



FEDERAL PUBLIC RESOURCES IN RESPONSE TO NATURAL DISASTERS IN THE BRAZILIAN STATE OF RIO GRANDE DO SUL

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ABSTRACT

Objective: The objective of this study is to analyze the sources and allocation of federal public resources applied to natural disasters in the Brazilian state of Rio Grande do Sul in 2024.

Theoretical Framework: Based on Public Choice Theory, the study investigates how self-interests can influence the allocation of public resources, which is relevant in the context of Brazilian public administration.

Method: Using a descriptive and documentary approach, this qualitative research collected data from provisional measures and the Transparency Portal, analyzing the sources and amounts of funds quantitatively and their allocations qualitatively through the lens of Public Choice Theory.

Results and Discussion: Most of the funds come from Official Credit Operations (41.80%) and Federal Financial Charges (13.97%). The allocation covers a range of areas from climate change mitigation to support for microenterprises. The diversity of allocations suggests an effort to meet multiple emerging needs and maximize political benefits, reflecting the influence of self-interests in public management.

Research Implications: The study emphasizes the importance of transparency and accountability in public management, especially in disaster situations. By revealing how resources are allocated and identifying potential influences of self-interests, the research contributes to the formulation of more efficient and equitable public policies. Detailed understanding of the allocations can improve accountability and integrity in resource allocation, promoting governance practices that increase public trust in government actions.

Originality/Value: Applying Public Choice Theory, this study offers insights into the efficiency and equity of resource allocation for natural disasters in Rio Grande do Sul, contributing to the literature on disaster management and public administration in Brazil.

Keywords: Natural Disasters, Resource Management, Rio Grande do Sul, Public Choice Theory.

RECURSOS PÚBLICOS FEDERAIS EM RESPOSTA AOS DESASTRES NATURAIS NO ESTADO BRASILEIRO DO RIO GRANDE DO SUL DO BRASIL

RESUMO

Objetivo: O objetivo deste estudo é analisar as fontes e a destinação de recursos públicos federais aplicados aos desastres naturais no estado brasileiro do Rio Grande do Sul em 2024.

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Referencial Teórico: Baseado na Teoria da Escolha Pública, o estudo investiga como interesses próprios podem influenciar a alocação de recursos públicos, relevante no contexto de administração pública brasileira.

Método: Com abordagem descritiva e documental, a pesquisa qualitativa coletou dados de medidas provisórias e do Portal da Transparência, analisando quantitativamente as fontes e valores dos recursos e qualitativamente suas destinações à luz da Teoria da Escolha Pública.

Resultados e Discussão: A maior parte dos recursos provém das Operações Oficiais de Crédito (41,80%) e Encargos Financeiros da União (13,97%). A alocação abrange desde mitigação de mudanças climáticas até apoio a microempresas. A diversidade das destinações sugere um esforço para cobrir múltiplas necessidades e maximizar benefícios políticos, refletindo influências de interesses próprios na gestão pública.

Implicações da Pesquisa: A pesquisa sublinha a importância de transparência e responsabilidade na gestão pública em situações de calamidade, contribuindo para políticas mais eficientes e equitativas. A análise detalhada das destinações pode melhorar a prestação de contas e a integridade na alocação de recursos, promovendo maior confiança da sociedade nas ações governamentais.

Originalidade/Valor: Aplicando a Teoria da Escolha Pública, este estudo oferece achados importantes sobre a eficiência e equidade na alocação de recursos para desastres naturais no Rio Grande do Sul, contribuindo para a literatura sobre gestão de desastres e administração pública no Brasil.

Palavras-chave: Natural Disasters, Resource Management, Rio Grande do Sul, Public Choice Theory.

RECURSOS PÚBLICOS FEDERALES EN RESPUESTA A DESASTRES NATURALES EN EL ESTADO BRASILEÑO DE RIO GRANDE DO SUL

RESUMEN

Objetivo: El objetivo de este estudio es analizar las fuentes y la asignación de recursos públicos federales aplicados a desastres naturales en el Estado Brasileño de Rio Grande do Sul en 2024.

Marco Teórico: Basado en la Teoría de la Elección Pública, el estudio investiga cómo los intereses propios pueden influir en la asignación de recursos públicos, relevante en el contexto de la administración pública brasileña.

