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Andrea de Oliveira Gonçalves
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Conception and Implementation of Risk Management Practices: An Analysis in a Brazilian Federal Institution of Higher Education

ABSTRACT

Objective: The research aims to understand how the risk management practices, implemented in a Brazilian Federal University context, were configured to the recommendations of international frameworks and their scope as a control mechanism of public governance.

Method: The arrangement adopted is based on the synthesis of risk management practices recommended in the model of the Committee of Sponsoring Organizations of the Treadway Commission (COSO), the COSO ERM, and in the ISO 31000:2018 standard. This is a case study, of a descriptive nature and qualitative approach. Data collection took place through documentary research and interviews. The results were analyzed using the technique of content analysis.

Originality/Relevance: The study deepens the process of implementing risk management in the organizational micro dynamics of a public sector entity, a gap identified in the literature due to the few studies carried out with the perspective of reflecting the practical articulation of international frameworks and their inherent complexity, in the Brazilian context.

Results: Considering the 12 risk management practices investigated, eight are aligned with those recommended in the international frameworks (percentage of 66% of adherence). Among the convergent practices, the integration of risk management with institutional strategic planning stands out. On the other hand, some practices lead to improvement, such as the active involvement of senior management.

Theoretical/Methodological contributions: Discussions on risk management in the public sector are expanded, where it is imperative to break certain paradigms (culture of compliance) in response to stakeholder demands for good governance and accountability practices.

Keywords: Risk management. Implementation. COSO ERM. ISO 31000:2018. Public sector.

Jaqueline Gomes Rodrigues de Araújo

Universidade Federal da Paraíba (UFPB), PB,
Brasil

E-mail: jgr_jaque@hotmail.com

Aldo Leonardo Cunha Callado

Universidade Federal da Paraíba (UFPB), PB,
Brasil

E-mail: aldocallado@yahoo.com.br

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1 INTRODUCTION

With the advent of New Public Management (NPM), a movement that began in Brazil in 1995, public sector organizations underwent a management reform that introduced concepts such as efficiency, efficacy, and effectiveness, along with the logic of results, relating them to the search for improvements in the performance of public entities, as in the private sector (Cavalcante, 2018; Palermo, 2014). One of the consequences of this management reform was the proliferation of risk management practices (Bracci, Tallaki, Gobbo & Papi, 2021; Carlsson-Wall, Kraus, Meidell & Tran, 2019; Christopher & Sarens, 2018; Hinna, Scarozza & Rotundi, 2018; Mahama, Elbashir, Sutton & Arnold, 2020).

Risk management is also part of the new state action model named New Public Governance (NPG). This model "changes the institutional relationships between the public sector and society, expanding networks between organizations inside and outside the government for the provision of public services" (Pereira & Ckagnazaroff, 2021, p.113). The underlying logic is oriented towards strengthening collaboration networks, given that, with the inclusion of new social actors in the process of formulating and implementing public policies, governance mechanisms have the role of contributing to the effective generation of public value, balancing performance and compliance (Vieira & Barreto, 2019).

Considering that appropriate controls contribute to improving results, risk management was introduced to the scope of internal control as "a new standard of excellence" (Klein, 2020, p. 2). In addition to being a control mechanism, this practice is considered a dimension of good governance, as it aims to improve the provision of services in the public sector, facilitating accountability, efficiency, and effectiveness of operations (Christopher & Sarens, 2015; 2018).

From the identification of information related to emerging risks and opportunities, entities can establish strategic responses (Committee of Sponsoring Organizations of the Treadway Commission [COSO], 2017; Sax & Andersen, 2019). In this sense, risk management acts as a strategic device that enables the achievement of organizational objectives by increasing the ability to process information in environments of uncertainty, contributing to the decision-making process.

It is observed that risk management, as pointed out in the literature, is not limited to demonstrating compliance but includes aspects of strategic management and governance (Mahama *et al.*, 2020; Rana, Wickramasinghe & Bracci, 2019). This approach was recognized within the Brazilian Federal Government with the advent of the Joint Normative Instruction of the Ministry of Planning, Development and Management (MPGD) and the Comptroller General of Brazil (CGU) No. 1 (2016), and Decree No. 9,203 (2017), which established the integration between the management process, internal controls, and risk management, the latter having to be integrated into the strategic planning process and its unfoldings.

In the regulations above, the influence of international risk management frameworks can be observed, especially the model of the Committee of Sponsoring Organizations of the Treadway Commission (COSO), called COSO ERM (Enterprise Risk Management), and the model of the International Organization for Standardization (ISO), the ISO 31000:2009 Standard (Souza, Braga, Cunha & Sales, 2020). However, it is noteworthy that the simple incorporation of international models does not guarantee that the implementation of risk management will be successful (Mahama *et al.*, 2020; Palermo, 2014; Rana *et al.*, 2019; Souza *et al.*, 2020).

