians supported by intellectuals presented a pro-market stance (Zacharias, 2020). According to the party’s manifesto, an independent country is "capable of defending its interests within a growing relationship with the international market and foreign capital” (Cardoso, 1990). In addition, by opening the country to foreign capital, stating that "multinationals only invest if they have the perspective of remitting the profits they obtain" and that it is Brazil's job to show the guarantees and potential for this attraction, FHC initiated a bond of confidence and network between multinationals and PSDB.

### *Worker’s Party (PT) Management*

In contrast, PT is the “most influential and best-organized left-wing party of the Third Wave of democratization in Latin America” (Guidry, 2003). The party's trajectory from semi-clandestine meetings during Brazil's military dictatorship (1964-85) to a successful national organization with international linkages is an instructive case study of how labor parties can contend in democratic politics during the neoliberal era. The party developed an innovative, grassroots structure that has sustained ties with labor movements, community movements, the progressive Catholic Church, and a growing sector of non-governmental organizations in Brazilian civil society. The party's electoral history over the last 20 years is one of continual expansion, emerging from the fringes in the early 1980s to become, by 2002, the third-largest party in the Senate (14 seats) and the largest (91 seats) in the Chamber of Deputies (Guidry, 2003).

Lula was the first Brazilian president whose political base resided in labor and the left (Guidry, 2003). The party owes its success to social-organizational, ideological, and governmental factors. First, the party can build bridges between labor and other grassroots movements by maintaining "autonomy" from organized labor and the other social movement organizations it claims to represent. Many of its members and public officials are drawn from organized labor, and many more are drawn from community movements, progressive religious organizations, human rights organizations, and the educational community. The most significant number of labor activists in the party itself comes from "white collar" unions of bank workers, school teachers, university professors, and other public sector employees. With its broad base, the party can build alliances across social movements and act as the political arm of various popular causes. The PT held the presidency for 14 years, between Lula's government (2003-2010) and Dilma's Rousseff (2011-2016) (Guidry, 2003). Despite ideological adjustments, PT maintains its party affiliation with unionism and is considered the pro-labor representative (Ribeiro and Mendes, 2019).

### *Pro-business party affiliation: 2014 elections*

Based on Mancuso et al. (2021), campaign donations are one of the forms that the relationship between political parties and foreign capital can vigorously develop. Some authors study business donations as a whole, exploring their determining factors and addressing their effects on the performance of candidates. Historically, in Brazil, business investments were the primary source of electoral campaigns between 1994 and 2014 (Mancuso et al., 2016). The results of two decades of corporate investments are reported and analyzed in several works (Junckes et al., 2019; Mancuso et al., 2016; Speck, 2016 ). There is a consensus among researchers that the allocation of corporate financing resources made the parties, as well as the candidacies, more competitive and economically dependent on this source and produced distortions in the conditions of dispute for the vote. (Junckes et al., 2020)

Considering the analysis period (2011-2016), the 2014 presidential campaign, in which the PSDB had Aécio Neves as the presidential candidate, is an interesting example. The party was the one that received the most funding from the five leading donor banks, most of them international or with a significant external presence (Souza, 2014). At the time of the electoral period of the 2014 campaign, in which Neves ran for the presidency, there was an explicit preference for foreign capital in the election of Aécio than in the re-election of Dilma Rousseff, the candidate from PT.

In the first round, Aecio Neves was just 8 points behind Dilma. The message impacted the financial market, and Ibovespa closed with an increase of almost 6% in the first two days after the election. The tendency of the stock market to rise when Dilma was doing poorly in the polls and to fall when she was doing well was a keynote of the first round. Thus, large Brazilian and foreign companies consider the election a determining factor in deciding the next steps in the business. Some executives even said that if Aecio did not win the election, the company would "immediately reduce the investment plan for the next four years, but if he won, it would reinvest the next day" (Barros, 2014).

Also, in a survey by the business management consultant Betania Tanure, on executives' opinions regarding the second round of the presidential election, more than 800 company presidents and advisers responded, and 92% said they would prefer Aécio to be elected president. The main reasons adopted for this position were the credibility of Aécio and the PSDB. Betania also asked what the determinants of the candidate's choice were. With 20% adhesion, the first item is the most chance of undertaking reforms good for the business sector (Barros, 2014).

In addition, the excitement of the private initiative with Aecio was justified as they believed the party could build a cohesive base of support in Congress and facilitate government governance. In the case of Aecio, his support base would have more than 200 representatives. In other words, there is even scope for projects that change the Constitution (which requires 308 votes). The party was seen as having good articulation capacity, as it was one of the only large parties that did not lose seats in the Chamber of Representatives (Barros, 2014).

Regarding the campaign of Federal Representatives, a study on campaign financing in 2002 stated that PSDB depended more on business resources to finance the elections of its candidates. Thus, the largest corporate donors had a greater weight in funding candidates from more right-wing parties. Interestingly, the PSDB was the party whose candidates generally received the most financial resources (Santos, 2009).

In return for the donations, exercising the mandate of a Federal Representative for at least a year generated, on average, a more excellent value of public contracts for the candidates' campaign donors (Araujo, 2012). The political party is undoubtedly an essential element in the composition of this amalgamation, which determines the decision to which candidacies will be donated resources during electoral season.

Then, PSDB, since its creation, aimed to attract more businesses to Brazil and transform the credibility of the country as suited for more FDI. Foreign investors had contributed by financing campaigns. Therefore, for the analyzed period of this research (2011-2016), by adapting the literature (Allern, 2010; Henisz and Williamson, 1999; Jensen et al., 2012; Lu and Biglaiser, 2019) to the Brazilian reality and based on PSDB's creation manifest and overall relevance in the political arena, the party can be considered a pro-business representative and, therefore, the party affiliated to the foreign capital community (Cardoso, 1990).

Consequently, this study focused on testing a central hypothesis related to the impact of pro-business party affiliation in the subnational allocation of FDI:

$H_1$: The most business-oriented party will attract more regional allocation of FDI.

The argument is that the PSDB, the most business-oriented party between 2011-2016 in Brazil, makes more pro-business decisions and this involves developing more strategies to attract direct foreign investment than pro-labor parties. The economic factors described before and some previously mentioned political variables were used as controls to analyze the party affiliation impact adequately. Table 2 summarizes these variables' anticipated relationships with foreign investment.

Table 2. Variables and Expected Proxy Summary. Source: Produced by the author.

| Variable | Type of Variable | Proxy | Expected effect | Source |
|---|---|---|---|---|
| Foreign Direct Investment Flows | Response | Electronic Declaratory Registration - Foreign Direct Investment (EDR - FDI) in relation to GDP | NA[5] | Central Bank of Brazil ('Olinda' Platform) |
| Infrastructure | Explanatory | Extension of the road network paved (Km) | + | National Department of Transportation Infrastructure (DNIT) |
| Market size | Explanatory | GDP per capita | + | Ipeadata |
| Federative Unit's Financial Situation | Explanatory | Federative Unit's Consolidated Debt | + | National Treasury Secretariat (TN) |
| Productive Sectors | Explanatory | Agricultural Production Contribution to GDP | + | Brazilian Institute of Geography and Statistics (IBGE) |
| | | Services Contribution to GDP | + | |
| Trade Openness | Explanatory | Exports | + | Ministry of Economy |
| | | Imports | + | |
| Bureaucratic Efficiency | Explanatory | The average monthly salary of civil servants | + | IBGE |
| | | Compared Productivity Index of Justice: IPC-JUS | + | National Council of Justice (CNJ) |
| Political Stability | Binary | Dummy representing the presence or not of coalitions between the governor's party and the president's party | + | Superior Electoral Court (TSE) |
| Party Affiliation | Binary | Governor from PSDB | + | TSE |
| | | Governor from PT | - | |

[5] Not Applicable.

## III. Data and Methods

As previously stated, I intend to apply a model to control for important economic factors and analyze the covariation of party affiliation. After, I clarify the explanatory mechanisms of the relationship between party affiliation and FDI for theory building.

BACEN provides two types of data on the topic: FDI stock and flows. Concerning data on the stock of FDI, BACEN conducted the Quinquennial Census of Foreign Capital. Although the data is scarce and only available every five years, some information can be observed on the origin of investments and the sectors that receive it the most. As for the FDI flows, there is an FDI Electronic Declaratory Registration (EDR) platform. EDR is a computerized system that allows interested parties to register operations in the foreign capital area in the country directly on an online platform[6]. For this type of FDI, it is possible to analyze the amounts transferred to a particular state in a specific year without associating them with previously allocated capital.