Método: Con un enfoque descriptivo y documental, la investigación cualitativa recopiló datos de medidas provisionales y del Portal de Transparencia, analizando cuantitativamente las fuentes y valores de los recursos y cualitativamente sus destinaciones a la luz de la Teoría de la Elección Pública.

Resultados y Discusión: La mayor parte de los recursos proviene de las Operaciones Oficiales de Crédito (41,80%) y Cargos Financieros de la Unión (13,97%). La asignación abarca desde la mitigación de cambios climáticos hasta el apoyo a microempresas. La diversidad de las destinaciones sugiere un esfuerzo para cubrir múltiples necesidades y maximizar beneficios políticos, reflejando influencias de intereses propios en la gestión pública.

Implicaciones de la investigación: La investigación subraya la importancia de la transparencia y responsabilidad en la gestión pública en situaciones de calamidad, contribuyendo a políticas más eficientes y equitativas. El análisis detallado de las destinaciones puede mejorar la rendición de cuentas y la integridad en la asignación de recursos, promoviendo una mayor confianza de la sociedad en las acciones gubernamentales.

Originalidad/Valor: Aplicando la Teoría de la Elección Pública, este estudio ofrece hallazgos importantes sobre la eficiencia y equidad en la asignación de recursos para desastres naturales en Rio Grande do Sul, contribuyendo a la literatura sobre gestión de desastres y administración pública en Brasil.

Palabras clave: Desastres Naturales, Gestión de Recursos, Rio Grande do Sul, Teoría de la Elección Pública.

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1 INTRODUCTION

Public administration in Brazil faces significant challenges related to budget allocation, often marked by corruption scandals and political crises, as discussed by Quaesner et al. (2017) and Sallaberry et al. (2020). These events raise questions about the arbitrariness of public managers' decisions, highlighting the importance of Public Choice Theory (Eskridge, 1988).

Public Choice Theory analyzes how collective decisions are made in democratic regimes, where individuals translate their personal preferences into choices that affect the collective (Eskridge, 1988; Sallaberry et al., 2020). Pereira (1997) argues that political and economic decisions are influenced by a diverse set of public agents, whose actions are often driven by the maximization of their own interests.

In the Brazilian context, this theory is particularly relevant to the analysis of natural disasters and their impacts. Climate change has intensified the frequency and severity of disasters such as floods and landslides, which result in significant social and economic losses (Debortoli et al., 2017; Gonçalves & Sampaio, 2022; Oliveira et al., 2023), thus highlighting the urgent need for effective resilience policies together with mitigation strategies (Sales, 2023).

The response to these disasters requires effective coordination between public and private agencies, as outlined by the National Civil Protection and Defense System (Guimarães et al., 2024). However, the effectiveness of these actions can be compromised by poor resource allocation, influenced by the particular interests of public managers, according to Public Choice Theory (Sallaberry et al., 2020).

The state of Rio Grande do Sul, recently affected by one of the largest climatic disasters in its history, exemplifies the need for efficient management of resources allocated for disaster mitigation in addition to recovery (Noskoski & Gysi, 2024; Oliveira et al., 2024). Law No. 12.608, which establishes the National Civil Protection and Defense Policy, emphasizes the importance of prevention and preparedness, but the effective implementation of these policies depends on the integrity and competence of public managers (Cardeal & Barcelos, 2016). Therefore, investigating the application of Public Choice Theory in the allocation of resources for natural disasters in Rio Grande do Sul can provide important and necessary insights into the efficiency and equity of civil defense and recovery actions.

Thus, this study presents the following research question: How are federal public resources being allocated to incidents of disasters in the State of Rio Grande do Sul in 2024? Therefore, this research aims to analyze the sources and allocation of federal public resources applied to disasters in the State of Rio Grande do Sul in 2024.



By analyzing the sources as well allocation of federal public resources applied to disasters in Rio Grande do Sul, the research ambition to be relevant by evaluating government actions and promoting transparency in the use of public resources, which is essential for accountability to society. By detailing the resources applied to the natural disaster in southern Brazil, the study can identify gaps in the financial allocation processes in disaster management, facilitating continuous improvements while also the mitigation of fund misappropriation or budget mismanagement.