The validity of the practical application of "generic" risk management structures in the context of organizations, as proposed by international frameworks, has been questioned

(Palermo, 2014; Power, 2007) since risk management presents unique challenges arising from the context institutional framework where it is implemented, and such challenges need to be understood. An example is the context of public sector entities, which are considered resistant to change and highly bureaucratic (Ahmeti & Vladi, 2017; Palermo, 2014).

In this sense, researchers point to a knowledge gap between theoretical reflections on adopting governance control mechanisms, such as risk management, and their practical implementation in the public sector (Christopher & Sarens, 2015, 2018). Based on this expectation, it was decided to explore the following problem: how did the risk management practices implemented in the context of the Federal University of Paraíba (UFPB) conform to the recommendations of international frameworks?

Considering that the practical articulation of international risk management frameworks may not be so simple (Rana *et al.*, 2019) and intending to deepen discussions in this sense, since research in the Brazilian context with this perspective is scarce, the present study aims to understand how the risk management practices implemented in the context of the Federal University of Paraíba (UFPB) were configured to the recommendations of international frameworks.

We chose to investigate risk management in the specific context of a university, due to the management challenges to which they are subject to fulfill their institutional mission in a scenario marked by budget cuts (Dourado, 2019), which makes it imperative to establish appropriate controls to mitigate possible threats to its strategic objectives (Palermo, 2014).

As risk management is considered "a crucial component of governance reforms" (Mikes & Kaplan, 2013, p.1), reflections aimed at strengthening it are important to break some paradigms, among them the focus strictly on compliance (Bracci *et al.*, 2021; Hinna, *et al.*, 2018; Rana *et al.*, 2019).

The research brings contributions to regulators and control bodies as it points to the challenges of implementing risk management (Christopher & Sarens, 2018), as well as reinforcing the need to reformulate incentives for the transparency of risk information (Araújo & Gomes, 2021; Klein, 2020), and changes in the forms of accountability and accountability of public agents (Klein, 2020).

2 LITERATURE REVISION

2.1 Risk Management: conceptual aspects and implementation challenges

Discussions about risk management have expanded in the context of organizations. As a result, this approach has been considered an important instrument in the framework of corporate governance, permeating the context of public entities (Bracci *et al.*, 2021; Carlsson-Wall *et al.*, 2019; Christopher & Sarens, 2018, 2015; Hinna *et al.*, 2018; Oulasvirta & Anttiroiko, 2017; Vieira & Barreto, 2019).

Risk management is part of the NPM agenda and has been widespread for decades (Carlsson-Wall *et al.*, 2019). It brings with it the perspective of recognizing the uncertainties and vulnerabilities of the environment in which organizations operate and the risks that can affect their performance (Carlsson-Wall *et al.*, 2019; COSO, 2004; 2017; Mahama *et al.*, 2020), to promote improvements in organizational results and the achievement of its objectives.

The achievement of better results by government entities is related to providing satisfactory public services to account for the resources entrusted by citizens. Likewise, the fulfillment of accountability obligations also covers using these resources effectively,

efficiently, and economically to meet the public interest (Federal Accounting Council [CFC], 2016), a context in which risk management is inserted as a governance mechanism.

This management practice is also part of the NPG's institutional arrangement, which presupposes the collaboration of agents at all levels of government - federal, state, and local, as well as private sector organizations - for the provision and provision of public services. This joint action considers the sharing of costs, risks, and benefits (Silvestre, 2019), and due to the complexity of this interaction, the assumed risks are high (Ahmadabadi & Heravi, 2019). Risk management, in turn, makes it possible to identify these risks, measure their impact and establish appropriate responses, contributing to the success of projects (Ahmadabadi & Heravi, 2019).

Risk management involves coordinated activities to identify, analyze, evaluate, treat, and monitor risks. These, in turn, consist of events that can affect the implementation of the strategy and achievement of an organization's objectives. In this way, its management aims to implement actions to mitigate risks or keep them within the established tolerance level (Brazilian Association of Technical Standards [ABNT], 2018; COSO, 2004, 2017).

Risk management is considered a set of principles that should guide the processes in an organization, going beyond the scope of internal control, including topics such as the definition of strategies, governance, communication with stakeholders, and measurement of organizational performance (COSO, 2017).

It is part of the scope of risk management to effectively deal with risks (events with a negative influence on the achievement of objectives), and recognize opportunities (events that favorably influence objectives), to improve the ability to generate and preserve value in the organizations, considering environmental uncertainties (Hinna *et al.*, 2018; Vieira & Barreto, 2019).

The need to create and preserve value makes risk management different for public entities since such entities must generate value for various stakeholders by providing satisfactory public goods and services; this implies that risk management is both relevant and more complex in the public sector, as the scope of its impact is social (Ahmeti & Vladi, 2017). In this sense, considering that every decision has an implication (increases, preserves, or erodes value) (Fletcher & Abbas, 2018), it is relevant for government entities to consider the risks arising from the internal and external environment, as the results of decisions made by managers public affect society as a whole.