### *FDI Stock*

FDI stocks measure the total level of direct investment at a given time, usually at the end of a quarter or a year. (Foreign direct investment (FDI) - FDI stocks - OECD Data, 2022) Analyzing the available data regarding FDI stock in Brazil, according to BACEN's Investment Report of 2021, in 2020, Europe remained the region with the most extensive stock of FDI in Brazil, with 66.3% of the total of US$765.4 billion. North America is the region with the second largest stock of FDI, with 18.9% of the total. The Netherlands stands out as the leading European immediate investor, with 41.4%, followed by Luxembourg, 13.3%, and Spain, with 12.2% of the total European position (US$507.3 billion). Also, the FDI position of North American Immediate Investors totals US$144.4 billion, of which 78.8% belongs to the United States. (Banco Central do Brasil, 2021)

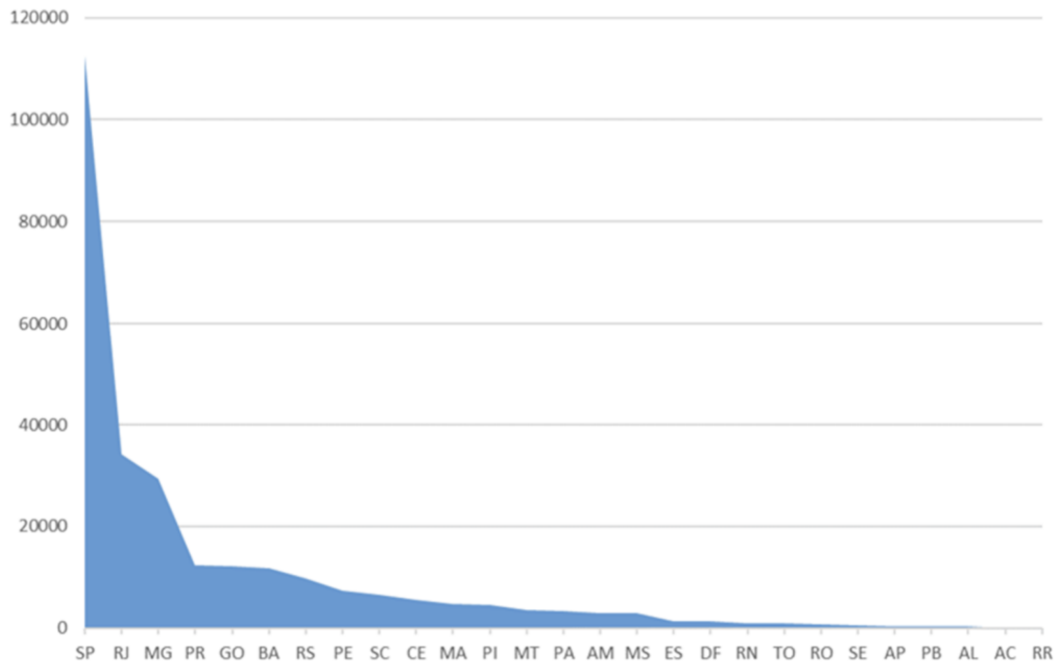
Looking at the origin of investors is attractive, especially when we try to correlate their business interests, the sectors most invested, and the regions. In this sense, depending on the region's most developed sector, companies will consider different aspects more when making investment implementation decisions. An example would be the agriculture sector, which can consider infrastructure and proximity to harvesting and processing areas. That is,

[6] Bearing in mind that the declaratory character of this registration implies the responsibility of the declarants for the integrity and legality information provided.

the determinants of investment are not always the same. Therefore, an overview of the Brazilian region's sectors can broaden the view of the connection between sectors and investment locations.

Figure 2 shows that the investment from the United States, France, Italy, China, and Japan, accumulated from 2003 to 2019, concentrates in the Southeast (60%) and South (13%) regions, in a similar geographic concentration to the total inflows into the country. In the Southeast, the state of São Paulo stands out (41%), followed by Rio de Janeiro (10%) and Minas Gerais (MG) (9%). In the South, the highlights are the state of Paraná (6%), and Rio Grande do Sul (5%) (Ministério da Economia, 2022).

Figure 2. The concentration of projects by Federation Units accumulated from 2003 to Sep/ 2019 (US $ million) - Selected Countries (United States, France, Italy, China, and Japan). Source: Ministério da Economia, 2022.




*North*

The economy of the North region is based on mineral and plant extractives, agriculture, livestock, and tourism activities (Azevedo, 2019). In addition, the region has the Manaus Free Trade Zone (ZFM). The ZFM is an economic development model implemented by the government to economically develop the Amazon region and promote better productivity and social integration of this region with the country. The ZFM currently houses around 600 industries (Fazcomex, 2022)[7].

According to BACEN, in 2020, the industries of Amazonas with the most FDI stock are information technology (IT), electronic and optical production, rubber and plastic materials, and automotive vehicle production. In Tocantins, the food products sector receives the most FDI.

*Northeast*

The strength of the economy of the northeast region is the agricultural, industrial, tourism, and trade activities (Magalhães, 2019). In addition, the region is known for the generation of wind energy. Of the 619 wind farms installed in the country, 523 are located in this region (Neonergia, 2022).

In terms of real examples, in January 2019, CGN Energy, China's largest nuclear power company, bought three renewable energy plants in the Northeast from Italian company Enel. The value of the transaction was approximately US $ 785 million, inaugurating the operations of this company in Brazil. Also, the Chinese packaging company GSPak has confirmed a US $ 48.8 million investment in setting up a factory in Rio Largo (AL). The Brazilian renewable energy subsidiary of the Italian group Enel has initiated investment to increase the total installed capacity of the Delfina (BA) wind farm. The value of the project is approximately US $ 40 million (Ministério da Economia, 2022).

The chemical sector generally receives a lot of FDI in Alagoas and Pernambuco. In addition, in Pernambuco, the beverage, chemical, maintenance, repair, and installation of machinery and equipment sectors receive much investment in the state. In Piauí, the sector with the most extensive stock of FDI is the repair and installation of machinery and equipment. In Bahia, the chemical, rubber, and plastic material and food industries are the largest recipients of FDI. The beverage and food sectors are the biggest recipients in Rio Grande do Norte, Ceará, and Sergipe. In Maranhão and Pará, the metallurgical industry is the largest recipient. In Paraíba, the non-metallic mineral products industry attracts the most FDI.

[7] The ZFM has one of the most modern technological devices. It houses an extensive production line in various industrial areas. Among them, we highlight the production of home appliances, vehicles, televisions, cell phones, motorcycles, sound and video equipment, air conditioners, watches, bicycles, microcomputers, and transmitter/receiver devices.

*Midwest*

This region has expressive grain productivity and leads Brazilian agricultural production. The region has large productive properties, mainly cotton, rice, corn, soybeans, coffee, and sugar cane (Cunha and Wander, 2016).

Therefore, in the Federal District, the sector with the most FDI is the food-producing industry, Mato Grosso, and Mato Grosso do Sul. In Goiás, in addition to the food industry, the production sectors of chemical products, non-metallic mineral products, machinery, and equipment also have the most extensive stock of FDI.

*South*

This region has a strong economy in agriculture and livestock (Luiz, 2019). Consequently, Paraná, Rio Grande do Sul, and Santa Catarina have a significant stock of FDI in the food industry.

In addition to this sector, Santa Catarina has the most extensive stock of FDI in metallurgy. Rio Grande do Sul has FDI in pulp, paper, paper products, machinery, and equipment. Paraná also has inventory in the chemical, beverage, motor vehicle, trailer, machinery, and equipment industries (Ministério da Economia, 2022).

*Southeast*

The economy of the Southeast region of Brazil is considered the largest in the country, as it is responsible for 55% of the GDP. The economy of the Southeast Region is driven by industrial and agricultural production, the commerce and services sectors, and especially tourism (Reis, 2019).

Espirito Santo, Rio de Janeiro, and Minas Gerais have a large stock of FDI in the metallurgical industry. Additionally, Minas has a large inventory of FDI in the chemical, beverage, pulp, paper, and paper products, non-metallic, and food chemicals sectors. Regarding Rio de Janeiro, the state receives more investment in beverages, coke, petroleum derivatives, and biofuels, pharmochemical and pharmaceutical products, and rubber and plastic products.

In terms of the number of investing industries, São Paulo is the state that has the most FDI industries. The most extensive inventories of FDI are in beverages, food products, motor vehicles, trailers and bodies, chemicals, machinery and equipment, and pulp, paper, and paper products.

São Paulo is the largest energy distribution market in Brazil. The state has more than 18.6 million captive market consumers, who use approximately 11 million MWh/month, making it very attractive for investments in the electricity sector (Distribuição de Energia em São Paulo, 2022). It is also important to emphasize that, in general, large companies, even if they do not have a production area in the state, have the main office in the country in São Paulo (Ministério da Economia, 2022).

### *FDI Flows*

FDI flows record the value of cross-border transactions related to direct investment during a given period, usually a quarter or a year (FDI stocks - OECD Data, 2022). For FDI Flows, analyzing the amounts transferred to a particular state in a specific year is possible without associating them with previously allocated amounts or capital.

