

## Panel T10-P02 Session 2

Subnational and Metropolitan Governance in the World: Innovations and Perspectives

## Title of the paper

Budgetary governance in subnational level: The Ministry of Cities in Brazil

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### **ABSTRACT:**

Most of the studies that address political behavior in budget allocation are still aimed at identifying the personalist logic of pork barrel in the execution of individual parliamentary amendments. This paper analyzes the biggest budget action (1D73) of the Ministry of Cities during Dilma Rousseff's government (2011-2016) and in the year after the impeachment (2017). We investigated the behavior of the six ministers in this period. Our hypothesis is that ministries choose the localities in which they have relevant political activity, as well as electoral visibility and concentration of people. We investigated if the average value destined to the municipalities located in the state in which the minister is politically active is higher than the average value of other cities. Statistical tests were performed to verify whether there was a difference between them. We did the t-test, comparing averages, and the f-test, which shows sample variance. In the end, it was possible to map the minister's performance in distribution of the resources. The results show not only the existence of pork barrel, but also other determinants such as the political context, electoral connection and party identity. This conclusion indicates the existence of an ample system of governance that involves not only the Legislative but the Executive as well.

**Keywords:** Budget; Pork Barrel; Electoral connection; Federalism; Ministerial Behavior.



### 1. Introduction

The configuration of the political system and institutional rules constrain the action of political actors. In the Brazilian case, the presidentialism and the large number of effective political parties in the National Congress leads the Chief of Executive - the President of the Republic – to establish coalitions formed by several parties in order to achieve majorities in the Legislative (Abranches, 1988; Limongi, 2006; Raile, Pereira e Power, 2010; Bittencourt, 2016).

Among presidential assignments, the definition of senior occupiers in the Ministry acts as a way of serving to the interests of the allied base. Ministers have some authority to allocate budgetary resources in the implementation of programs at the subnational levels. This autonomy weakens the coordination of the federal government and allows the emergence of patronage mechanisms and the pork barrel: patronizing actions that imply transfers of federal resources in favor of the local spheres of political performance of the executor (Melo, 2005).

For the purpose of this article, we consider that the Minister is politically active in the State in which he is contesting the election. Thus, it aims to assess whether, using its discretionary power to allocate part of the Ministry's budget programming, there is a targeting for these localities. In a second moment, it was also sought to identify and measure if in its State, there is a privilege of the municipalities located in the metropolitan regions (RM). The main objective is to verify if in the allocation of the resources of the budget action 1D73 (Support to the National Policy of Urban Development) in the period 2015-2017 the Ministers privileged their states of political action and if within these states, directed resources for metropolitan regions.

The choice of the Ministry of Cities for the study is justified by its strong local appeal. The 1D73 budget action was created because of a National Congress request, in order to allow congressmen to allocate resources directly to as many municipalities as possible, increasing the gains from pork barrel. In recent years, almost all of the parliamentary amendments made to the Ministry have been devoted to this action, which makes the choice of 1D73 relevant in the universe that makes up the ministerial budget.



The first hypothesis to be tested in this paper is whether the average value committed to the State in which the Minister is politically active is higher than the average value of the other localities. The second one is whether the average value of municipalities in the metropolitan regions of these states (those in which the Minister is politically active) is higher than the average value of other localities in the State.

This is a pioneering approach in the field of Brazilian budgetary studies, as so far the majority of research has focused on the issue of implementing parliamentary amendments. In addition, the use of the category "favored of the commitment", allows the identification of the localities benefited by the resource and that perspective is also not common in the works focused on the budgetary issue in Political Science.

The article is divided as follows: the first section deals with the literature on coalition presidentialism and pork's barrel distributive logic; the second one presents the concept of urban governance, the process of creation of the Ministry of Cities and the influence of local issues in the conduct of ministerial affairs; the third details the rules and institutions that govern the Brazilian's budgetary process, with emphasis on the actions that are used to implement government programs; then the methodology used is presented; the fifth section shows the data and analyzes the results; the latter establishes the conclusions and possibilities for future studies.

### 2. Coalition Presidentialism, Local Interest and Pork Barrel

In Brazil, considering the multiparty system, the President needs to establish coalitions to build a legislative support. The term coalition presidentialism was first used by Abranches (1988) to express an arrangement that allows governability even when legislative support is formed by heterogeneous majorities.

This "stability" is possible because the President has institutional and constitutional powers such as the agenda and budget initiative on the legislative and also the distribution of ministerial portfolios. About this, distribution of ministries positions is related to the political game associated with the accommodation of interests (Pereira, Power & Rennó, 2007).



However, it is important to understand that it is not always possible to maintain the coalition according to the wishes of the President. This mismatch between his wishes and the others is a characteristic of Brazilian's party system, which creates personal and clientelist incentives: the open list election in which the success of the candidates depends on the number of votes received, encouraging individual competition within the party; vote-pullers, which make parties rely more on candidates than the other way around; and the ease of migrating and creating new parties (Cintra, 2007).