Furthermore, the measurement of the impact of risks in generating value for stakeholders does not occur directly, as a measure of "value" equivalent to what would be the "profit" for a private entity is not available, hence the complexity around risk management in the public sector (Fletcher & Abbas, 2018).

In summary, among the factors that denote the complexity of risk management in public entities are the following: a variety of stakeholders; specific nature of risks (such as reputational risks, operational risks, financial risks, infrastructure risks, security risks, and others); various sources of risks that emanate from the provision of public services, in contrast to the finite amount of resources to deal with these risks (Ahmeti & Vladi, 2017; Hinna *et al.*, 2018); conflicting interests; political influences (Braig, Gebre & Sellgren, 2011); and, difficulty in measuring the impact of risks in generating value for stakeholders (Fletcher & Abbas, 2018).

In addition to the complexity inherent to the context, the literature presents challenges and barriers to the implementation of risk management in public sector entities, among which are: the objectives and institutional mission, which presupposes taking certain risks to fulfill the entity's social function (Mahama *et al.* 2020); frequent changes in leadership and vacant leadership positions for a certain period; leaders who do not know about risk

management; lack of clear risk metrics, as the impact of risk management is difficult to measure; complex procedural requirements; limited risk culture and risk mindset (Ahmeti & Vladi, 2017; Braig *et al.*, 2011).

Newman, Charity & Faith (2018) confirm this position by pointing out impediments to the adoption of risk management in the public sector, among them: the unavailability of experienced staff in the subject; lack of awareness and understanding of risk management; fundamental knowledge gaps associated with lack of training; inadequate guidelines; and the lack of a formal risk management system.

Specifically, in the Brazilian public universities context, the challenges for the adoption of risk management highlighted by Araújo and Gomes (2021, p.241) were: "the lack of process mapping, the need for employee engagement and training, the emergence of divergences around the treatment of risk and the excessive demands of the servers."

In view of the challenges and barriers to the implementation of risk management in the public sector exposed above, it is worth mentioning the existence of best practice models that have been developed internationally, which provide a conceptual framework with guidelines and principles that can be adopted by any organization, including those applicable to public entities, with the intent of promoting effective risk management and contributing to decision-making and organizational performance.

2.2 Risk Management Models Applicable to the Public Sector

In Brazil, risk management within the Federal Executive Branch was regulated through the Joint Normative Instruction MP/CGU nº 1/2016, an initiative that resulted in the publication of Decree Nº 9,203/2017 (Araújo & Gomes, 2021; Souza *et al.*, 2020). In the regulations above, the influence of international risk management models is perceived, especially the COSO ERM Framework and the ISO 31000:2009 Risk Management - principles and guidelines, which have become models of best practices (Sax & Andersen, 2019; Souza *et al.*, 2020).

The COSO ERM Framework proposes a conceptual framework that addresses risk management in organizations. Risk assessment allows the development of strategies to manage them based on identifying and assessing the impacts of their occurrence (COSO, 2004). This framework was updated in 2017, introducing strategy and performance into its scope.

Regarding the conceptual structure proposed by COSO in its updated version, the following components and principles are highlighted: a) governance and culture (involves the risk supervision structure by the board of directors and the organization's operational structures; the definition of culture desired; the commitment to the fundamental values of the entity; and the formation of human capital); b) strategy and definition of objectives (comprises the analysis of the business context for the establishment of the risk profile of the organization; the definition of the risk appetite; the evaluation of alternative strategies and impact on the risk profile; and the formulation of the objectives of business considering the risk at different levels of the organization); c) performance (includes the identification of risks; the assessment of their impact; the prioritization of risks for the selection of responses; and the adoption of a portfolio view). In addition to these, the following are added: d) analysis and review (comprises the assessment of changes capable of significantly affecting the organizational strategy and objectives; the analysis of performance considering risk; and the improvement of risk management); and e) information, communication, and disclosure (involves the use of information systems and technologies to boost risk management; the

communication of information about risks; and the disclosure of information on risks, culture and performance), aspects related to monitoring and disclosure (COSO, 2017).

The ISO 31000:2009 Standard, although similar to COSO, presents a simplified approach with generic principles and guidelines. The most significant difference between the models refers to the issue of assigning responsibilities and defining the agents' roles, as the ISO Standard leaves it up to the organization to determine the central roles (Souza *et al.*, 2020). The updated version of this Standard is ISO 31000:2018, which brought as main changes the revision of risk management principles, the broadening of the focus on senior management leadership, and the emphasis on interaction with stakeholders.

Regarding the stages of the risk management process, and once the models converge on their fundamental principles (Sax & Andersen, 2019), it is noteworthy that their beginning takes place from the establishment of the scope, understanding of the organizational context (internal and external environment) and definition of risk tolerance criteria, aiming to customize the risk management process to the organization's reality. The risk assessment process includes the identification, analysis, and assessment of risks for subsequent implementation of treatment plans, assuming the monitoring and critical analysis of risks at all stages, as well as the communication of risk management activities and results in the entire organization (ABNT, 2018; Ahmeti & Vladi, 2017; COSO, 2004).