Therefore, for this study, I will observe the flows of FDI, given that this information will be more related to the "instantaneous" investment attraction in a given state. I want to understand the impact of party affiliation in attracting investments to enter the country and compete with other regions. Flows of FDI, as it is the investment's value over time, will be a better measure than the accumulated stock, which could result from years of investments from different regional governments. Therefore, making it impossible to separate and associate FDI with a particular government.

Then, initially, for the quantitative part, this project will use panel data for the quantitative analysis from the Electronic Declaratory Registration - Foreign Direct Investment (EDR - FDI)[8] from 2011 to 2016 to analyze the FDI flow. Electronic Declaratory Registration (EDR) is a computerized system that allows interested parties to register operations in the foreign capital area in the country directly on the online platform of BACEN (Blonigen, Davies, and Head, 2003; Cheng and Kwan, 2000; Stein and Daude, 2007).

[8] After the download from the ‘Olinda’ platform, this variable was transformed from Json to Excel format and then separated by year and state. Further, the data was divided by the GDP of each state as the percentages would make the analysis interpretation more intuitive. In the model, FDI was transformed into logarithmic variable in order to fit a more normalized dataset.

After triangulating the results of the quantitative part, I selected a Brazilian state as an in-depth case for the qualitative part. The intention was to test variables with a large sample and then explore in more depth with one case during the qualitative phase.

Regarding the time frame, I chose the years from 2011 to 2016. Initially, the choice was made due to data availability. Some exceptional events took place in the country, such as the Rio 2016 Olympics and the 2014 World Cup, which were seen as atypical years that could have impacted the attraction of FDI. However, these aspects were considered and weighted in formulating the quantitative model.

***Independent Variables***

This research has systematized the main economic variables of the literature review in a model. The variables consist of choosing Infrastructure, GDP Per Capita, Federative Units'(FU) Financial Situation, Productive Sectors, Trade Openness, and Bureaucratic Efficiency as control variables to study FDI in Brazil (Blonigen, Davies and Head, 2003; Bortoluzzo and Bortoluzzo, 2012; Broadman and Sun, 1997; Cheng and Kwan, 2000; Du, Lu, and Tao, 2008; Forssbæck and Oxelheim, 2008; Guimarães, Figueiredo, and Woodward, 2000; Hsiao and Shen, 2003; Mukherjee, 2011; Nunnenkamp and Spatz's, 2002; Nonnenberg and Mendonça, 2005; Stein and Daude, 2007; Sun, Tong, and Yu, 2002).

Also, to identify the impact of political stability, I added a dummy variable: the presence or not of coalitions between the governor's party and the president's party (Amal and Seabra, 2007; Dunning, 1993; Getz and Volkema, 2001; Khan and Akbar, 2013; Madr and Kouba, 2015).

*Control Variables*

Further discussing the literature about the control variables regarding infrastructure, it is expected that a location with poor infrastructure will discourage FDI, as it can increase production costs. Therefore, the extension of paved road networks in kilometers was the proxy chosen to measure the state´s infrastructure[9] (Chakrabarti, 2003; Guimarães, Figueiredo, and Woodward, 2000).

[9]The data on the road network was taken from the Transport Yearbook of the National Transport Confederation. Also, it was transformed into a logarithmic variable in order to fit a more normalized dataset.

Also, FDI intends to capture a part of the consumer market from where the investments occur, so the markets' size leads to an impact on FDI through the scope of domestic demand. That way, the GDP per capita[10] was the proxy to calculate this impact.

The FU's Financial Situation can also significantly impact the allocation of FDI. States with higher debt are expected to actively search for various forms of external alternative financing (Forssbæck and Oxelheim, 2008). This situation may improve FU's probability of engaging intensively in public actions to attract more FDI. The model used FU's Consolidated Debt (Debt of Brazilian FUs/current Net revenue) as a proxy to assess the financial status.

Guimarães, Figueiredo, and Woodward (2000) concluded that agglomeration, especially service agglomeration, strongly affects FDI allocation. The variables of Agricultural Production[11] and Service Sectors' contribution concerning the FU GDP were used as proxies to understand if a well-developed sector in a FU attracts more investment to the area. The same logic was applied to measure the regions' trade openness. As one might expect, with the greater commercial openness of the region, the FU would have a proclivity to receive more FDI, as it can set an image of being more prepared to receive other investments in terms of strategic location and better logistics (Chakrabarti, 2003; Dunning and Lundan, 2008; Hymer, 1960; Krugman and Obstfeld, 2010). Therefore, the variables regarding the trade dimension of the states (Export and Import) are used as proxies to the extent of previous relations with international sellers or buyers.

Further, some studies negatively correlated FDI and administrative bottlenecks (Nunnenkamp and Spatz, 2002), as internally disorganized public administration can repel potential investors. Therefore, the average monthly salary of civil servants[12] and Compared Productivity Index of Justice are proxies to analyze the impact of bureaucracy efficiency in attracting FDI. The first variable assumes that positions with higher salaries attract, through competitiveness, more efficient employees. In addition, this variable can measure the cost of labor and have a reverse effect. On the other hand, the second variable expects that an effective judiciary will accelerate the process of opening companies or other administrative

[10] In the model, GDP per capita was transformed into a logarithmic variable in order to fit a more normalized dataset.

[11] The variable referring to Industrial production was suppressed to avoid collinearity.

[12] In the model, the average monthly salary of civil servants was transformed into a logarithmic variable in order to fit a more normalized dataset.

necessities and, in the case of a company, will go into production beforehand, generating profit.

*Political Variables*

In terms of political stability, in the sense that a closer relationship with the central government will provide greater access to federal resources and support, for example, when prioritizing policies. A dummy regarding the party's coalition will be used as proxies. The dummy represents the presence or not of alliances, which will assume one for the states in which the governor's party is the same or in coalition with the president's party and zero for the others (Amal and Seabra, 2007; Getz and Volkema, 2001; and Madr and Kouba, 2016). The period considers the alliances between PT in the electoral period that elected Dilma Rousseff as president (2011-2016). The alliances are based on official self-declarations by the parties and are presented in detail in Annex 1.

As previously discussed, party affiliation can influence the attraction of FDI (Samford and Gómez, 2012; Pinto, 2013). Therefore, to test the hypothesis, dummy variables representing PSDB (pro-business) and PT (pro-labor) were added to the quantitative analysis Model 2.

***Econometric Model: Arellano-Bond***

The current research project has systematized the control and political variables previously stated in two similar models. The models were regressions with panel data to study the effect of the explanatory variables on the FDI flows (Nascimento, 2009; Bortoluzzo, Sakurai, and Bortoluzzo, 2012). In that way, it was possible to study the same cross-sectional unit (each state of Brazil) over time (2011, 2012, 2013, 2014, 2015, 2016), allowing control of heterogeneity present in States.

After several considerations, the Generalized Method of Moments (GMM) estimator proposed by Arellano and Bond (1991) was the most popular alternative for estimating dynamic panels with unobserved heterogeneity and predetermined regressors. The advantage of the Arellano and Bond (1991) estimator is that it relies on minimal assumptions and provides consistent estimates even in panels with few time series observations per individual (i.e., small T). The estimator proposed by Arellano and Bond (1991) is a dynamic model that places a lag of the dependent variable as an explanatory variable and is the best model for solving residual autocorrelation and endogeneity.

The lag allows controlling for factors not captured by the model's explanatory variables. In addition, the model allows for the fixed-effect control by the state and by year and fids instruments in the lags of the system variables for the endogenous variables.

The models are characterized as

$$y_{it} = \alpha y_{i(t-1)} + x_{it} + \eta_i + \upsilon_{it} \qquad |\alpha| < 1. \qquad (1)$$

where $i$ indexes units in the panel and t refers to "time periods," $x_{it}$ are the explanatory variables, $\eta_i$ is the effect not observed and $\upsilon_{it}$ is an idiosyncratic error term.

Furthermore, dummies will be added for each of the six periods to control specific effects during the period analyzed (2011, 2012, 2013, 2014, 2015, 2016). To avoid multicollinearity, 2011 will be used as the reference year.

Further, the regression and the database results pointed to prospects states for the case study analysis.

## IV. Results

Initially, a descriptive analysis was performed between the values for each variable to identify patterns. Table 3 presents the main individual characteristics of each variable, such as mean, maximum, minimum value, and standard deviation.