Raile, Pereira e Power (2010) have identified that the Executive has a "toolbox" for coalition management. The main instruments are: the distribution of budget resources in logic of porkbarrel; the sharing of governmental areas, with the consequent influence on the formulation and implementation of public policies; the appointment to the commissioned positions, both the first rank, as the other ones spread by the Federal Public Administration; and even the negotiation of public policies contents. Bittencourt (2016) considers that the Executive analyses the cost-effective of each resource and manage it to achieve his goals.

Therefore, since the basis is broad, particular political interests may prevail, especially when there is the possibility of allocating resources to states and municipalities. As a result, the Coalition Presidentialism arrangement allows that a slice of the resource allocation occurs according to the personalist criteria of pork-barrel, including in the context of the implementation of ministerial programs - and not just restricted to parliamentary amendments, as has traditionally been analyzed. There is also a significant revenues concentration in the Federal Government and the set of rules and institutions that govern the process of the resource's allocation (budget governance) guarantee some discretion to the Ministers, since these resources are not linked to a specific project. The existence of a large amount of municipalities also makes difficult to monitor the distribution of these resources.

For that reason, the clientelism mechanism would not be only in individual parliamentary amendments, as already pointed out by the literature (Pereira & Muller, 2002; Limongi, 2005), but also in the action of the Executive at federal level. This is because the parties that former the coalition have many interests, which, consequently, has a reflection on the preferences and performance of the Ministries.



From the federative perspective, the fragmentary pressures in Brazil, which is one of the most decentralized nations because it has three levels of government with administrative and political autonomy and shared competences, can result in conflicts, low cooperation and predatory relations. There are authors who argue that the adoption of federalism and the goal of equal results between units is an impossible task (Wildavsky, 1984, p. 57-68).

The Ministers' preference to attend their electorate is based on the expectation regarding the amount of votes that can receive in the electoral arena and this marks its decision on how to distribute federal resources among the subnational levels. The electoral connection is expected, as politicians have strong incentives to meet the demands of their constituency.

Abrucio (1998) believes that voting during electoral years is capable of changing the orientation of politicians in favor of regional policies. The transfer of funds and the execution of public projects, especially those of infrastructure are ways to strengthen the relationship with the electorate and representatives at the subnational level, notably when there is the ambition of winning elective positions in the state or municipal executive (Melo, 2005).

### 3. Urban Governance and the Ministry of Cities

The urban-metropolitan issue is a reflection of socio-spatial and environmental historical contradictions. The actors with decisional power dispute the agenda's hegemony in function of their political projects. As a result, there is preference for selective growth in some spaces while perpetuating the marginalization of peripheral spaces. In addition, there is institutional fragmentation in management, since the laws are varied and limited at the subnational level, while at the national level there is no specific legislation that guides and regulates metropolitan governance (Klink, 2013).

In 2003, the Ministry of Cities was created in the Federal Government. This was a historical claim of community, union and urban movements linked to Urban Reform. They resented the absence of a coordinating body of urban policy at the national level that had



ministerial status - a part of the attributions was performed by the Department of Urban Development, linked to the Presidency of the Republic.

The Ministry was structured to address three of the major problems facing cities: housing, sanitation and mobility. According to Maricato (2006, p. 219): "The Ministry of Cities articulates transversally the financial and land issues, seeking to integrate general and sectoral policies - housing, environmental sanitation and transport - for the cities, without ignoring the municipal and state competences" (own translation).

The policies of sanitation, housing and urban development require intersectoriality and cooperation between the levels of the Federation. However, in practice there are socio-spatial inequalities and institutional disarticulation that hamper the development of that public policy. The possible selective action in the budget allocation by the Ministers, privileging certain localities instead of the search for the equity; perpetuates, or even accentuates, these disparities. Tonella (2013) points out that for an effective implementation of urban policy both a structured policy and expressive public resources, as well as continuity, are necessary.

In this context, the Ministry of Cities is a relevant cut in the identification of personalist incentives, since its strong local (and fragmented) performance favors the use of pork barrel. In Brazil, one of the clearest ways to meet the expectations generated by the electorate is through urban infrastructure Rather than the accommodation of mere private interests, this behavior represents a way of seeking legitimacy from their mandates by serving the bases that elected them.