3 METHODOLOGICAL PROCEDURES

For this research's methodological development, recommendations were used in the COSO ERM conceptual framework (COSO, 2017) and the ISO Standard 31000:2018 (ABNT, 2018). Furthermore, as they are generic risk management standards, the article explored a public entity's organizational context to understand the implemented arrangements.

The present research sought to understand how the risk management practices implemented in the context of the Federal University of Paraíba (UFPB) were configured to the recommendations of international frameworks and, for that, a case study was carried out contemplating multiple sources of evidence (documentary research and interviews) to obtain the data necessary to understand the phenomenon under analysis. Therefore, the study is characterized as descriptive and qualitative from the point of view of approaching the problem.

The institution selected for the investigation evidenced risk management integrated with institutional strategic planning (which consists of the document called Institutional Development Plan [PDI]), as established in Decree No. 9,203/2017, which is the selection criterion of the investigated institution.

By seeking institutional documents as sources of information, the research is characterized as documentary, using, for data analysis, the technique of content analysis, as this allows the interpretation of the content of texts in an objective and systematic way. The documents selected for document analysis were the following: the Institutional Development Plan - PDI 2019-2023; the 2019 and 2020 Management Reports; Resolution No. 38/2018 - which constituted the Governance, Risks and Control Committee; Resolution No. 13/2020 - Institutional Risk Management Policy, and, in addition to these, the Final Report on the Consolidation of the Risk Mapping of the Strategic Objectives of the PDI UFPB 2019-2023, prepared by the Pro-Rector of Planning of the UFPB (PROPLAN).

In addition to the sources above, semi-structured interviews were conducted with actors who participated in the risk management implementation process, using a bottom-up approach, as Carlsson-Wall *et al.* (2019) proposed. As an important step for implementing

risk management is mapping risks associated with institutional strategic objectives, it was decided to conduct interviews with PROPLAN employees, as they were key actors in this process. The interviews were carried out using the Google Meet tool, with a total duration of approximately 60 minutes, and out of a total of 07 (seven) servers participating in the team, 04 (four) were available to participate in the research. The profile of the participants is presented in Table 1.

Table 1

Profile of the servers participating in the survey

Interviewed	Function/Position	Time experience
Interviewee 1	Economist	Ten years
Interviewee 2	Economist	Nine years
Interviewee 3	Economist	Ten years
Interviewee 4	Administrator	Three years

The researchers prepared a script to conduct the interviews, which is presented in Table 2. The interviews were recorded, transcribed, and validated by the researchers with the interviewees.

Given the central points of the questioning, although the entire team that acted in the execution of the mapping of strategic risks was not interviewed (the total was seven servers), data saturation is considered to have been reached due to the high degree of consensus that emerged among the interviewees, due to the homogeneity of the sample (Vasileiou, Barnett, Thorpe & Young, 2018).

The aspects addressed in the interview aimed to understand how risk management has been articulated in the daily life of the investigated institution. Participants were encouraged to speak freely about risk management implementation of strategic objectives and perceived gaps and challenges in the process.

Table 2

Interview script

	Aspects addressed
Risk management in the public sector	Perception of the process of implementing risk management in public sector entities, considering the nature of these entities
Risk Management Implementation Process	Description of the risk management implementation process at UFPB, in each of its stages, up to its current stage Gaps perceived in the process so that it becomes effective Perception of what would need to be strengthened for risk management to be more effective in the context of UFPB (extending to the context of universities) Indication of which steps required (or is demanding) more effort in the risk management implementation process
Barriers to the Implementation of Risk Management	Possible barriers (or challenges) to implementing Risk Management in a robust way

Due to the use of a qualitative approach for data analysis, Table 3 was prepared based on the literature review and included the script used both to guide data collection and for the research content analysis, as it consists of 12 recommendations contained in the COSO ERM models (COSO, 2017) and the ISO Standard 31000:2018 (ABNT, 2018), regarding risk management.

Table 3

Content analysis: categories and units of analysis

Analysis Categories	Units of Analysis - Best Practices
Management environment	Senior management commitment (active involvement in the implementation of risk management) Assignment of those responsible for risk management Consideration of risk in the definition of strategy and objectives Commitment to the dissemination/dissemination of the institutional strategy (mission, vision, and values) Training of human capital (managers and servants) to deal with risk-related issues
Risk management process	Establishment of a risk management policy Implementation of plans and establishment of guidelines and models Definition of standards and criteria for the treatment of risks considered significant Monitoring and measurement of risk management results
Information, communication and dissemination	Use of information systems to boost risk management Communication with stakeholders on risk management activities and results Disclosure of information (throughout the organization) related to strategy, organizational objectives, and organizational performance, as well as related to risk management

Note. Source: Adapted from Associação Brasileira de Normas Técnicas - ABNT. (2018). ABNT NBR ISO 31000:2018 *Gestão de Riscos: Princípios e Diretrizes*. Rio de Janeiro: ABNT; e Committee of Sponsoring Organizations of the treadway commission – COSO. (2017). *Enterprise Risk Management - Integrating with Strategy and Performance*. Committee of Sponsoring Organizations of the treadway Commission. Nova York.