Public Choice Theory can help in understanding how self-interests can influence resource allocation, highlighting the need for efficient and equitable policies. Furthermore, it guides the formulation of efficient and effective policies, promoting governance practices that increase transparency and accountability of public managers. This research seeks to explore how Public Choice Theory can explain resource allocation in natural disaster situations, emphasizing the need for transparency in addition to accountability in public management to ensure that society's needs are met in a fair and effective manner.

2 THEORETICAL FRAMEWORK

2.1 PUBLIC CHOICE THEORY

In Brazil, public administration constantly faces challenges related to scandals involving peculiar budget allocation decisions (Quaesner et al., 2017). According to Sallaberry et al. (2020), the corruption scandals and political crises that Brazil has been experiencing raise questions about the arbitrariness in the decisions of public managers, which stem from public choices that are constantly reported in the media.

In democratic regimes, public choices are made by individuals who make collective decisions according to specific rules, which allow these individuals to transpose their individual preferences into a single choice that affect the collective (Ostrom & Ostrom, 2004). Therefore, Public Choice Theory desire to analyze the quality of behavior of individuals related to the political process, whether they are public agents, voters, or people interested in the adopted policies (Fiirst et al., 2018).

The main perspective of Public Choice Theory consists of observing that political and economic decisions of governments are subject to a set of powers distributed among different public agents, all with specific functions in the political system (Eskridge, 1988). Thus, the various actors involved in the political system can influence the decision-making process



through the application of traditional economic science methods with the aim of maximizing their own interests (Ostrom & Ostrom, 1971; Sallaberry et al., 2020).

As Pereira (1997) points out, the various public agents, including the president, the executive, legislative, and judicial branches, political parties, interest groups, and the public administration in general, have the ability to influence the possibility and effectiveness of implementing public policies. Therefore, according to Public Choice Theory, the public manager, driven by personal interests, can shape society's perception of their image by manipulating information about their actions (Basu, 1994; Santos & Machado, 2021).

Observing the representatives of a society, democratically elected, in line with the theory's assumptions, their decisions tend to occur according to a set of rules, which may be motivated by the maximization of the possibility of reelection (Quaesner et al., 2017). In other words, since the government tends to make decisions based on their chances of reelection, they may seek actions that cause satisfaction in society with a view to achieving reelection (Santos & Machado, 2021). In this context, countless revelations about public resource misappropriation, stemming from public agents' misconduct, draw attention to public choices that may harm society's well-being (Sallaberry et al., 2020).

2.2 NATURAL DISASTERS AND THEIR IMPACTS

Climate change represents a global phenomenon that reflects a complex interaction between human activities and natural processes, resulting in significant changes in global climate patterns (Vitousek, 1994; Wink et al., 2023; Oliveira et al., 2024). In Brazil, some climatic phenomena, such as heavy rains, can lead to major natural disasters, such as floods and landslides (Oliveira et al., 2023).

A disaster is understood as an event caused by nature or human action, which causes various problems for society, such as housing loss, diseases, deaths, etc. (Cannon, 1994; Gonçalves & Sampaio, 2022). Natural disasters can result from geophysical, biological, climatic, hydrological, and/or meteorological factors, generating significant impacts on society through damage to victims and complex recovery in the affected area (Chaudhary & Piracha, 2021; Oliveira et al., 2023).

According to Oliveira et al. (2024), economically, damage to essential infrastructure along with the reduction of local economic activities result in high costs for the recovery and reconstruction of areas affected by disasters. Therefore, responses to the damages caused by disasters should be supported by relevant public and private civil protection and defense



agencies, which constitute the National Civil Protection and Defense System (Ratchev & Tagarev, 2018; Guimarães et al., 2024).

Natural disasters, depending on their magnitude, result in a state of public calamity. Public calamity comprises an abnormal situation caused by disasters, which implies a compromise of public power or requires the adoption of exceptional administrative measures for the response and recovery of the affected federative entity (Burkle, 2006; Santanna et al., 2021). The occurrence of environmental disasters is communicated through the issuance of Emergency Situation (SE) and State of Public Calamity (ECP) decrees, which are issued by municipalities moreover approved and recognized by the states and the Union (Guimarães et al., 2024).