The main action of the Ministry of Cities that demonstrates the action pulverized between the municipalities is the 1D73 (that is a support to the National Policy of Urban Development). According to the Register of Actions (2015)<sup>1</sup>, available by the Ministry of Planning, Development and Management, this action consists in:

Formulation and implementation, through projects demanded by federal entities and amount of resources: actions of water supply, sanitary sewage, urban solid management, urban drainage, integrated sanitation, formulation studies, plans and projects, paving and urban

<sup>&</sup>lt;sup>1</sup> Register of Actions (2015), retrieved from <a href="http://www.orcamentofederal.gov.br/orcamentos-anuais/orcamento-2016/cadastro-de-acoes-1-1">http://www.orcamentofederal.gov.br/orcamentos-anuais/orcamento-2016/cadastro-de-acoes-1-1</a>



access roads, public transport, accessibility, land regularization, access to habitation and urbanization, among other characterized as urban development, with the aim of to improve of sanitary conditions, urban habitability, mobility and accessibility (p.2, own translation).

As described above, the action has broad magnitude in relation to the urban issue, which allows the Ministry to act in interest areas of the States and Municipalities. The budget action 1D73 was created because of a National Congress request. The intention was to allow Congressmen to allocate resources directly to as many municipalities as possible, increasing the gains from pork barrel.

This fact is confirmed when we analyze the individual parliamentary amendments that were proposed to the Ministry of Cities in the last three years: 96%, 96% and 95% of the total resources were intended for this action. It is possible to conclude that the option for the 1D73 is representative of how the budgetary actions are used to obtain the pork gains, as shown in the table:

**Table 1 - budgetary amendments for the Ministry of Cities (2015-2017)** 

	2015	2016	2017
Action 1D73	1,714,614,197	1,373,232,130	1,458,012,721
Total	1,780,985,697	1,425,644,868	1,534,094,897
%	96%	96%	95%

Source: SIOP. Access in july 2018.

## 4. Budgetary Governance

The success of public policies, as well as the State's capacity to implement them, depends substantially on budget governance, which can be understood as "the set of rules (formal and informal) that guide the political, economic, and social relations underlying the process of resource allocation in the public sector" (Barcellos, 2015, p.1, own translation). Considering that the budgetary institutions are created and implemented by people, we also need to include the form of interpretation and application of these institutions.



For Rajkumar &Swaroop (2007, as quoted in Barcellos, 2015), the good governance of public resources is a fundamental factor for the collective development of any society. The findings indicate that the profile of budgetary institutions substantially affects the results of public policies. They conclude that the effectiveness of public expenditure in improving human conditions can be largely explained by the quality of governance budget resource.

In the brazilian case, the *Constituição Federal de 1988* (CF/88) [Federal Constitution of 1988] establishes that the brazilian public budget comprises the elaboration and execution of three basic laws: the *Plano Plurianua l*(PPA) [Multiannual Plan] (PPA), the *Lei de Diretrizes Orçamentárias*(LDO) [Budgetary Guidelines Law] and the *Lei Orçamentária Anual* (LOA) [Annual Budgetary Law], which together should be able to materialize the planning and execution of public policies. These instruments are approved and implemented in each sphere of the Federation.

It is up to the LOA, the mission to achieve the objectives and goals proposed in the PPA, according to the guidelines established by the LDO. The LDO is a law in the formal sense elaborated by the Executive and approved by the Legislative, which establishes the expenses and revenues that will be realized in the next year.

In relation to the budget, the process begins with the preparation of the proposal<sup>2</sup>. The budget laws (PPA, LDO and LOA) are (according to art. 165 of the CF/88) on the initiative of the Executive. At the federal level, this initiative is exclusive of the President of the Republic. It must be exercised compulsorily by the incumbent.

After the projects have been drafted, the President sends them to the National Congress, initiating the constitutive phase of the legislative process. At this stage, parliamentarians debate about the legislative proposal. Unlike all the other proposals, budget projects do not go through a series of thematic committees before going to the plenary. The project is instructed only in the Joint Budget Commission (CMO), which receives the budgetary amendment and gives technical advice, forwarding it for voting by the National Congress Plenary. Once

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<sup>&</sup>lt;sup>2</sup>The deadlines for the budget cycle at the federal level are determined by art. 35, § 2, I to III of the Transitory Constitutional Provisions Act.



approved, it follows to sanction or presidential veto. After the legislative phase, the budget execution process begins.

The budget execution of the expenditure is composed of three phases: commitment, settlement and payment, as regulated by Law n. 4.320/64. The commitment corresponds to the act of the competent authority, which creates the obligation of payment, pending or not of condition of implementation. The settlement of the expenditure consists in verifying the right acquired by the creditor based on the securities and corroborative documents of the respective credit. And the payment corresponds to the competent authority order, which determines the payment of the expenditure.

In the context of budget execution, two regimes coexist: the tax for individual parliamentary amendments and non-taxation for other schedules. The *Emenda Constitucional* (EC) [Constitutional Amendment] n. 86/15, requires the budgetary and financial execution of individual parliamentary amendments up to the limit of 1.2% of the revenue from the project submitted by the Executive. In this way, once the individual amendments in the legislative process have been approved, the Minister in charge is "obliged" to execute them<sup>3</sup>.