The risk management practices recommended in the models were synthesized for this research. First, however, we sought to address their main guiding principles. In turn, the analysis of the research results sought to observe the organizational context in light of these practices, that range from the definition of strategy to the dissemination of information at all organizational levels.

4 RESULTS PRESENTATION

4.1 Analysis of UFPB's Risk Management Practices in Light of International Frameworks

UFPB is a Federal Institution of Higher Education founded in 1955, whose mission is to generate and disseminate knowledge and innovation through teaching, research, and extension. The institution has a multicampus structure consisting of 4 teaching campuses, demonstrating its breadth in terms of extension.

Among the institutional characteristics that denote the responsibility of managers in complying with accountability obligations, we highlight the institution's budget, which in 2020 represented the amount of BRL 1,790,371,660.00 - corresponding to 14.06% of the Government's budget State of Paraíba in the same year (UFPB, 2021).

The quest to achieve institutional goals while maintaining the quality of services offered to society is one of the challenges imposed on managers due to the scenario of budget constraints currently faced by IFES (Dourado, 2019). In this sense, UFPB has shown concern with adopting good governance practices, which is one of the objectives established in its PDI.

In the survey carried out by the Federal Audit Court (TCU) in 2021, the institution reached a percentage of 49% in the Integrated Governance and Public Management Index –

iGG; and 61% in the Public Governance Index – iGovPub, which indicates an intermediate level in terms of governance and management capacity (Federal Court of Accounts - Brazil [TCU], 2021).

Given the above, considering that risk management is a dimension of good governance (Bracci *et al.*, 2021; Christopher & Sarens, 2018; Palermo, 2014), we sought to analyze the practices implemented at UFPB from the recommendations of the models COSO ERM (COSO, 2017) and ISO 31000:2018 (ABNT, 2018), under three categories of analysis, namely: Management Environment; Risk Management Process; and Information, Communication, and Dissemination, to understand the practical articulation of risk management.

a) Category "Management Environment."

For the analysis of the category "Management Environment" and the other categories, the investigated items were presented in Table 3.

Regarding the commitment of senior management to risk management, this perspective could be observed from some practices, namely: the constitution of a Governance, Risks, and Control Committee, with the competence to institutionalize adequate governance structures, management of risks and internal controls, an important aspect to give vent to the formalization of the policy and implementation of its guidelines – Resolution nº 38, 2018; and the establishment of an Institutional Risk Management Policy - Resolution No. 13, 2020. However, there was a time lag of almost two years between the formation of the Committee and the approval of the Risk Management Policy itself, which is a significant step toward the institutionalization of risk management and its dissemination throughout the organization.

The prerogative of going beyond formal aspects makes risk management capable of effectively contributing to management, enabling the achievement of established strategic objectives and goals (Rana *et al.*, 2019; Mahama, 2020). This aspect was discussed in the interviews as follows:

"Risk management is still understood as one more thing that the control bodies demand. However, there is still no vision of how this can be important for management [...] we start because the decree comes, the ordinance comes, so, you have to manage risks... [...] we have to transform this first to be part of the organization's culture so that it is internalized, not as an obligation, but as something that will facilitate our day by day" (Interviewee 1).

The involvement of senior management in the implementation of risk management, and the attribution of those responsible for supervising such practices, proved to be relevant points for other measures to be implemented and risk management to become effective.

"The main point is this: top management buy the idea of risk management, have this policy and disseminate it to everyone" (Interviewee 4).

"Top management has to embrace the cause, want to do the thing first, then decentralize it to the other managers and servers... not just worry about formalizing it... if something is not formalized just to respond to the Court, and not thinking in the institution" (Interviewee 1).

The consideration of risk in defining the strategy and institutional objectives is a recommended practice in risk management models, which is supported by Decree 9,203/2017, which provides for the governance policy of the direct federal, autarchic and

foundational public administration. Moreover, when integrated with institutional strategic planning, the risk management approach can guarantee that institutions achieve their objectives more effectively by supporting decisions and ensuring more effective controls (Sax & Andersen, 2019).

In this sense, when preparing its new PDI (2019-2023 term), UFPB sought to meet the recommendation of the decree above and the requirements of the control bodies, building an instrument to implement the risk management of strategic objectives.

As described in the report on the consolidation of the risk mapping of strategic objectives, UFPB identified and classified the risks associated with the activities necessary to achieve the strategic goals set out in its PDI, as well as established the ways of dealing with these risks (UFPB, 2019b).

In this process, the Dean's Offices and Supplementary Bodies reported for each goal contained in the PDI, under their direct responsibility, up to three activities and three risks that could affect its achievement. Then, the units classified these risks in terms of probability (estimate of the occurrence of the risk), impact (consequence for the activity in case the risk materializes), level of risk (product between probability and impact), and action (treatment to be given to risk). For this, an information collection instrument was developed as an electronic spreadsheet (UFPB, 2019b).