Public administration is responsible for conducting citizens' interests, as it is through it that solutions are sought through government planning to meet society's needs (Vigoda, 2002; Santanna et al., 2021). Therefore, public managers responsible for management should guide the dynamics of public spending, especially those to be used to minimize the economic, social, and environmental damages resulting from disasters (Gonçalves & Sampaio, 2022).

Thus, as Ratchev and Tagarev (2018) and Guimarães et al. (2024) point out, it is necessary to understand the governance structure that underpins the functioning of the civil protection and defense system, as governance is fundamental in the decision-making process at different scales, especially in situations of public calamity. Recently in Brazil, a tragedy occurred in the State of Rio Grande do Sul due to climate change (Oliveira et al., 2024), which required public authorities to take civil protection and defense actions.

2.3 PUBLIC SPENDING AND DISASTERS IN RIO GRANDE DO SUL

The state of Rio Grande do Sul is one of the regions that has been suffering from natural disasters, such as floods, gales, droughts, hail, flash floods, etc. (Zanchin et al., 2017; Wink et al., 2023). Studies indicate that in Rio Grande do Sul, an increase in precipitation variability and the incidence of extreme rains contribute to the intensification of floods and landslides, which affect both urban and rural areas (Oliveira et al., 2024).

In May 2024, the state of Rio Grande do Sul was affected by one of the largest climatic disasters recorded in its history (Noskoski & Gysi, 2024). This disaster mainly results from climate change, which is sometimes intensified by uncontrolled human exploitation of natural resources and environmental devastation (Oliveira et al., 2024). However, the damage to society could be minimized by prevention mechanisms if well implemented by Civil Defense (Zanchin



et al., 2017).

Civil protection and defense represent a fundamental pillar in risk management and the mitigation of impacts caused by natural disasters together with social adversities. In Brazil, the National Civil Protection and Defense System (SINPDEC) emerges as an important institutional framework in this context, being shaped by a series of evolutions over the decades (Souza et al., 2011; Sales, 2023). This system was designed based on the structures in addition to realities of disasters occurring in the southern and southeastern regions of the country (Guimarães et al., 2024).

The proper allocation of financial resources plays a crucial role in the ability to respond to natural disasters (Kourtiti et al., 2023). The National Civil Protection Policy, established by Law No. 12.608, emphasizes the importance of integrated action between different government agencies, prioritizes prevention and preparedness to deal with such events (Cardeal & Barcelos, 2016).

The resource allocation policy also involves emergency transfers from the federal government to affected municipalities, allowing a quick and unbureaucratic response after federal recognition of the emergency situation (Cardeal & Barcelos, 2016; Ommer et al., 2024). These transfers are essential to ensure assistance to victims and start the reconstruction process of areas affected by natural disasters (Henrique & Batista, 2021).

Consequently, Public Choice Theory applied to natural disasters highlights that public managers, motivated by personal interests, can influence resource allocation and disaster response in a way that maximizes their own benefits, potentially compromising the efficiency and equity of civil defense and recovery actions in affected areas. Therefore, analyzing the allocation of public resources in calamity situations becomes relevant as it contributes to society's understanding of public spending aimed at facing natural disasters.

3 METHODOLOGICAL PROCEDURES

3.1 RESEARCH TYPOLOGY

This article desire to analyze the source and allocation of federal public resources allocated to disasters in the State of Rio Grande do Sul (RS) in 2024. Analyzing the source and allocation of public resources to support those affected by floods requires data collection regarding budgetary and non-budgetary resources.

Therefore, regarding objectives, the research is considered descriptive, as its main goal



is to describe the sources of federal public resources and how these resources are applied to different initiatives, such as food, civil defense, health, reconstruction, etc. Concerning research procedures, the research is considered documentary, as the information source is documents officially disclosed, i.e., the information source are the provisional measures published on official federal government platforms. According to Bowen (2009), document analysis represents a systematic procedure that ambition to review or evaluate documents, whether printed or electronic materials. Thus, by analyzing the provisional measures, these documents are considered electronic materials that provide the necessary information for the preparation of this research.

Regarding the research approach, the research adopts a qualitative approach, as it uses the analysis of the contents of the provisional measures, and through this analysis, descriptions of the resource sources together with discussions about their allocations will be made. According to Selvi (2019), content analysis is considered a qualitative analytical method used for the systematic interpretation of qualitative data. Therefore, by analyzing the contents of the provisional measures and describing them analytically, the study uses a qualitative approach.