Other expenditure are not subject to this imposition because of the high degree of national budgetary rigidity. Therefore, Ministers still have some degree of discretion to allocate resources. As pointed out by Raile, Timonthy & Power (2010), this is one of the instruments used by the Executive Power to manage its coalition.

In sequence, the budget cycle has the steps of evaluating budget, execution and accountability/judging, which often happen concurrently with the implementation phase. At the moment the accounts are prepared, which will be assessed by the auxiliary structure of the Legislative (*Tribunal de Contas e Assessorias Especializadas*) [Court of Accounts and Specialized Advice], and, finally, judged by Parliament.

<sup>3</sup> However, the EC 86/15 excludes certain situations, such as the occurrence of technical impediments.

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## 5. Methodology

In the contextof the Ministry of Cities, this paper proposes a descriptive and quantitative analysis to investigate if the ministers holding the portfolio privilege municipalities located in their states in the execution of the budget action 1D73.

This action has a very broad descriptor, which allows the Ministry of Cities to act in areas of interest to the States and Municipalities. This also arouses the interest of parliamentarians: from the total of R\$ 1.78 billion (approximately half a billion dollars) allocated by deputies and senators to the Ministry through parliamentary amendments in 2017, R\$ 1.71 billion was in this action. That's mean more than 96% of the total amount.

From the quantitative point of view, it was proposed to perform the Student's T test, which is a test of hypotheses to reject or not a null hypothesis. The hypothesis to be verified in the article is based on the assumption that the Ministers of the Cities direct resources of the budget action 1D73 to the municipalities located in the states in which they have political action. The hypotheses are:

**H0:** average value committed in the places where the Ministers have political activity is equal to the average value committed in the other places.

**H1:** average value committed in the places where the Ministers are politically active is higher than the average value committed in the other places.

It is expected that H0 will be rejected, what it means that there is a difference between the averages of the committed values and that this difference occurs due a clientelistic option, which privileges the area of the Minister's electoral performance. In addition, the F test was used to verify the sample variance.

For the second analysis, that is the verification if the Ministries privileged the municipalities located in the metropolitan regions within their State of policy, the T and F tests were also used, considering the following hypotheses:



**H0:** average value committed in the municipalities located in metropolitan regions of the State in which the Ministers are politically active is equal to the average value committed in the other places of that same State.

**H1:** average value committed in the municipalities located in metropolitan regions of the State in which the Ministers are politically active is higher than the average value committed in the other places.

The period of analysis was between 2011 and 2017, a time horizon of seven years. This interval is reasonable to identify the mode of ministerial action when he has discretion to decide the allocation of federal resources. The first year coincides with the beginning of a new presidential term. Over the years, seven leaders have passed through the Ministry.

To establish the groups of Ministries, two criteria were verified:if he has previously disputed elections, in order to identify the State of political activity; and if he has occupied the Ministry for at least six months for each year. Based on these two criteria, Minister Gilberto Occhi, who did not run elections until that moment, was left out of the analysis, and also Minister Inês Magalhães, who did not participate in any electoral process and was less than a month commanding the Ministry of City.

Finally, Minister Mario Negromonte held the position from January 2011 to February 2012. As he did not meet the criterion of occupying the Portfolio for less than six months in 2012, for the purposes of the analysis, only 2011 will be considered as a year of his direction.

The correlation between the Minister and the analyzed period is listed below:

**Table 2 – Ministries of City (2008-2017)** 

Ministry	Start	End	State	<b>Analyzed Period</b>
Mário Negromonte	01/01/2011	02/02/2012	BA	2011
Aguinaldo Ribeiro	07/02/2012	17/03/2014	PB	2012 e 2013
Gilberto Occhi	17/03/2014	01/01/2015	-	-



Gilberto Kassab	01/01/2015	04/15/2016	SP	2015
Inês Magalhães	04/15/2016	05/12/2016	-	-
Bruno Araújo	05/12/2016	11/13/2017	PE	2016 e 2017

**Source:** own elaboration.

Once identified the State of political action of the Minister, the data were classified in groups of two together two:

- 2011: resources allocated to municipalities of BA and resources allocated in other municipalities;
- 2012/2013: resources allocated in PB municipalities and resources allocated in the others;
- 2015: resources allocated in municipalities of SP and resources allocated in other municipalities;
- 2016/2017: resources allocated to municipalities of PE and resources allocated in other municipalities.

In the second moment, we verified the weight of the Metropolitan Regions in the Minister's allocation. The objective was to investigate if in the field of state action the Ministers favored RMs for the allocation of resources. The data was organize thereby:

- 2011: resources allocated in municipalities of the Metropolitan Region of Salvador and Feira de Santana and resources allocated in the other municipalities of BA;
- 2012/2013: resources allocated to municipalities of the Metropolitan Region of Cajazeiras, Esperança,
  Guarabira, Itabaiana, João Pessoa, Patos, Sousa, Mamanguape Valley and resources allocated in the other municipalities of PB;
- 2015: resources allocated in municipalities of the Metropolitan Region of Baixada Santista, Campinas,
  RibeirãoPreto, Santarém, São Paulo, Sorocaba, Vale do Paraíba and Litoral Norte and resources allocated in the other municipalities of SP;
- 2016/2017: resources allocated in municipalities of the Metropolitan Region of Recife and resources allocated in the other municipalities of the EP.