Table 3. Variables' Characteristics. Source: Produced by the author. [13]

| Variable | Mean | Minimum | Maximum | Standard Deviation |
|---|---|---|---|---|
| Electronic Declaratory Registration - Foreign Direct Investment (EDR - FDI) in relation to GDP* (R$1000) | 1.78 e+07 | 0 | 3.31 e+08 | 5.37 e+07 |
| Extension of the road network paved (Km)* | 7.77 e+03 | 4.735 e+02 | 1.8 e+01 | 6.95 e+03 |
| GDP per capita* (R$1000) | 22.94 | 7.85 | 79.10 | 12.57 |
| FU's Consolidated Debt (%) | 69.44 | -5.06 | 233.84 | 58.46 |

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| | | | | |
|---|---|---|---|---|
| Exports* (R$1000) | 8.11 e+06 | 7.22 | 59.33 e+03 | 1.2 e+07 |
| Imports* (R$1000) | 7.57 e+06 | 1.74 | 8.97 e+04 | 1.46 e+07 |
| Agricultural Production Contribution to GDP (%) | 5.94 e-02 | 1.8 e-03 | 3.53 e-01 | 6.45 e-02 |
| Services Contribution to GDP (%) | 1.84 e-01 | 1.03 e-01 | 3.41 e-01 | 5.91 e-02 |
| Monthly Average salary of civil servants* (R$1000) | 4.7 | 3.78 | 6.15 | 0.64 |
| Compared Productivity Index of Justice (%) | 7.57 e+01 | 2.1 e+01 | 1 e+02 | 1.72 e+01 |
| Party in the president's coalition (Binary) | 0.62 | 0 | 1 | 0.49 |
| PT (Binary) | 0.19 | 0 | 1 | 0.39 |
| PSDB (Binary) | 0.26 | 0 | 1 | 0.44 |

*In the model, the data was transformed into a logarithmic variable in order to fit a more normalized dataset.

### a. *Descriptive Data Analysis*

Performing a descriptive analysis of the explained variable (Y), FDI, one can observe that the lowest value (0) corresponded to the state of Acre in 2011 and 2012, followed by the year 2014 in the same state (R$ 92493.65). This information can be related to a low level of self-declaration of the data or the non-declaration of the FDI in the state.

The state of Rio de Janeiro in 2015, followed by São Paulo during 2011, 2016, 2015, 2012, and 2014, then Rio de Janeiro again in 2016, respectively, obtained higher values referring to FDI in volume, revealing a significant inequality of FDI allocation in these regions. The Olympic Games were in Rio de Janeiro in 2016, so this event can have impacted those results. There is an increase in the FDI received over time, with greater attention to 2015, which significantly increased over the previous years.

### *b. Econometric Data Analysis*

As previously mentioned, some variables were transformed into logarithmic variables to fit a more normalized dataset. When we model variables with non-linear relationships, the chances of producing errors may also be skewed negatively.

*Model 1*

The results obtained based on Arellano-Bond's (1991) Model Estimation are shown in Table 4. In the econometric analysis of the model, I paid attention to two main factors. First, I look across the model at whether or not the coefficients have the expected direction and significance and how the significance of the predictors differs across the dependent variables. Second and lastly, I compare the size coefficients across the model to compare the sensitivity of each kind of investment to the independent variables.

Table 4. Arellano-Bond's Estimation: Model 1 and Model 2

| Variable | Model 1 | Model 2 |
|---|---|---|
| Electronic Declaratory Registration - Foreign Direct Investment (EDR - FDI) in relation to GDP | -0.159<br>(0.107) | -0.171<br>(0.108) |
| GDP per capita | 6.686*<br>(2.642) | 6.631*<br>(2.576) |
| Extension of the road network paved | -4.621<br>(2.853) | -2.621<br>(2.506) |
| FU’s Consolidated Debt | -0.001<br>(0.004) | -0.003<br>(0.005) |
| Exports | 1.317*<br>(0.512) | 0.808<br>(0.550) |
| Imports | 2.493**<br>(0.727) | 2.203**<br>(0.795) |
| Agricultural Production Contribution to GDP | 5.654<br>(14.635) | 1.070<br>(10.661) |
| Services Contribution to GDP | 31.300**<br>(10.564) | 29.687**<br>(10.432) |
| Average Monthly salary of civil servants | -6.203.<br>(2.302) | -7.901***<br>(2.039) |
| Compared Productivity Index of Justice | 0.004<br>(0.013) | 0.008<br>(0.013) |

| | | |
|---|---|---|
| Party in the president's coalition | -0.546*<br>(0.231) | NA |
| PT | NA | 0.246<br>(0.374) |
| PSDB | NA | 1.322<br>(0.558)* |
| Observations | 98 | 96 |

Signif. codes: 0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' - NA: Not Applicable

To capture the effect of market size, the GDP Per Capita proxy was statistically relevant in explaining the distribution of FDI among Brazilian UFs, and the sign of the coefficient was positive, as it was expected that an increase in the local market's size would cause an increase in the states' FDI.

Also, as expected, agglomeration, especially service agglomeration, has a notably strong effect on FDI allocation. The services sector's contribution to the FU GDP strengthened the idea that as the service sector is more important to the regional economy, the sector will attract more attention and public investment than the agricultural and industrial sectors. Therefore, with a more developed sector and better financed by the state, it is logical to imagine that foreign investments will be better advised and attracted to these regions. The same logic was applied to measure the regions' trade openness. The variable regarding the states' trade dimension, imports, and exports was also significant. As one might expect, with greater commercial openness of the region, the FU would have a proclivity to receive more FDI, as it can set an image of being more prepared to receive other investments in terms of strategic location and better logistics.

Further, in the case of the cost of bureaucracy, the average monthly salary of civil servants was significant in discouraging FDI and not contributing to the idea that higher wages are related to efficiency. This result can be associated with the high salaries of public servants in Brazil. According to a report by the World Bank (2019), state civil servants earn 36% more than workers who perform a similar role in private sector companies. The federal public sector's "wage premium" is the highest in 53 countries. In the report, the bank assesses that the high salaries received by civil servants contribute to increasing inequality in Brazil. The ten activities with the highest salaries are in the public sector, which is not often observed in OECD countries and emerging economies.

The infrastructure did not present statistically significant coefficients to explain the flow of investments. Other variables, such as debt, agricultural production, and the Compared Productivity Index of Justice, which is the efficiency of the judiciary, were also not statistically significant.

Finally, the indicator dummy of political stability was statistically relevant. As the sign of this dummy coefficient was negative, there is an indication that UF states that did not have the same party or coalition with the President's party received more FDI. This result was not expected, but it is an interesting analysis point. The political party in power between 2011-2016 was PT, a left-wing party. Thus, the results indicate that states with opposing parties received more FDI.

To analyze the resulting estimates from Table 4, one can calculate the marginal effects of the variation of each significant variable regarding the FDI. The analysis of the marginal effects of the market size indicates that an increase of one percentage point in the GDP Per Capita of the FU causes an average growth of 6.7% in the investment received, keeping the other fixed variables. Also, an increase of one percentage point in the Services Sector contribution to the FU GDP leads to an increase of approximately 31% in the FU's FDI flows. In contrast, a one percentage point rise in the monthly average salary decreases the expected FDI received annually by around 6.2%. In addition, an increase of one percentage point in the volume of exports causes an expected increase of approximately 1.3% in the FU FDI. In contrast, a one percentage point rise in FU's imports volume increases the expected FDI received per year by around 2.5%, keeping the other variables fixed.

Furthermore, suppose the governor of the FU has the same political or is in coalition with the president's party. In that case, there will be an expected decrease of 0.5% in FDI received in the year, ceteris paribus. This result was surprising, mainly because the literature pointed it out in another direction. Therefore, it stated that governors from political parties non-aligned with the party in power could promote more extensive connections and orient more investments to the state.

As mentioned earlier in Annex 1, the construction of the coalition variable involves associations formally created during the electoral period and declared in the Superior Electoral Court (TSE). Consequently, in the two presidential elections, 2010 and 2014, the presidential decision had a runoff with opposing coalitional slates headed by PSDB or PT.

Thus, to understand the direct impact of party strength in attracting FDI, I carried out a second econometric model (Model 2), similar to the first, but substituting the coalition variable for the presence of the parties, PSDB and PT, in state governance. Therefore, based on the new model, I could see that states that somehow experienced a PSDB government had better results than other parties. Besides, PSDB, during the period mentioned above, was one of the biggest and richest Brazilian political parties, being the main opposition to the PT, which had President Dilma Rousseff leading the country.

*Model 2*

In Model 2, resembling methodologically Model 1, I only exchange the "coalition" variable for two dummy variables representing PSDB and PT. The dummy variables indicated whether the state government had been composed of a PSDB or PT governor within the 2011-2016 interval, assuming a value of 1 for presence and 0 when it was a governor from another party. The new results are shown in Table 4.

This model pointed to new but somewhat similar results, reinforcing the methodological constancy of the model (1). GDP Per Capita, Services Sector contribution to the FU's GDP, the average monthly salary of civil servants and imports remained significant, with similar signs and marginal effects. The analysis of the marginal effects of the market size indicates that an increase of one percentage point in the GDP Per Capita of the FU causes an average growth of 6.6% in the investment received, keeping the other fixed variables. The increase of one percentage point in the Services Sector contribution to the FU GDP leads to an increase of approximately 30% in the FU's FDI flow. In contrast, a one percentage point rise in the monthly average salary decreases the expected FDI received yearly by around 7,9%. Also, if there is an increase of one percentage point in the volume of imports causes an expected increase of approximately 2,2% in the FU FDI, keeping the other variables fixed.