3.2 DATA SOURCE AND COLLECTION

For the operationalization of the research, the Provisional Measures related to investments aimed at RS, with a view to supporting the population and governments of the areas affected by the floods that occurred in the state from May 2024 onwards, are analyzed.

The necessary information to achieve the research objective is obtained from the Transparency Portal, linked to the Office of the Comptroller General of the Union (CGU). The data collected in this research was updated until July 9, 2024, with MP No. 1,237/2024 available on the portal.

The focus of the research is on the budget-financial execution related to the extraordinary credits of the provisional measures related to the Provisional Measures (PMs) supporting RS, as follows:

**Table 1***Provisional Measures for Flood Relief in the State of RS - 2024*

Provisional Measure	Description
1.218/2024	Extraordinary credit of over R\$ 12 billion for a series of initiatives.
1.223/2024	Extraordinary credit of R\$ 1.8 billion, with R\$1.2 billion for Reconstruction.
1.225/2024	Credit of R\$ 6.8 billion for the acquisition of imported rice.
1.231/2024	Extraordinary credit of R\$ 124,060,365.00 for public calamity transfers.
1.233/2024	Credit to various ministries of R\$ 17,587,897,059.00 to the RS calamity.
1.235/2024	Credit to MIDR of R\$ 689,689,688.00 to address the calamity situation in RS.
1.237/2024	Credit of R\$ 2,036,694,007.00 for RS.

Source: CGU (2024).

The PMs refer to budget-financial executions aimed at addressing the floods that occurred in the RS. The information disclosed on the Transparency Portal focuses only on budgetary resources, which include public expenses and the public budget (CGU, 2024).

3.3 DATA PROCESSING

As previously mentioned, information regarding public spending to address natural disasters was collected. This information, obtained from the Transparency Portal, is presented in numerical form, with values represented in Brazilian Reais (R\$). The available information includes: Agency; Unit; Program; Action; Product; and Value. Additionally, the budget structure was consulted in the Integrated Planning and Budget System (SIOP) for a better understanding of the expenditure allocation.

The data were analyzed descriptively, by analyzing the quantities of resource sources and how these resources are allocated to different initiatives. Qualitatively, the research focus is to describe how the amounts were allocated and to discuss the allocations through descriptions of the most significantly applies resources. These discussions will be conducted from the perspective of Public Choice Theory.

4 RESEARCH RESULTS

4.1 SOURCE OF RESOURCES

The resources allocated to the areas affected by the floods in the RS originate from Extraordinary Credits for Public Calamity. These credits were provided directly by the Union or by representative Union bodies. Table 2 summarizes the public bodies, the total spending



allocated, and the proportions of how much each body allocated to RS.

Table 2

Source of Expenditures to the RS

Agency	Amount	Percentage
Official Credit Operations (OOC)	17,201,897,059	41.808%
Financial Charges of the Union (EFU)	5,750,000,000	13.975%
Ministry of Agrarian Development and Family Agriculture (MDA)	5,194,549,000	12.625%
Ministry of Integration and Regional Development (MIDR)	2,745,514,688	6.673%
Ministry of Cities (MCID)	2,344,366,000	5.698%
Ministry of Agriculture and Livestock (MAPA)	2,020,514,000	4.911%
Ministry of Labor and Employment (MTE)	1,718,159,346	4.176%
Ministry of Transport (MT)	1,185,949,636	2.882%
Ministry of Defense (MD)	1,122,693,138	2.729%
Ministry of Health (MS)	931,815,310	2.265%
Transfers to States, Federal District, and Municipalities (TEDM)	313,916,503	0.763%
Ministry of Finance (MF)	200,000,000	0.486%
Ministry of Dev. and Social Assistance, Family, and Hunger Combat (MDS)	156,702,406	0.381%
Ministry of Education (MEC)	94,626,953	0.230%
Ministry of Justice and Public Security (MJSP)	73,241,031	0.178%
Ministry of Communications (MCOM)	27,861,384	0.068%
Ministry of Environment and Climate Change (MMA)	26,000,000	0.063%
Federal Justice (JF)	15,376,000	0.037%
Public Defender of the Union (DPU)	14,781,999	0.036%
Ministry of Ports and Airports (MPOR)	6,000,000	0.015%
Ministry of Human Rights and Citizenship (MDHC)	1,000,000	0.002%
Total	41,144,964,453	100.00%

Source: Research data (2024).