The data were extracted from the Sistema Siga Brasil (Follow Brazil System) in the portal of Federal Budget on July 2, 2018, in the Universo – Despesa Execução criterion, considering the following filters:

• Year of practice: 2011-2017.



• Budget Action: 1D73 (Support to the National Urban Development Policy).

• Locator: national<sup>4</sup>

• State of the Comitment

• Location of the Comitment

• Value of the Commitment

For the identification of the Metropolitan Regions (MRs) and the municipalities, we utilized the data from the *Brasileiro de Demografia e Estatística* (IBGE) [Brazilian Institute of Demography and Statistics].

The article divided the analysis into a descriptive part and one dedicated to performing the following statistical tests: F, to verify the variance between the samples; and, the T, to compare the means. The results are in the next section.

### 6. Results

### **6.1** Descriptive Analysis

The ID73 action had a total of R\$ 3.47 billion authorized in the budget laws, in which R\$ 2.84 billion were effectively committed. The percentage of budget execution, which is calculated by dividing the commitment by the authorized one, was high, especially if we consider that they are not compulsory expenses:

Table 3 – Evaluation of budget action 1D73

Authorized R\$	Value of the Commitment	% of Execution
138,670,406.00	116,413,466.67	84%
331,277,772.26	331,277,772.26	100%
	138,670,406.00	138,670,406.00 116,413,466.67

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<sup>&</sup>lt;sup>4</sup> The choice of the national locator is fundamental because it is in this subtitle that resources will be available to the Minister.



2013	400,791,752.00	400,791,752.00	100%
2014	532,335.357.00	109,858,936.94	21%
2015	407,520,000.00	228,050,975.28	56%
2016	149,211,099.00	146,770,730.57	98%
2017	506,954,580.00	505,606,823.83	100%
Total	3,466,081,485.82	2,838,090,977.11	82%

Source: SIOP.

The exceptions are the years 2014 and 2015, in which the execution was below historical value. About the historical series of the action:

**Grafic 1 – Nominal Amounts Commitment by Year** 

Source: SIOP.

Over the years there were strong variations in nominal terms which indicate that resource allocation is irregular. As part of the Minister's discretion, political will and interest are crucial. It is not a coincidence that the years in which the mechanism of the pork was less effective (2011 and 2015) were also the years in which the available resources were smaller.

About the disposition of the beneficiary states in action 1D73:



Table 4 – Ranking of distribution by State

State	Average	2011	2012/2013	2015	2016/2017
BA	1	1	6	3	3
SP	2	2	5	13	5
MG	3	3	12	10	2
PE	4	11	15	2	1
PI	5	6	11	14	4
PB	6	10	1	19	9
ES	7	16	-	1	14
RS	8	4	3	25	10
MA	9	21	4	9	11
RR	10	20	2	17	6
SC	11	9	7	15	15
PR	12	23	10	5	12
GO	13	8	17	18	8
AM	14	14	8	7	24
RO	15	5	16	16	19
MT	16	7	-	23	13
DF	17	17	19	8	17
RJ	18	22	14	4	21
ТО	19	12	18	24	7
RN	20	15	20	11	16
CE	21	25	13	6	20
AL	22	13	9	21	22

# 4<sup>th</sup> International Conference on Public Policy (ICPP4)

**June 26-28, 2019 – Montréal** 

SE	23	19	21	20	18
PA	24	24	-	12	25
MS	25	18	-	-	23
AC	26	-	-	22	26
AP	27	-	22	-	27

**Source:** own elaboration.

It can be seen that the populous states of the Northeast (BA, PE and PI) and all of the Southeast (MG, ES, SP and RJ) are among the most benefited, given the average performance of the four administrations.

Considering the states of action of Minister Mário Negromonte (2010), Aguinaldo Ribeiro (2012/2013), Kassab (2015) and Bruno Araújo (2016-2017), BA, PB, SP and PE, respectively, it is possible to conclude that Negromonte was the most efficient in the pork mechanism over the years.

In fact, one of the most obvious ways of perceiving how resource allocation is accomplished it is from a geographical perspective:

2011 2012-2013 2016-2017

Figure 1 - geographical distribution of the 1D73 by Municipality

Source: own elaboration.