Regarding the direct impact of political parties, the presence of a PSDB government in the states was relatively significant, increasing investment attraction by 1.3%. Thus, some specification tests between the variables were performed (autocorrelation tests and Sargan test of overidentifying restrictions[14]).

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[14] Tests' results can be available upon request.

The result shows that party affiliation is relevant, even when controlling for all other factors essential to explain FDI.

Then, with the results of both econometric models, it was possible to find a relationship between the presence of a party in the state government and a more significant attraction of FDI. Therefore, we do not reject the central hypothesis, $H_1$: *The most business-oriented party will attract more regional allocation of FDI*. More specifically, the results of Model 2 pointed to the importance of a specific political party, the PSDB, during 2011 and 2016, when the presidential party was the PT, which was the primary opponent in the presidential electoral race.

Based on the results of the quantitative models, especially model 2, which pointed to a correlation between the PSDB government and a more remarkable attraction of FDI, it is essential to understand this relationship in greater depth.

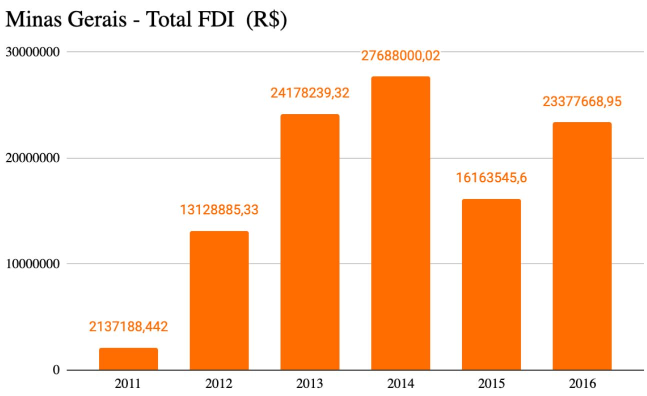
## V. In-depth case - Minas Gerais (MG)

Based on the Arellano Bond (1991) results, the qualitative study chose a Brazilian in-depth case for a closer evaluation.

The main reasons for choosing the state of MG as an in-depth case were:

1) Minas showed an apparent FDI growth (2011 - 2014) and decline pattern, as indicated in Figure 3. During the government of PSDB, there was an increase in the flow of FDI for the state. However, during the change of power, for a PT government, the following years showed an evident decline in the FDI flows data;

Figure 3. The flow of FDI reception in Minas Gerais in Brazilian Reais (Prices deflated based on 2011). Source: Banco Central do Brasil, 2021.



2) Minas was a state that showed an evident change in party affiliation from 2011 to 2016. In 2011, Antonio Anastasia from PSDB got elected, following the path of Aecio Neves, the former governor, also from PSDB. In 2014, there was a turn in the political preferences of the state, and Fernando Pimentel (PT) got elected. He ran the state from 2015 until 2018. Also, MG had similar economic patterns in all variables compared to other Southeast states, so the political aspect drew attention.

Therefore, the analysis focused on interviews with five categories: lobbyists, consultants, scholars, civil servants, and investors, to develop a causal mechanism in the case study. As interviews assess a range of observable implications that stem from the theoretical framework, that information could confirm, as evidence, the main factors, especially political ones, that attract FDI to MG.

The primary strategy for the interview was to select active and non-active participants in public policy to ensure the triangulation of information from actors. Regarding the chronology, I chose interviewees who worked between 2011 and 2016, mixing up between those who worked for the whole period, more recently, or during some specific critical juncture. The interviews were directed at pivotal actors, such as international investors, lobbyists from multinational companies and consultancies, civil servants from the previous and current government, and scholars studying FDI. Interviews gather much deeper responses.

The semi-structured interviews were taken in person or by phone without recording. The open-ended questions were a middle-ground interview style that could provide detail, depth, and an insider's perspective. At the same time, this type of question allowed the testing of the hypothesis by thematic analysis in Portuguese. In this way, if responses generated additional queries, the interviewer asked follow-ups, probing more deeply into the actions and attitudes of respondents. Such follow-up questions particularly enlightened when the respondent appeared to hold contradictory views or the phenomenon of interest was multifaceted. Furthermore, the interview provided information about actions taken or attitudes held by others-the interviewee's colleagues, superiors, or subordinates.

This metadata facilitated more accurate use and interpretation of interview data, which is often impossible for survey responses or other quantitative indicators. Thus, Minas

Gerais in-depth case tested the quantitative model results besides providing more detailed information about the state's socio-political and economic scenario.

Therefore, this section focuses on the interviews conducted with 16 people who either worked between 2011 and 2016 or more recently but know this time interval (Annex 2). As previously mentioned, the interviewees were separated into five categories: consultants, scholars, lobbyists, investors, or civil servants; and had the opportunity to comment on the characteristics of attracting foreign direct investment during the different administrations, PSDB and PT in the state of MG.

*Government of PSDB in Minas: "Choque de gestao - Management Shock"*

When talking about economic and political aspects of FDI attraction, lobbyists, consultants, and civil servants addressed the importance of the political-economic context of the state of MG during and prior to, 2011 to 2016. Implemented in 2003, during the government of Aecio Neves (PSDB), the "management shock" aimed to reduce expenses, reorganize and modernize the institutional apparatus of the State, and implement new management models. The "management shock" proposed the involvement of all bodies and entities of the State Executive Power, aiming to improve the quality and reduce the costs of public services in the state. In the medium and long term, the "management shock" contemplated achieving results based on quality and productivity. It also invested in training public servants and adopting new models of public-private partnerships.

In the government of MG, Aecio was followed by Antonio Anastasia from March 31, 2010, to April 4, 2014. Before effectively leading the state executive, Anastasia was the Vice-governor from January 2007 to March 2010. Anastasia followed Aecio's steps in managing MG. In particular, it continued the policies of the "management shock" policies and made infrastructure investments.

Before Neves, Minas had R$5 billion in debt to suppliers and a budget deficit of R$2.3 billion reais. Then, his first step was to prohibit spending, and later, he implemented a strategy to eliminate the deficit. Amendments to the state Constitution were also approved to prevent the resource deficit from growing again. After fourteen years in debt, the federal government recognized the balance of the state's accounts and authorized the government of Minas Gerais to resume raising funds abroad in 2005.

According to a civil servant, MG previously had "bad numbers." Therefore, the "management shock" showed the state's improvement and raised companies' interest. For consultants, the 'management shock' was applied to "take Minas out of the deep crisis" and helped companies in the state to have a fiscal recovery. It was an incentive through a strategic plan by the government to encourage companies to reduce the financial impact and clear debts.

However, not only the "management shock" that PSDB implemented contributed to a rise in FDI in MG. Some civil servants, lobbyists, and consultants stated that PSDB's public policies "were more friendly" for investors. So, the party conveyed a positive image for investors by providing tax incentives, organizing events, and developing long-term relationships with investors. Also, for civil servants, "PSDB had more contacts and intelligent action than the PT managers." Regarding the party's relationship with the investors, a lobbyist stated that PSDB was more reliable than PT.

> "Reliability comes from many things. Aecio's family is traditional. [...] From 2011 to 2016, the party's trajectory was consolidated, and Aecio enjoyed prestige at an international and national level. Then, he was followed by Anastasia, who also had a lot of national and international prestige. These two figures facilitated the attraction. For the prestige of name, family, and position."

Besides, for civil servants, investments in the period rose because they were considered a priority for the PSDB governors to ensure that MG's international investment attraction agency had good staff and budget." For another civil servant, "Investment attraction policy is cheap, and the benefits are fast." However, if the government does not prioritize it, the lack of resources from the private sector becomes "very expensive for the state."

> "If you wake up in the morning and find that "Fiat" chose Pernambuco and not MG (to build its factory), there is no impact on the daily life of a citizen. He does not see the jobs (that were not created). Sometimes an (investor) meeting

> with the governor would have done the trick. What does a governor's hour cost? Nothing."

Also, there was "a good design of prioritization of human resources" during the PSDB government. The PSDB staff had a "more technical profile" that generated more results and managed to develop a "commercial promotion of the state." According to a civil servant, "if you look for the names of the secretaries of economic development during PSDB and PT, great economists were in charge during the PSDB, and not in the PT government."

> "In 2016, MG lost a huge investment opportunity from a large e-commerce company. At that time, they met with the president of INDI (now Invest Minas), and she dismissed them. She said the state did not have an interest in the investment. [..] The staff approach makes all the difference."