A total of forty-one billion, one hundred and forty-four million, nine hundred and sixty-four thousand, four hundred and fifty-three reais (R\$ 41,144,964,453) was allocated to mitigate the impacts that the floods in RS had on the population. This resource has 21 sources in total, with Table 2 classifying these resources according to their significance in relation to the total allocated to the state. Initially, the largest source of resources allocated to RS came from Official Credit Operations (OCO), which represent 41.80% of all resource sources, thus indicating high significance of the extraordinary credits allocated to RS.

Next, Union Financial Charges (UFC) comprise the second most significant resource source, representing about 13.97% of the resources allocated to RS. In third place, the Ministry of Agrarian Development and Family Agriculture (MDA) was one of the bodies that made the largest resource allocation to RS, comprising 12.62% of all the applied resources. Together, the OCO, UFC, and MDA sources comprise more than half of the resources allocated to RS, accounting for 68.41%.

Bodies such as the Ministry of Integration and Regional Development (MIDR), the Ministry of Cities (MCID), and the Ministry of Agriculture and Livestock (MAPA) represent



the next largest resource allocations to RS, each contributing about two billion reais to the State of Rio Grande do Sul through extraordinary credits for public calamity situations. Once again, there is a notable concern from bodies related to agriculture regarding the consequences of the floods in RS.

As pointed out by Troian et al. (2020), family farming in the State of Rio Grande do Sul is significant, as this federal entity stands out nationally due to the importance of the resources transacted with this segment. Additionally, family farming is responsible for generating employment and income, as well as providing food to the national population. Thus, it is essential to have public policies that aim to reduce the socioeconomic vulnerabilities faced by this segment (Troian et al., 2020).

As observed, only the MDA and MAPA account for 12.62% and 4.91% of the resources allocated to RS, totaling 17.54%. For this reason, due to the relevance of family farming to the national environment moreover RS's significant share of these activities, there is a lot of concern from the Union regarding the regions affected by the floods. Thus, it is initially observed that there is great concern from bodies related to the Brazilian agricultural sector, as both are concerned with sustainable rural development and the promotion of food security in Brazil.

Descriptions of resource allocations, whether through Official Credit Operations or Union Financial Charges, will be provided in the next subsection, which aims to describe characteristics related to how resources were allocated through the extraordinary credits described in the Provisional Measures for addressing the floods in the State of RS.

4.2 ALLOCATION OF RESOURCES

After analyzing the sources of resources for addressing the floods in the State of RS, it is important to verify the main allocations of such resources. As previously observed, the most significant resources come directly provided by the Union, either through Official Credit Operations or through Union Financial Charges. Consequently, the following bodies are identified as those that allocated the largest volume of resources: Ministry of Agrarian Development and Family Agriculture; Ministry of Integration and Regional Development; Ministry of Cities; as well as Ministry of Agriculture and Livestock.

The following Table 3 presents the descriptions of the main resource allocations by each body. The table lines show the body or source of the resource and the description of the primary allocation for the most significant volume of resources from that source. Thus, it is possible to verify how the extraordinary credits are allocated moreover in what situations they will be



applied.

Table 3

Destinations of Expenditures to the RS

Agency	Main Destination
OOC	Operations to Support Climate Change Mitigation and Adaptation
EFU	National Program for Support to Micro and Small Businesses (PRONAMPE)
MDA	Import of processed or unprocessed rice to address social/economic impacts
MIDR	Civil Protection and Defense Actions
MCID	Capitalization of the Residential Leasing Fund (FAR)
MAPA	Import of processed or unprocessed rice to address social/economic impacts
MTE	Financial Support for Workers and Artisan Fishers
MT	Interventions for Recovery and Restoration of Federal Highways
MD	Military Support Team
MS	Health Services
TEDM	Financial Support to Municipalities in the State of Rio Grande do Sul
MF	Projects to Address Consequences of Climate Events
MDS	Social Assistance
MEC	Direct Money to Schools for Basic Education
MJSP	Compensation Payments for Highway Police
MCOM	Emergency Services and Connectivity
MMA	Environmental Team Actions
JF	Recovery of Federal Justice Units in Rio Grande do Sul
DPU	Legal Assistance to Citizens
MPOR	Support for the Operation of the Canoas Air Base/RS
MDHC	Promotion and Defense of Human Rights

Source: Research data (2024).