# 4<sup>th</sup> International Conference on Public Policy (ICPP4)

June 26-28, 2019 – Montréal

The figure shows that the management of Aguinaldo Ribeiro (2012-2013) concentrated the resources in the Northeast region to the detriment of the other localities. What is expected, since the Minister has electoral base in the State of Paraíba. The 2016-2017 management was the one that best distributed the resources in the Municipalities. However, these cuts show that the implementation of 1D73 was not uniform over the years throughout the national territory. The destination of resources was concentrated in certain localities. This difficult equity and overcoming of socio-urban disparities. This process becomes more clearer, when the amount is allocated at the aggregate level:

Figure 2 - geographical distribution of the 1D73 action by Municipality (2011-2017)

Source: own elaboration.



Resuming the question of political action, the distribution of resources in the States of Ministers' interest was, overall, above the execution average (4%), as shown in the table below:

Table 5 - distribution of resources in the States under the Ministry's political activities

State	2011	2012/2013	2015	2016/2017
BA	21,5%	4,56%	11,46%	9,31%
SP	13,64%	4,79%	2,44%	7,12%
PE	2,95%	1,63%	16,00%	12,97%
PB	3,37%	24,69%	1,17%	4,62%
TOTAL	41,46%	35,67%	31,07%	34,02%

Source: own elaboration.

It is interesting to mentioning that 2015 was the year that preceded Dilma's impeachment. Kassab himself left the government before the vote on the case. Already in Temer, Kassab occupied the Minister of Science, Technology, Innovations and Communications. It is to be expected that the allocation of 1D73 funds would not be among the Minister's priorities, reflecting a low commitment in the use of the action in favor of the electoral connection that year (in favor of the State of São Paulo). The lack of explanatory patterns of pork in 2015 is related to the political context.

In 2011, the first year of Dilma's government after the reelection, before Mário Negromonte, the Minister of Cities had been for almost six yearsMárcio Fortes, a longtime diplomat with no party affiliation. Because of this, it is undeniable to assume that the institutional arrangement shaped during those previous years had an impact on the management of Negromonte (2011). Perhaps the Minister had less autonomy in carrying out this action than expected, and the criteria previously established by the Ministry of Cities itself may have prevailed; another possible explanation lies in the learning process. It is likely that Ministers will need some time to "oil" the machine and be able to direct resources to him electoral base.



There are a range of external determinants that directly affect the budget field. In addition, more than the electoral connection or party identity, it is observed that the larger states in the Northeast and Southeast are the most benefited, which reaffirms the unequal treatment, according to social and spatial criteria, in the urban issue.

## **6.2** Statistical analysis

## A. 2011: Mario Negromonte

F-Test: two sample for variances

	Variable 1	Variable 2
Mean	500691,4	471025,2406
Variance	1,77021E+11	3,48179E+11
Observations	50	194
Df	49	193
F	0,508419017	
P(F<=f) one-tail	0,003106808	
F criticalone-tail	0,670873442	

Test-t: two sample assuming unequal variances

	Variable 1	Variable 2
Mean	490.754,49	471.935,73
Variance	1,75669E+11	3,4983E+11
Observations	49	193
HypothesizedMeanDifference	0	
Df	102	
t Stat	0,25614619	
P(T<=t) one-tail	0,399176922	
t criticalone-tail	1,659929976	
P(T<=t) two-tail	0,798353843	
t criticaltwo-tail	1,983495205	

First, f was performed, which indicated that the two sample have different variances. Therefore, the t test was performed assuming unequal variances. And, although the average value committed to the State of Bahia (R \$ 490,754) was higher



than for the other states (R \$ 471,935), we can not reject the null hypothesis, which states that the means are equal. That is, statistically there is no difference between these averages in the committed value.

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F-Test: two sample for variances

	Variable 1	Variable 2
Mean	1.390.000,00	466.021,70
Variance	9,10404E+11	1,08113E+11
Observations	3	47
gl	2	46
F	8,420860632	
P(F<=f) uni-		
caudal	0,000765111	
F crítico uni-		
caudal	3,199581706	

Test-t: two sample assuming equal variances

	Variable 1	Variable 2	
	R\$		
Mean	1.390.000,00	R\$	461.434,79
Variance	9,10404E+11		1,06823E+11
Observations	3		48
PooledVariance	1,39622E+11		
HypothesizedMeanDifference	0		
Df	49		
t Stat	4,175724376		
P(T<=t) one-tail	6,07441E-05		
t criticalone-tail	1,676550893		
P(T<=t) two-tail	0,000121488		
t criticaltwo-tail	2,009575237		

In turn, the statistical analysis of the Minister's behavior within his State of political action allowed the conclusion that the resources are channeled to the MRs. First, the F test signaled that the two samples (municipalities of MR x municipalities not MR) have equivalent variances. And the T test allowed the rejection of the null hypothesis, that is, we can state that the means are distinct and that the localities located in the MRs received more resources than the others.