This mapping, after its consolidation, resulted in the identification of 518 risks, grouped into four categories, namely: a) legal risks, related to compliance and integrity; b) budgetary risks, associated with the internal management of resources or related to resources arising from external actions; c) operational risks, those related to people management, infrastructure, information technology, and internal processes; and d) external non-budgetary risks, involving the market – business and labor – and partnerships with public and private bodies (UFPB, 2019b).

Another research topic was the dissemination/dissemination of the institutional strategy, which is also recommended by the frameworks to strengthen risk management (COSO, 2014, 2017). Risk management contributes to achieving institutional goals and objectives, and, consequently, for the institution to fulfill its mission, the lack of knowledge about this mission was punctuated as difficulty in identifying the risks associated with strategic objectives.

"[...] They cannot understand that there are risks that can make it impossible to reach that goal, but it is because they do not see the goal either [...] there is this previous problem... non-integrated management. Each one sees their sector and work, but they do not see how this is integrated into the university [...] So I have to do this to contribute to the university's mission [...] extension" (Interviewee 1).

Risk management models are based on processes to ensure everyone knows their responsibilities and contributes to the organization's mission, vision, and objectives, thus ensuring accountability. The premise is that organizational alignment at the operational level makes it possible for everyone to know their responsibilities and contribute to achieving the goals developed at the strategic level, thus ensuring accountability (Christopher & Sarens, 2015; COSO, 2004).

In the case of UFPB, the dissemination of the institutional strategy demonstrated limited reach in the research interviewees' perception, as the university's goals and mission are understood differently by institutional actors. That is, there is greater understanding on the part of managers who work at the Higher Administration's strategic and tactical levels and servers (Rectory, Pro-Rectories, and Supplementary Bodies). On the other hand, this does not occur with those who work at the operational levels and in the different teaching

centers. Consequently, the understanding of the risks that can make the execution of the strategy and organizational objectives unfeasible is affected by the actors' limited risk awareness (Ahmeti & Vladi, 2017; Braig *et al.*, 2011).

Risk management must integrate the corporate culture because risks must be managed at all organizational levels (Bracci *et al.*, 2021). Furthermore, the values of organizational actors must be congruent with the corporate culture, both at the strategic and operational levels, which favors risk management, as it allows the identification of risks that permeate the organizational environment at the various levels of governance (Christopher & Sarens, 2018, 2015).

Regarding the training of human capital (managers and civil servants) to deal with risk-related issues (COSO, 2017), UFPB expressed concern about holding sectorial meetings to assist units in their planning and identification of risks when preparing for the PDI 2019-2023, as well as showing a willingness to promote, together with the Dean of Personnel Management, training courses in risk management (UFPB, 2019a).

Concerning the sectorial meetings, the interviews highlighted holding a general presentation with the planning agents appointed by the units, the heads of sectors, and Pro-Rectors, to explain the risk management of the strategic objectives. In addition, there were also sectorial meetings with the 22 units of the Higher Administration, as stated in the Management Report and the Risk Mapping Report of the PDI (UFPB, 2020a, 2019b). However, regarding the qualifications item, it was not possible to verify whether they were related to the theme of risk management, although there were provisions in the PDI 2019-2023 for the training of servers in strategic areas (UFPB, 2019a).

Considering the inexperience found in sectorial meetings when the subject was related to risks, this aspect was considered by the interviewees as a gap associated with the lack of training, which is consistent with what was pointed out by Newman *et al.* (2018). The training aspect was pointed out as essential for the employees' understanding of the concept of risks and the risk management process, as it is a new theme that still needs to be disseminated and internalized in the institution.

b) Category "Risk Management Process"

The Risk Management Process category results analysis sought to understand how the institution proposed to identify, analyze and evaluate risks and whether some type of measurement of risk management results was established.

As the ISO 31000:2018 Standard recommended, senior management should issue "a policy that establishes a risk management approach, plan or course of action" (ABNT, 2018, p.5). In this sense, the risk management policy was a requirement introduced by the Joint Normative Instruction MP/CGU No. 1/2016.

In the case of UFPB, the risk management policy was established through Resolution No. 13/2020 to ensure a structured risk management process, aiming to contribute to the generation of value to society; with the continuous improvement of the efficiency, effectiveness, and quality of the public services offered; and, with the rationalization and promotion of the effectiveness of the agency's expenses (UFPB, 2020b).

Although the approval of UFPB's risk management policy took place in 2020, a previously identified initiative was Ordinance No. 23/2017, issued by the Dean of Administration (PRA), which includes the risk management policy related to contracts.

In this regard, it was highlighted by the interviewees that before the establishment of the UFPB's risk management policy, there were isolated initiatives carried out on time, such as the practices implemented by the PRA for contracting and the mapping of the risks of the

strategic objectives carried out by PROPLAN, but without formal guidance from senior management, that is, institutional support (which took place a posteriori).