The analysis of the data listed in Table 3 reveals a resource allocation strategy that covers a wide range of areas to mitigate and respond to the impacts of the floods in Rio Grande do Sul. Official Credit Operations, which represent the majority of resources, are primarily intended to support climate change mitigation in addition to adaptation actions, reflecting a concern with preventing future disasters. Meanwhile, the Union Financial Charges focus on supporting micro and small businesses through PRONAMPE, which is essential for maintaining the local economy and preserving jobs.

The import of rice, financed by both the Ministry of Agrarian Development and Family Agriculture and the Ministry of Agriculture and Livestock, is a measure aimed at ensuring food security for the affected populations and Brazil as a whole. The Ministry of Integration and Regional Development directs its resources towards civil protection and defense actions, essential for the immediate protection of the population and critical infrastructures. Direct financial support to municipalities, facilitated by Transfers to States, the Federal District, and Municipalities, desire to ensure a quick and effective response to specific local needs.

Several ministries focus on infrastructure recovery and maintenance, such as the



Ministry of Transport with the restoration of federal highways and the Federal Judiciary with the recovery of its units in the state. The Ministry of Health and the Ministry of Labor and Employment provide essential health services and financial support to workers and artisanal fishermen, respectively, addressing basic needs and ensuring the subsistence of the most vulnerable populations.

Other areas covered include education, through resources allocated directly to schools, and public safety, to expand the workforce in dealing with the public calamity. Communications and the environment also receive attention, with resources allocated to emergency services and environmental actions. Finally, legal support and human rights protection are guaranteed by the Public Defender's Office and the Ministry of Human Rights and Citizenship, ensuring that affected populations have access to legal support and that their rights are protected during the recovery process.

The study by Silva et al. (2021), when analyzing resource allocation to address climate change between 2008 and 2019, observed that the main actions were: environmental management; agriculture; sanitation; administration; public safety; urbanism; among others. Thus, it is observed that the findings of this study align with the current research, especially in the allocation of resources to the agriculture area, which showed a large percentage of the resources allocated in the State of RS.

Overall, the distribution of resources reflects a multifaceted and coordinated approach, aiming not only at the immediate response to the impacts of the floods but also at long-term recovery and the resilience of the affected communities. Thus, a diversified resource allocation strategy is observed, focusing both on mitigation and immediate response actions and on long-term recovery and adaptation initiatives. The distribution of resources reflects the need to address multiple dimensions of the impact of the floods, from food security and housing to infrastructure furthermore public health.

4.3 DISCUSSION OF RESULTS

Public Choice Theory offers critical lens for analyzing the research findings on the allocation of public resources in response to natural disasters in Rio Grande do Sul. This theory, which applies economic principles to the analysis of political decisions, suggests that public managers may be motivated by self-interests and the maximization of personal benefits, influencing the effectiveness and equity in resource allocation.

The resources allocated to Rio Grande do Sul, as presented in Table 2, come from



various sources, mainly from Official Credit Operations (OCO) and Union Financial Charges (UFC). The predominance of OCO (41.80%) and UFC (13.97%) resources suggests a significant reliance on federal financial mechanisms to address public calamities. This aspect can be interpreted considering Public Choice Theory, which emphasizes the influence of multiple public agents with different interests in the resource allocation process.

The high concentration of OCO resources may indicate a preference for financing solutions that offer greater flexibility for public managers, allowing adjustments according to political or personal interests. On the other hand, UFC resources, allocated to the National Support Program for Micro and Small Enterprises (PRONAMPE), show a concern with maintaining the local economy, especially micro as well as small enterprises, which can be both a legitimate public policy objective and a strategy to ensure electoral support from strategic sectors of the economy.

The resource allocation (Table 3) reflects a wide range of areas, from climate change mitigation actions to direct support for microenterprises and affected workers. The diversity of allocations can be seen as an effort to cover multiple emerging needs but can also be analyzed from the perspective of maximizing political benefits.