## B. 2012/2013: Aguinaldo Ribeiro

F-Test: two sample for variances

	Variable 1	Variable 2
Mean	2.287.996,84	1.122.846,79
Variance	5,95439E+13	2,61987E+13
Observations	79	491
Df	78	490
F	2,27278047	
P(F<=f) one-tail	0,00000	
F criticalone-tail	1,307339226	

Test-t: two sample assuming equal variances

	Variable 1	Variable 2
Mean	2.253.950,64	1.124.131,99
Variance	6,02244E+13	2,62515E+13
Observations	78	490
PooledVariance	3,08732E+13	
HypothesizedMeanDifference	0	
Df	566	
t Stat	1,667972308	
P(T<=t) one-tail	0,047937161	
t criticalone-tail	1,647550238	
P(T<=t) two-tail	0,095874321	
t criticaltwo-tail	1,964164013	

The F test indicated that it is not possible to assume that the sample have different variances, therefore, the t-test was assumed assuming equal variances. In this situation, the average value committed to the Minister's political State is 104% higher than the average value committed to the other states. But beyond this expressive value, we can affirm from the results of the t test, that these values are statistically different. That is, the average resources committed to the State of Paraíba was higher than the others.

F-Test: two sample for variances

	Variable 1	Variable 2
Mean	R\$ 2.689.274,11	R\$ 1.310.973,91
Variance	8,33333E+13	1,3692E+12



Observations	56	23
Df	55	22
F	60,86296921	
P(F<=f) one-tail	7,96497E-16	
F criticalone-tail	1,898473646	

Test-t: two sample assuming equal variances

	Variable 1	Variable 2
Mean	R\$ 2.689.274,11	R\$ 1.310.973,91
Variance	8,33333E+13	1,3692E+12
Observations	56	23
PooledVariance	5,9915E+13	
HypothesizedMeanDifference	0	
Df	77	
t Stat	0,718986171	
P(T<=t) one-tail	0,237162891	
t criticalone-tail	1,664884537	
P(T<=t) two-tail	0,474325782	
t criticaltwo-tail	1,991254395	

Related to the analysis of the distribution of resources by the State of Paraíba, the F test indicated that the samples had equal variance. In turn, the T test signaled no difference between the means of the municipalities of the RMs and the others.

## C. 2015: Gilberto Kassab

F-Test: two sample for variances

	Variable 1	Variable 2
Mean	464.254,17	1.090.587,87
Variance	45997622027	5,56743E+12
Observations	12	204
Df	11	203
F	0,008261907	
$P(F \le f)$ one-tail	1,5532E-10	
F criticalone-tail	0,411454804	

Test-t: two samplesassuming unequal variances



	Variable 1	Variable 2
Mean	484.109,09	1.092.313,18
Variance	45393706409	5,59439E+12
Observations	11	203
HypothesizedMeanDifference	0	
Df	184	
t Stat	-3,41680951	
P(T<=t) one-tail	0,000389919	
t criticalone-tail	1,653177088	
P(T<=t) two-tail	0,000779838	
t criticaltwo-tail	1,9729405	

Test f was performed which indicated that the two samples have different variances. Thus, the t test was performed assuming different variances. The analysis of the results shows that the averages of the committed values are not equal, but as can be seen from the table above, the values of the other States are much higher than those of São Paulo.

F-Test: two sample for variances

	Variable 1		Variable 2
Mean	R\$ 483.210,00	R\$	450.714,29
Variance	24942085500		67187597262
Observations	5		7
Df	4		6
F	0,371230503		
P(F<=f) one-tail	0,178329656		
F criticalone-tail	0,162255158		

Test-t: two sample assuming equal variances

	Variable 1		Variable 2
Mean	R\$ 483.210,00	R\$	450.714,29
Variance	24942085500		67187597262
Observations	5		7
PooledVariance	50289392557		
HypothesizedMeanDifference	0		
Df	10		
t Stat	0,247474977		
P(T<=t) one-tail	0,404773839		



t criticalone-tail	1,812461123
P(T<=t) two-tail	0,809547678
t criticaltwo-tail	2,228138852

The analysis of the results considering the distribution of resources within the State of São Paulo did not allow, in the test T, to reject the null hypothesis. That is, it is not possible to state that the average of the resources distributed to the RMs is superior to the others.

## D. 2016/2017: Bruno Araújo

F-Test: two sample for variances

	Variable 1	Variable 2
Mean	1.484.289,64	729.785,40
Variance	2,6434E+12	2,94032E+12
Observations	57	778
Df	56	777
F	0,899019971	
$P(F \le f)$ one-tail	0,316145964	
F criticalone-tail	0,704400375	

Test-t: two sample assuming equal variances

	Variable 1	Variable 2
Mean	1.458.897,31	727.544,33
Variance	2,65405E+12	2,94019E+12
Observations	56	777
PooledVariance	2,92126E+12	
HypothesizedMeanDifference	0	
Df	831	
t Stat	3,092604045	
P(T<=t) one-tail	0,001025197	
t criticalone-tail	1,646689343	
P(T<=t) two-tail	0,002050395	
t criticaltwo-tail	1,962822752	

The F test indicated that it is not possible to assume that the samples have distinct variances, so the test was carried out assuming equivalent variances. In this situation, the average value committed to the Ministry's political State is 101% higher than the average value committed to the other States. But beyond this expressive value, we



can affirm from the results of the test t, that these values are statistically different. That is, the average resources committed to the State of Paraíba was higher than the others.