Furthermore, a civil servant believed that during both Aecio and Anastasia governments, they sought "greater fiscal rigor," which led to greater predictability in the 12 years of their mandate.

> "This banner of fiscal balance and fiscal austerity provided predictability that gave greater rigidity to the accounts. Brazil's investment continuity agenda was due to an external contingency, with many foreign investors wanting to invest in infrastructure and agricultural commodities. [...] PSDB was associated with fiscal responsibility and signaled favorably to those who make long-term investments. [...] You can say that the announcement of fiscal austerity and holding back public spending positively affected investment."

PSDB had a more central government in managing the public machine. It showed "commitment and transparency" and affected the FDI attraction. For academics, "PSDB takes great care in the legal and economic aspects, which is not seen in other governments. Companies with (fiscal) incentives suffer from great insecurity of having their benefits interrupted or eliminated by judicial decisions".

Therefore, during the 12 years of PSDB in MG, investors benefited from the PSDB's party connections. The governors prioritized technicians to develop investment attraction public policies, in addition to policies of fiscal rigidity and legal security.

*Worker's Party (PT) Management: Government of Pimentel*

In 2015, Fernando Pimentel was elected and was the Governor of MG until 2018. According to civil servants, the governor change was accompanied by a change in management style for FDI attraction: "as soon as PT came in, the first thing (they did) was to reduce these tax incentives."

> "PT did not have good eyes for the granting of tax incentives. [..] They wanted to change the way of attracting investment, and the staff could not visit companies anymore to assist in industries' expansion projects. Three years (of PT's mandate) until they realized they (FDI attraction policies) were not working. They started losing companies to the northeast because they had federal incentives through SUDENE[15]. [...] It was only at the end of the government that they realized that MG needed to be aggressive. They were unable to develop a good policy with this management."

Also, according to civil servants, from 2014 to 2015, there were several changes from the PSDB government to the PT. PT government extinguished the Secretariat for Economic Development and merged its functions with the Secretariat for Science and Technology, creating an under-Secretariat for Economic Development. Besides, the international investment attraction agency, previously called the Integrated Institute of Economic Development (INDI), also became responsible for foreign trade affairs "without reinforcing the team or additional compensation." With the accumulation of functions and excessive work, the attraction of FDI took a backseat, and this may explain the large drop in MG's FDI flow in the change of government. "PT management was heavily criticized, a challenging period."

Also, a consultant shared that, as an innovative public policy, "Pimentel created an integrated and technological development plan for the state for productive activities."

[15] The Northeast Development Superintendence (SUDENE) is a special autarchy, administratively and financially autonomous, part of Brazil's Federal Planning and Budget System.

According to him, it is a “characteristic of the party to create these kinds of initiatives. So, a “management plan created regional government forums.” Therefore, there were “17 development territories in MG that were named regional forums for attracting investment in a regionalized way.” However, “at the time, he (Pimentel) was undergoing an investigation process, he did not visit companies, he did not participate in the processes.”

In lobbyists' and consultants' view, “PT affiliation has a more centralizing and statist approach.” Also, for scholars, the political and economic context impacted the investment drop. “Pimentel survived during Dilma’s government, the worst period, with recessive GDP. Pimentel did not have a good coincidence of PT in the government and PT in the presidential, which happened in Aecio.” Besides, the moment of political and economic crisis also affected the state. According to civil servants, “PT did not comply with transfers from states to municipalities, and the government borrowed money (from banks) and did not return it.” Therefore, MG started to lose credibility with investors. FDI attraction was not prioritized, “the investor will not put money in a place where the government is not credible. The governor is the one who legitimizes an investment attraction. The PT did not care about this agenda. It is a matter of propaganda.”

However, a civil servant warned that the big drop in the inflow of investments in this period might have been impacted by a change in the methodology of "counting" these investments. At that moment, “PT management chose to abandon an instrument for formalizing an investment announcement.” According to him, the investment announcement consists of a document signed by the government of MG and the investing company, addressing the commitments signed between them. For example, it includes the amount of capital the company invests in the state, including the number of job positions generated. At the same time, the government commits to certain benefits or guarantees. In previous PSDB governments, governors treated “investment announcements” as “investments completed,” even if the proper "entry" of investments took place in another government or even if the investment did not occur in the future following a break in the contract.

Therefore, the management of Aecio, Anastasia, and current Zema insisted on these announcements. However, for Pimentel, there were no obligations for “investment announcements.” “Even if these ‘investment promises’ were not signed at the time, it does not mean that investments did not happen.” According to them, Invest Minas does not isolate “investment announcements” and “investments completed.” They are all considered investments. In addition, Pimentel created the public policy that granted isonomic ICMS[16] benefits for MG.

> "Only in Pimentel, before benefits were granted in an individualized format, case by case, sometimes even the same sectors had different fiscal benefits. [...] Sometimes, the sector had the right to the incentive but needed to ask for it individually. Pimentel ended this discretion."

Consequently, for a group of civil servants, "during the PT management, they (investments) fell, but not in the proportion that data shows." "Investment advertisement is not an investment."

*Invest Minas and other FDI attraction factors*

Another critical aspected mentioned by civil servants, lobbyists, consultants, and scholars was the vital role of Invest Minas in attracting FDI to MG. Invest Minas is MG's investment and foreign trade promotion agency, the first created in Brazil. A civil servant commented that "It was created by the Energy Company of Minas Gerais (Cemig) and Development Bank of Minas Gerais (BDMG)." The agency's primary objective, a public company, is to attract and help establish companies in MG. Invest shares information on soil composition; warehouse availability; access to energy, water, gas, and other natural resources; assists in bureaucracy by working directly with other government n Minas, such as the Treasury Office and Environment Secretariat; and facilitate dialogue with municipalities, carrying out joint visits or events, "Investors arrive at Invest Minas and they will have all the support they need." Especially, Invest Minas helps companies understand that the federal, state, and municipal legislation. Also, they teach the regulatory process, ensure speed in licensing approval, such as environmental or operational licensing, and facilitate access to tax benefits, "all within the law."

> "Each investor comes with a demand. [...] They (investors) may have talked to APEX[17] Brasil before looking for us, so our role is to show the 'best package'

[16] Goods and Services Tax (ICMS) is a state tax under Brazilian state administration. That is, only the governments of the states and the Federal District have the competence to institute it.

[17] Brazilian Agency for the Promotion of Exports and Investments (APEX)

> - from mapping the territory and location advantages, showing photos of sheds, understanding financing concerns, discussing environmental issues…"

Therefore, according to a civil servant, "there are many states that make their policies (FDI attraction policies). However, I do not know whether it is the state, by receiving more investments, that creates an agency or if it was the creation of the agency that enticed the investment." According to them, Invest Minas is a construction of "bureaucracy and reputation, independent of the government," as independent civil servants form the technical body. Therefore, "the technical staff, on a day-to-day basis, maintains a certain reputation and quality in service."

However, "agencies must commit the state." As a civil servant stated, "Invest Minas is a public company and subordinated to the Secretariat of Economic Development." So, the agency as a public company "has its budget and legal department, which convey flexibility and simpler processes." However, the budget and priority regarding governmental agenda vary greatly depending on who assumes the state government. Depending o the party affiliation, the government can cut travel expenses, reformulate benefits granted to companies and change the leadership of the technical staff. "These things make a difference", especially when competing for investment with other states.

Besides, civil servants mentioned other factors for the success of MG in attracting FDI: fiscal benefits, bureaucracy, infrastructure, skilled labor, human natural resources, consumer market, and political affiliation. However, according to civil servants,

> "depending on the degree of maturity of a company, if it already knows its priorities for the investment, it knows which state it wants to invest in and will not change. [...] In other cases, if a company from the northeast wants to expand to the southeast, it will compete between states in the same region. They look more at the consumer market, which is the Southeast that draws more attention. [...] Industry wants to be close to the consumer market. Steelmakers want to be closer to materials."

Therefore, according to civil servants, image building is crucial, as MG can sell as having adequate infrastructure, skilled labor, and lower costs for companies. MG "offers a cost-benefit image for the investor".

> "First, a company chooses Brazil because of the size of the market. Not because it is a global player. [...] When choosing to go to Brazil, he (the investor) sends a representative, usually to Sao Paulo. If he sells the products, the customer starts to export more to Brazil. As this market grows, he sets up distribution centers and starts exporting to a unit. This distribution center will sell to international and national customers. When he feels he is consolidated within the Brazilian market, then he sets the industry."

According to investors, they look to risks in general, "apart from the regulatory political risk, to what extent that government presents challenges", they look to "operational risks, to what extent the supply chain needs will be met or not".

> "I look to temperature, income availability, all micro, and macroeconomic conditions. [...] Also, I work with products that need to be very fresh, so geographical location is important, as is water availability too. Besides tax benefits and a skilled workforce, I searched if there is a university in the region. [...] Any consumer goods company looks at this. [...] When negotiation begins, I talk to the Economic Development and Treasury secretaries. Everything needs to be matched: jobs, tax benefits; and then negotiations are made."