Most of the OCO resources are directed towards climate change mitigation and adaptation actions, reflecting a concern with preventing future disasters. However, the effectiveness of these actions depends on implementation and monitoring, which can be influenced by political interests.

In contrast, the significant allocation of UFC to PRONAMPE points to a strategy of sustaining the local economic base, crucial for maintaining jobs and economic stability. However, this choice may also be motivated by the pursuit of political support from micro and small enterprises, a significant electoral group.

Both the MDA and MAPA allocate resources to the importation of rice to address the consequences of the floods. This action ensures food security for the affected populations but can also be interpreted as a mechanism to maintain the satisfaction of influential agricultural sectors and their voters. This finding corroborates Troian et al. (2020), who point out the concern with public policies aimed at reducing the vulnerabilities of the agricultural segment.

Public Choice Theory suggests that public managers, motivated by particular interests, can manipulate resource allocation to maximize their own benefits, whether political, electoral, or economic (Ostrom & Ostrom, 2004). The findings indicate that ministries related to agriculture and regional development (MDA, MAPA, MIDR) have a significant presence in resource allocation, which can reflect both a legitimate need to support the agricultural sector



and a strategy to secure political support from a sector fundamental to the economy of Rio Grande do Sul.

The analysis through the lens of Public Choice Theory raises questions about the efficiency and equity of resource allocation. While the diversification of resource sources and allocations shows an attempt at comprehensiveness and immediate response, the theory warns us of the possibility that personal and political interests of public managers may compromise the fair and effective distribution of resources.

Therefore, it is suggested that the implementation of climate mitigation policies and economic support should be monitored to ensure that resources are used efficiently and achieve the long-term goals of recovery and resilience. Additionally, the allocation must be equitable, meeting the needs of all affected populations, especially the most vulnerable. The influence of political interests may divert resources to areas or sectors that provide greater electoral returns, to the detriment of the neediest areas.

5 CONCLUSIONS

The objective of this study was to analyze the source and allocation of public resources aimed at addressing the floods in the State of Rio Grande do Sul in 2024, in light of Public Choice Theory. The research sought to understand how different public bodies financially contribute to mitigating the impacts of natural disasters and how these resources are distributed and used in the affected areas.

The methodology used was qualitative and descriptive, based on data collected on extraordinary credits allocated to Rio Grande do Sul. The data was compiled and analyzed, presenting the origin of the resources and their respective allocations. Additionally, the analysis was supported by a theoretical review of Public Choice Theory and the management of natural disasters.

Most of the resources allocated to Rio Grande do Sul came from Official Credit Operations (41.80%) together with Union Financial Charges (13.97%), with significant contributions from the Ministry of Agrarian Development and Family Agriculture (12.62%). The resources were allocated to various areas, including climate change mitigation and adaptation, support for microenterprises, food security (rice importation), civil protection and defense, in addition to infrastructure recovery. The concern with family farming was evident, reflecting the importance of this sector to the state's economy and national food security.

This research provides important information on the management of public resources in



calamity situations, highlighting the need for efficient and transparent allocation. By applying Public Choice Theory, there is evidence that the personal interests of managers can influence the allocation of resources. The research also emphasizes the importance of public policies focused on natural disaster mitigation and preparation for future events.

The research findings on resource allocation to address natural disasters in Rio Grande do Sul, when analyzed in light of Public Choice Theory, highlight the complexity of the public decision-making process. The theory suggests that despite the stated intentions of mitigation and recovery, the personal and political interests of public managers can significantly influence resource allocation. Thus, it is crucial to implement transparency and accountability mechanisms to ensure that the allocated resources effectively and equitably meet the needs of the affected population.

As a limitation of the study, the focus exclusively on Rio Grande do Sul may limit the generalization of the results to other regions of Brazil or the world. The analysis was based on data available for the year 2024, which may not fully capture the dynamics of resource allocation in other years or contexts. Lastly, aspects such as the efficiency in resource execution and the population's perception of the adopted measures were not addressed.

As suggestions for future studies, there is a need to investigate resource allocation over several years to identify patterns and changes in natural disaster management. Comparative studies between different states or regions could also be conducted to understand variations in resource allocation policies and their implications. Finally, it is important to investigate the population's perception of disaster management and transparency in resource allocation, contributing to more participatory and effective policies.

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