F-Test: two sample for variances

	Variable 1	Variable 2	
Mean	1.820.529,64	1.451.958,87	
Variance	1,5861E+12	2,76601E+12	
Observations	5	52	
Df	4	51	
F	0,57342533		
P(F<=f) one-tail	0,316867944		
F criticalone-tail	0,175496706		

Test-t: two sample assuming equal variances

	Variable 1	Variable 2
Mean	R\$ 1.820.529,64	R\$ 1.451.958,87
Variance	1,5861E+12	2,76601E+12
Observations	5	52
PooledVariance	2,6802E+12	
HypothesizedMeanDifference	0	
Df	55	
t Stat	0,480824467	
P(T<=t) one-tail	0,316274252	
t criticalone-tail	1,673033965	
P(T<=t) two-tail	0,632548504	
t criticaltwo-tail	2,004044783	

When analyzing the distribution of resources within the State of Pernambuco, it is not possible to conclude that there is a differentiation between the municipalities of the RMs and the others.

### E. Comparison between Minister's Management

Of the four ministers analyzed, it can be said that two of them (Aguinaldo Ribeiro and Bruno Araújo) used budget action 1D73 to privilege their states of political action. In relation to the Minister Mario Negromonte, although the value committed in Bahian localities was higher than the others, from the statistical point of view, it was not significant.



As for Minister Kassab, the relationship was in the opposite direction, with the other states having a value committed higher than the State of São Paulo.

Table 6 – Pork Barrel in the Ministry of Cities

Minister	State	AnalyzedPeriod	Does the Minister privileged his State?	
			YES	NO
Mário Negromonte	BA	2011		X
Aguinaldo Ribeiro	PB	2012/2013	X	
Gilberto Kassab	SP	2015		X
Bruno Araújo	PE	2016/2017	X	

Source: own elaboration.

The second step of the research was to verify whether, in their State of political action, the Ministers favored the municipalities of the Metropolitan Regions (MR)and analysis was inconclusive, as can be seen in the table below:

Table 7 – Privilege of Metropolitan Regions for pork in the Ministry of Cities

Minister	State	<b>Analyzed Period</b>	Does the Minister privilegedthe MRs?	
			YES	NO
Mário Negromonte	BA	2011	X	
Aguinaldo Ribeiro	PB	2012/2013		X
Gilberto Kassab	SP	2015		X
Bruno Araújo	PE	2016/2017		X

Source: own elaboration.



#### 7. Conclusions

This article sought to analyze the performance of the Minister of Cities, in the period between 2011 and 2017, in relation to the allocation of resources from budget action 1D73 in the various municipalities. There was a strong indication that the Minister operates according to the distributive logic, in a benefit-sharing scheme. The statistical tests indicate the existence of the pork in half the managements. In addition, the data descriptive analysis shows this mechanism in three of the four managements analyzed.

With these results, it was tried to verify if the municipalities located in Metropolitan Regions would receive, in average, more resources than the others. And the results were inconclusive, only in the State of Bahia, the resources directed to the MRs were superior. another hypothesis to be verified in future studies is whether there is a preference for small municipalities, in detriment of larger ones (usually located in MRs). This is a promising field for further studies.

The research can also be expanded in order to investigate wich other logics may guide the allocation of resources. One possible way is to verify if the municipalities that received the largest amount of resources are from the same political party of the Minister Thus, the logic of pork would be strongly linked to the strengthening of political parties and not just to the re-election of the Minister.

Another important point would be to verify if this ministerial behavior is replicated in the other Ministries, or if it is more restricted to Ministry of the Cities, that deals with infrastructure and urban questions, issues with strong local demands. The explanation for pork barrel stems from the fact that the Minister has the autonomy to choose directly the locations in which he will allocate the resources. in the expectation that, in the electoral moment, it receives votes and even other future political favors.

The clientelistic behavior, typically exploited in the area of legislative studies, also replicates for the other actors of the political system, including in the federal government itself. This demonstrates the relevance of the dialogue with the subnational spheres: it is in the



localities that we can find in fact the electorate. Even if there are constraints and rules that require members of the Executive and Legislative to act in favor of national interests, these actors also perform concerning local demands.

Thus the field of budgetary studies within Political Science must transcend the processes that involve only the parliamentary amendments. It urges to revisit and broaden the literature. the attempt to identify the localities benefited by the resource is still uncommon in academic work.

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