"We have in each sector, as in the PRA, the contracts sector, does its risk management [...] And what we do with risk management is strategic planning, that is, it is something else. It is another vision of risk management that we started, but still, without the support of a risk management policy [...] They are isolated initiatives, which, if at some point they come together, will be interesting for the university" (Interviewee 1).

It is important to emphasize that the risk management process can have many applications in an organization and must be customized to achieve its objectives and adapt to the external and internal contexts in which they are carried out (ABNT, 2018). Therefore, it is understood that risk management can be applied in the various units of an organization and the context of its various activities.

Based on documental research and interviews, it was found that at UFPB, risk management is integrated into hiring planning, contract management, and strategic planning, and must also be implemented in other activities and processes of the institution in an integrated manner, as suggested in the literature (Hinna *et al.*, 2018; Rana *et al.*, 2019; Sax & Andersen, 2019).

In this sense, it was highlighted by the interviewees that risk management is not yet integrated. Each unit (of those that have implemented it) makes its risk checklist and the respective management without synergies or exchange of information. In turn, the literature emphasizes that implementing holistic risk management is a challenge (Bracci *et al.*, 2021), and what predominates is the silo mentality, as identified in Mikes & Kaplan (2013).

Regarding the risk management process, UFPB adopted the structure proposed by the ISO 31000:2009 Standard, which starts with the establishment of the context, followed by the risk assessment process - this consists of the stages of risk identification by the units; risk analysis and assessment (in terms of probability of occurrence and impact); and subsequent implementation of treatment plans (establishing ways to deal with risks, such as accepting, reducing or sharing).

Observing the measurement methodology adopted by UFPB, it was possible to verify that the analysis of the probability of occurrence and impact of risks took place on a scale from 1 to 5, ranging from "(1) very low" to "(5) very high".

After identifying and evaluating the risks, there was the classification stage (probability x impact), which presented the following scores: low risk (from 1 to 4), moderate risk (from 5 to 9), high risk (from 10 to 16) and critical risk (from 20 to 25). Then, the units indicated the action to be taken, namely: "accepting" the risk, planning the contingency to be adopted if it occurs; "reducing" the risk, establishing measures to avoid or mitigate it; or "sharing" the risk, informing the action to be taken and the partner units in action.

Figure 1 demonstrates the mapping of the risks of the strategic objectives carried out by PROPLAN, in which the risk levels (low, moderate, high, and critical, according to legend) and the identified amount are verified.

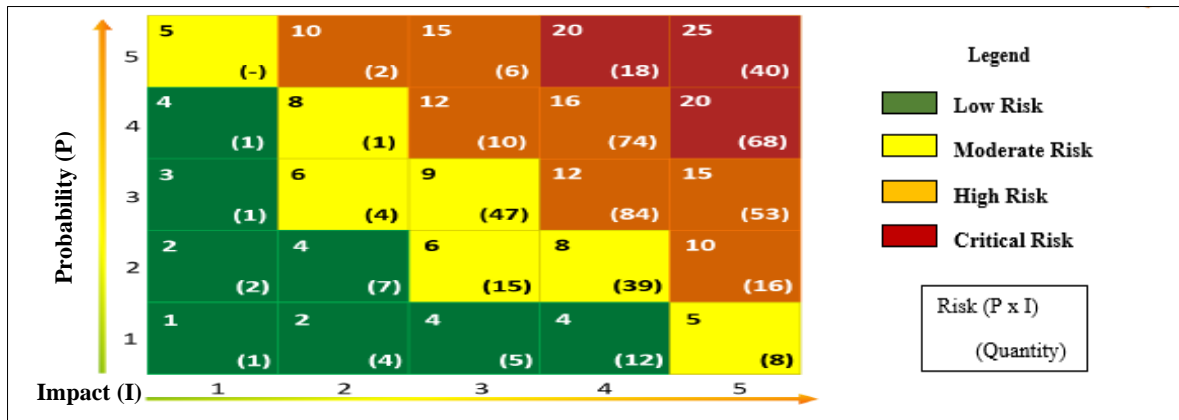


Figure 1. Rich matrix of UFPB's strategic objectives

Source: Universidade Federal da Paraíba. (2019b). Relatório Mapeamento de Riscos PDI 2019-2023. Recuperado de http://www.proplan.ufpb.br/proplan/contents/documentos/codeplan/relatorio-mapeamento-de-riscos_pdi-2019-2023.pdf

Concerning the monitoring and critical analysis of risks, it was established by the UFPB that such steps must happen continuously and according to the established level of exposure (UFPB, 2019b). Monitoring must be based on monitoring the PDI's strategic objectives, and the units must establish their activities annually and analyze risks and measures to be adopted (UFPB, 2019b).

The monitoring item was highlighted as critical by the interviewees, due to the difficulty of monitoring, with the units, and the proposed treatment measures to face the risks, if they are being effective.