According to scholars, factors such as bureaucracy are also relevant. MG is considered to be "careful from a legal and institutional point of view" compared to others Brazilian states. Especially, scholars mentioned MG's policy as "granting tax incentives to attract new ventures, always defending the legal security of contracts signed with investors." MG's bureaucracy is considered "consolidated, simple, agile, as they (civil servants) are used to it."

For civil servants, the change in the management impacts bureaucracy, as governors are the responsible for choosing the secretaries. Depending the government, secretaries can assume “a more assertive policy of going after investments,” therefore changing internal regimens, encouraging modernization of the public service and organizing better bureaucracy’s flux. “Before the regimen took one year. Now, it has become automated and takes 2 hours [...] It speeds up a lot.” Also, civil servants agree that the organizational structure “makes a difference”.

> “Before, when investors called the agency, they did not know who was the right person responsible for their needs. Now, the analyst becomes an account manager from the start to the end of the process for a given company. It makes all the difference. These little things are the game changers. They are what makes the difference in the subnational arena.”

In terms of infrastructure, consultants and lobbyists stated that MG’s “infrastructure and logistics” calls the attention of investors, especially those looking for expansions or changing the production location. Also, according to civil servants, MG is at the “epicenter of the southeast region” and has large “distribution logistics centers”. In scholars opinion, because MG neighbors Rio de Janeiro and Sao Paulo, the state has plenty of energy, however, “the logistics structure is not so good”. On the other hand, MG has a “diversified industry and second largest population with the second highest income. All of this helps to catch investors’ attention. ”

The importance of natural resources was also mentioned by scholars and civil servants, as MG has many minerals. MG is usually “linked to basic industry, mining, steel, cement, and lime”. Therefore, investors looking for those raw materials will go to MG. For investors, natural resources and fiscal benefits were the main factors they pursued. “I look for states’ resources, raw materials, and human resources.” Also, they look for the state's reputation regarding environmental practices.

Tax benefits such as those applied to ICMS, despite not being captured by the quantitative model, were frequently mentioned. According to investors, “it is quite evident how fiscal policy is decisive in attracting investments, but not only fiscal policy at the moment, but the stability of this fiscal issue.” According to different sectors, “the ICMS is a good filter” because they provide a measure of comparison between states.” Scholars have claimed that MG has a “tradition of granting fiscal and financial benefits,” since the 1980s. Aecio’s government “was a portrait of that.” According to civil servants, MG entered the “tax war" between competing state's ICMS fiscal benefits, during Aecio management. As a federation, Brazil gives to state units "some autonomy and freedom for them to have their own policies to attract investment, having some type of fiscal investment."

> "It was PSDB that put 'mines into the tax war', giving up state's revenue to receive more companies. Attracting these investors could have much greater benefits for the state. There will be employability. There will be income circulation, in addition to direct and indirect jobs. It ends up bringing a chain of suppliers. So, giving up direct revenue would bring more benefits."

Following Aecio, Anastasia also successfully created several incentives for the industry. Initially, they were created for electro-electronics industrial activities. "After the Treasury Secretariat saw the return on tax collections, the secretariat extended them to other industries." Besides, civil servants believe that fiscal incentives are essential to attracting and maintaining companies in MG. "When the company is a multinational, it is very complex for them to understand the tax regime in Brazil." For them, "90% of the companies had meetings with Invest Minas for the tax issue", as each sector has a different tax treatment. Nowadays, the secretariat is finding ways to standardize these incentives.

The ICMS's importance, the tax benefits have different weights depending on the business when a company decides where to settle. According to civil servants, " Of all companies and states, ICMS can be a deciding factor, but there is a mistake in thinking that only ICMS is what companies will consider. Sometimes, they search more for market availability." Also, civil servants agreed that tax incentives are significant for international companies. However, as investors sometimes do not understand how those incentives operate, they frequently mention that ICMS, sometimes, is not even considered by international companies. "National companies are those who focus more on tax treatment."

*Considerations*

Analyzing the interviews concerning the results achieved by the quantitative studies, it is possible to state that they added a new layer of possible variables. These are important factors to consider to understand FDI regional allocation. However, despite the addition of "new factors," the interviews did not make it unfeasible or diminish the importance of the impact of party affiliation.

In the present case of MG, interviewees analyzed the role of different party affiliations in state control, such as PSDB and PT. PSDB is considered a more center-right party, with policies aimed at greater commercial openness. Besides, according to the very foundation of the party manifesto, its priority is to attract FDI. On the other hand, the PT is considered a left-wing party, originating from the unionist movements of the 1980s. Different from the objectives of the PSDB, the PT is "committed to placing popular interests on the political scene and overcoming the atomization and dispersion of class currents and social movements." With different objectives, government priorities are also defined differently. This directly impacts public administration and, therefore, impacts how the governor will treat foreign investors, especially the leaders who organize the bureaucratic flow.

Therefore, for consultants and lobbyists, party affiliation is fundamental. "The mindset changes." The governor will determine the "management methodology" and "choose the leadership of secretariats, which will encourage or not the attraction of FDI to MG." For scholars, "investments are also associated with demands from the World Bank, which are economic liberalists, such as fiscal adjustment and pension reform." However, they see the affiliation of the state government as more important than the party per se. "The hypothesis makes sense as the government's affiliation is one of the variables when assessing the risks involved when analyzing any investment, be it a merger or acquisition, or starting a project from scratch." Also, in terms of governance, the coalition with the president party is important, as to measure to "what extent the decision-maker can implement his agenda, given the restrictions of other policies and party interests. [...] His (decision-maker) ideology will be considered with his ability to rule".

> "A government with a non-friendly political agenda for the private sector may intend to conduct its 'non-friendly projects' but, sometimes, it will not have the political capacity to conduct them. [...] It is not just about intention, but it is also about capacity. Low capacity is not a threat. [...] Left-wing government is not always seen as a negative business environment. [...] some investors want to see the 'regulatory' moment, rather than who is in charge of the state."

Civil servants agree with consultants and lobbyists saying that different party affiliations "comes with different objectives and changes the management of Invest Minas", either putting more or fewer resources in the area. According to them, at the time, PT struggled to understand how Invest Minas worked and did not choose a “competent leadership.” More technical staff can quickly grasp the skills and knowledge necessary for FDI attraction.

> “I do not believe that the presence of the PSDB is crucial, but PSDB ideology helped. No company says, ‘I am going to MG because of the government,’ but the government's ideology favored this choice. [...]When a party declares itself in favor of a certain issue, such as attracting investment, this is reflected in the government program and focuses on the government structure to achieve this result. The government proposals of that party will concentrate on those results.”

Also, for a civil servant, “leftist parties are afraid to attract foreign investors.” He said that during Pimentel’s government, Invest Minas was linked to the secretary of investments, and “you could see, the management was horrible, the staff had no appetite for seeking investors.”

> “What counts regarding the partisan ideology is how they see the market opening. It is important to know who is in government. A liberal government serves as a decoy for investors to know that there is a government that is a friend of the private sector, that they will see them (private sector) as a priority.”

Also, for another civil servant, when there is a change in the government, investors check the government's credibility if the government honors contracts. “Investors will ‘google’ the governor and check who he is and what he has done.” According to them, there are different established criteria in parties, and that resonates on what the leadership chooses management priorities. As a result, the “level of priority given to a secretariat will also determine the priority of Invest Minas, and how they will strive for FDI investments”.

> “In the Pimentel government, investment was low. After, even with the same team and during a pandemic, Invest Minas could reach ten times more FDI. It

> is just a matter of leadership and priority. [...] even with less budget and the same team, they (Invest Minas' staff) achieved ten times more. It is linked to management."

## VI. Final Remarks

The present work carried out a quantitative and qualitative analysis to understand if party affiliation is important to the location of FDI within Brazil. For this reason, based on the availability of data from EDR - FDI and Quinquennial Census of Foreign Capital, both by BACEN, I examined FDI patterns from 2011 to 2016 from the 27 Brazilian states. More specifically, the research developed: a quantitative analysis of the political and economic determinants for the subnational attraction of FDI in Brazil; and a qualitative investigation of MG for a closer look at the party affiliation impact. This in-depth case was based on semi-structured interviews with consultants, lobbyists, civil servants, scholars, and investors from MG.

Also, both analyses could test the main hypothesis: The most business-oriented party will attract more regional allocation of FDI. As previously discussed, I added governors from PSDB, the most business-oriented party (Cardoso, 1990), and PT, the most labor-oriented party (Guidry, 2003; Power and Zucco, 2014), as variables to grasp if more pro-business party affiliation increase FDI flows to a state.

The results of the Arellano-Bond's (1991) econometric Models (1 and 2) suggested that the market size, service sector agglomeration, states' trade dimension, and partisan affiliation, especially if the governor is from PSDB, are relevant factors for attracting FDI. In turn, the results suggested that a higher cost of bureaucracy and alignment with the president's political party decrease FDI. In general, most of the econometric results were expected. States know that companies want minimal costs in their investment locations, therefore, meager bureaucracy costs and more profits. Brazilian states with broader consumer markets, more prosperous, and more open governors for investors are targets for multinationals.

However, one surprise was the political stability negative coefficient, indicating that states that did not have the same party or coalition with the President's party received more FDI. This result is interesting because the political party in power between 2011-2016 was PT

[18]. Thus, the results indicated that states with opposing PT governors received more FDI. By the second econometric model, I could further test that states that somehow experienced a PSDB government had better results attracting foreign investment than other parties.

Based on the results of the quantitative models, which pointed to a correlation between the PSDB government and a more remarkable attraction of FDI, I could delve into more details by taking a closer look at MG. The interviews added a new layer of possibilities to understanding FDI subnational allocation. They characterized the two administrations of the PSDB (Aecio Neves and Antonio Anastasia) and one administration of PT (Fernando Pimentel). They discussed the importance of good infrastructure, consumer markets, access to natural resources, public accounts, and tax benefits. In addition, the interviewees brought more information about the performance of the MG foreign investment attraction agency, Invest Minas.

Despite adding "new factors," the interviews did not make it unfeasible or diminish the importance of the impact of party affiliation. Interviewees analyzed the role of different party affiliations in state control, such as PSDB and PT, and how their distinct government priorities directly impacted the public administration of MG. Therefore, the different partisan affiliations impacted how the governor treated foreign investors, especially those who organized the bureaucratic flow. The governor's party affiliation was considered fundamental for consultants, civil servants, and lobbyists.

As regards the contributions of this article, first, it concerns the investigation itself, given that recent literature on the subject has focused on studies that investigate the determinants of subnational allocation of foreign investment in a given country - this is particularly true for the Brazilian case, which has received a large amount of FDI over the past few years, but which presents significant regional disparities across its territory.

Second, the results are interesting for policy formulation. They tend to reinforce the perception that states that aim to attract foreign investments should be concerned with the market size, service sector agglomeration, states' trade dimension, and bureaucracy cost. Most important, state political party affiliation should present itself as open to foreign investment needs.

[18] In the period between May 12 and August 31, 2016, Michel Temer (PMDB) took over the government of Brazil as interim president. He was the 37th President of Brazil from August 31, 2016, to December 31, 2018.

Future work must verify whether different sectors and countries are sensitive to various aspects. As mentioned previously, the characteristics of FDI in the country have changed over the past decades. It would be interesting to have more data availability by region and sector, separating “investment announcements” from “investments completed” as the primary variable. Also, more variables mentioned in the interviews in the quantitative model, such as tax benefits, which are usually given by sector, and the presence of an investment agency with different roles and capabilities around Brazil, could be added to the analysis. In addition, greater data availability by years, companies, and economic sectors would allow observing an extended period with more exchanges of party affiliations in government and the most benefited sectors.

Ultimately, this study contributes to my aspiration to be a participant in academic debates on political economy, as well as having an impact on policy discussions. I have long been fascinated by studying the political and economic dimensions of FDI, and I hope this work inserts the political affiliation variable in future discussions.

## VII. Acknowledgments

I thank my advisors, Pedro Feliú and Natália Poiatti, for their support and guidance throughout the research processes. I also thank my family, Carlos Coury, Claudia Coury, and Ian Coury, and friends for all the support. Replication data can be available upon request.

## VIII. Declaration of conflicting interests

The author(s) declared no potential conflicts of interest concerning the research, authorship, and/or publication of this study.

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**X. Annexes**

Annex 1. Political parties in coalition with the President's party between 2011 and 2016. Source: TSE, 2014; Agência Brasil, 2016. Produced by the author.

| **Party coalitions in the 2010 elections** | **Party coalitions in the 2014 elections** | **Parties in favor of Dilma's impeachment**[19] |
|---|---|---|
| *President elected: Dilma Rousseff (PT)* | *President elected: Dilma Rousseff (PT)* | *President: Michel Temer (PMDB/MDB)* |
| Republicans (PRB) | Labor Democratic Party (PDT) | *Brazilian Democratic Movement (PMDB/MDB)* |
| Labor Democratic Party (PDT) | Communist Party of Brazil (PCdoB) | Brazilian Social Democracy Party (PSDB) |
| Worker's Party (PT) | Progressives (PP) | Progressives (PP) |
| *Brazilian Democratic Movement (PMDB/MDB)* | Liberal Party (PR) | Brazilian Socialist Party (PSB) |
| National Labor Party (PTN) | Social Order Republican Party (PROS) | Social Democratic Party (PSD) |
| Christian Social Party (PSC) | Social Democratic Party (PSD) | Democrats (DEM) |
| Liberal Party (PR) | Republicans (PRB) | Liberal Party (PR) |
| Christian Labor Party (PTC) | Worker's Party (PT) | Republicans (PRB) |
| Communist Party of Brazil (PCdoB) | *Brazilian Democratic Movement (PMDB/MDB)* | Brazilian Labor Party (PTB) |
| Brazilian Socialist Party (PSB) | | Solidariedade (SD) |
| | | Christian Social Party (PSC) |
| | | Cidadania (PPS) |
| | | Monarchical People's Party (PPN) |
| | | Humanist Solidarity Party (PHS) |
| | | Green Party (PV) |
| | | Social Order Republican Party (PROS) |
| | | Social Liberal Party (PSL) |

[19] Parties considered aligned to the MDB - Michel Temer's Presidency.

Annex 2. List of interviewed actors.

| Respondent category | Date of the interview | Mini-biography related to the interviewee's choice |
|---|---|---|
| **Civil Servant 1** | 28 de outubro de 2022 | Business Manager at Minas Gerais Investment and Trade Promotion Agency. Worked with attracting FDI to MG since 2013. |
| **Civil Servant 2** | 3 de novembro de 2022 | Manager of Agribusiness, Chemistry and Life Sciences at Minas Gerais Investment and Trade Promotion Agency. Worked with attracting FDI to MG since 2013. |
| **Civil Servant 3** | 9 de novembro de 2022 | Coordinator of the Northeast Office of the Brazilian Agency for the Promotion of Exports and Investments. |
| **Civil Servant 4** | 26 de outubro de 2022 | Social and Institutional Communications Manager at Minas Gerais Investment and Trade Promotion Agency. Worked with attracting FDI to MG since 2008. |
| **Civil Servant 5** | 16 de novembro de 2022 | Economic-Financial Advisor for Public-Private Partnerships and Concessions at the MG State Secretariat for Infrastructure and Mobility. |
| **Civil Servant 6** | 24 de novembro de 2022 | He was Undersecretary for International Affairs of the Government of Minas Gerais and Secretary for Strategic Affairs of the State. Worked with attracting FDI to MG between 2011 and 2016. |
| **Civil Servant 7** | 2 de dezembro de 2022 | Worked as Director of Investment Attraction and President at Minas Gerais Investment and Trade Promotion Agency. Worked with attracting FDI to MG since 2011. |
| **Civil Servant 8** | 2 de dezembro de 2022 | Investment Promotion Analyst at Minas Gerais Investment and Trade Promotion Agency. Worked with attracting FDI to MG since 2012. |
| **Civil Servant 9** | 2 de dezembro de 2022 | Investment Promotion Officer Minas Gerais Investment and Trade Promotion Agency. Worked with attracting FDI to MG since 2012. |
| **Civil Servant 10** | 24 de novembro de 2022 | Worked as the President of the Development Company of Minas Gerais and the President of Minas Gerais Investment and Trade Promotion Agency. Also, he worked as the Deputy Secretary for Budget and Planning from 2011 to 2014. |
| **Investor 1** | 25 de outubro de 2022 | Executive Director of an association of multinational industries. |
| **Investor 2** | 28 de outubro de 2022 | Senior Institutional Relations Manager from a large beverage company. |

| | | |
|---|---|---|
| **Lobbyist 1 and Consultant 1** | 25 de outubro de 2022 | Coordinator of the Minas Gerais area at a government relations consultancy. Works with customers in the mining industry. |
| **Lobbyist 2 and Consultant 2** | 26 de outubro de 2022 | Consultant of the Minas Gerais area at a government relations consultancy. Worked as Chief of Staff of the General Secretariat of MG (2016) and was responsible for Institutional and Governmental Relations at Companhia Energética de Minas Gerais (Cemig). Also, worked at Belo Horizonte City Council between 2009 and 2014. |
| **Scholar 1** | 16 de novembro de 2022 | Scholar specialist in Public-Private Partnerships and Concessions. |
| **Scholar 2** | 25 de novembro de 2022 | Political Risk Professor and Senior Political Risk Analyst in a Consultancy. |