The risk tolerance level established by the institution is 18%; this is the acceptable risk percentage. According to the UFPB criteria, the other risks must be avoided or mitigated by the units (UFPB, 2019b). However, the PDI risk mapping report draws attention to the fact that the number of critical risks considered acceptable exceeds the number of critical risks to be reduced (37 and 33, respectively), and among the acceptable, most are related to external risks to the institution (25 risks) (UFPB, 2019b).

It is important to highlight that in the PDI risk mapping consolidation report, an expressive amount of high and critical risks was evidenced (245 and 126, respectively). This information was based on the risk analysis carried out by the units. In the context of UFPB, high and critical risks represented 71.6% of the total that was mapped (518 risks), and most were related to infrastructure (UFPB, 2019b).

The analysis of risks by category made it possible to identify that operational risks are among the most expressive, comprising 68.3% of the total risks mapped, corresponding to 354 risks. In this category, there is a predominance of risks associated with internal processes (65%) and people (27%). Within internal processes, risks were related to academic management, administrative management, communication management, information management, university planning, and policy; as for the risks associated with people, these involved insufficiencies in training and staffing (UFPB, 2019b).

Regarding assessing the effectiveness of the treatment of risks, no indicator was established by the institution that allows knowing, for example, how many critical or high risks had their risk levels reduced from the treatment measures implemented.

In this sense, it is worth noting that the assessment of the effectiveness of risk management is a recommended practice, as it allows the identification, monitoring, and assessment of the level of risk to which an organization is exposed. And this must be a continuous process for measuring the performance of the risk management structure, to

verify that it fulfills its purpose, and this is only possible through periodic analysis of indicators, as recommended by the ISO 31000:2018 Standard (ABNT, 2018).

During the stages of the risk management implementation process of the strategic objectives, the interviewees highlighted the perceived difficulties in the identification of risks and feedback by the participating units; in the evaluation stage of the probability and impact of the occurrence of risks due to the subjectivity inherent to how the risks are measured, and in the establishment of forms of risk treatment. Because of the above, it is noted that the implementation above process was not preceded by the establishment of an institutional risk management policy, which has the prerogative of establishing guidelines, and that there was no extensive discussion and training with the agents involved, as reported in the interviews and transcribed below:

"Difficulties are found at every stage. Both in construction, due to the difficulty of evaluating, for not having a structured policy [...], there was no broad discussion of how it will be done, so, logically, we will have difficulty implementing it. Then it goes through the identification, the analysis of the unit itself, and, in the following year, the monitoring. [...] This subsequent measurement of monitoring does not have to assess whether the process is being effective in the units" (Interviewee 4).

Some of the difficulties reported may be mitigated by the disclosure of the manual and the risk management implementation plan, documents cited in the UFPB risk management policy, which, at the time of the research, were about to be published by the institution. (UFPB, 2020b). However, it cannot be ignored that other difficulties persist; these are related to the internalization of a risk management culture to counteract the prevailing compliance culture.

Given the aspects discussed, it is worth noting that the complexity of the processes, characteristic of the bureaucratic management of the public sector, may explain some of the difficulties pointed out in this research, as predicted by the literature (Newman *et al.*, 2018), especially concerning the lack of integrating risk information into the management process (Bracci *et al.*, 2021; Rana *et al.*, 2019).

c) Category "Information, Communication and Dissemination"

In the third proposed category, initially, we sought to identify the use of information systems to boost risk management. Using existing information systems and technologies, as well as new technologies (artificial intelligence and automation), is important for entities to leverage their ability to manage risks (Mahama *et al.*, 2020; COSO, 2017). In this sense, Bracci *et al.* (2021) emphasize that information technology directly influences risk management because the risk control process can be facilitated through specialized software. However, considering the context of UFPB, this prerogative was not observed.

It should be noted that this aspect could add value if implemented in the institution, given the need to monitor the 518 mapped risks. In addition, this would contribute to the generation of information more timely for managers, given the importance of integrating risk information in the organizational decision-making process.

The perspective of communication was something positive evidenced by the institution. Communication with stakeholders about risk management activities is emphasized in the policy guidelines established by UFPB. The policy provides for communication between the agents directly involved in the process and throughout the organization. Furthermore, it was observed that the actions related to risk management were

disclosed through the institutional website, which denotes the concern of managers with the transparency of risk information to interested parties.

The transparency of risk information is a characteristic of good governance identified in the institution, which contrasts with the trend in the literature that managers avoid disclosing information that could harm their reputation (Hood, 2007).

In this sense, stakeholders, which in the case of universities comprise the academic community and society in general, can benefit from what has been disclosed to demand concrete actions from managers to minimize the risks that may affect the provision of services and even, the reputation of the institution. Including citizens to pressure public agents to correct their actions is one of the perspectives of the NPG and an accountability dimension (Pereira & Ckagnazaroff, 2021). However, there was not enough evidence in this research to state whether such disclosure had repercussions for stakeholders or if there was any interaction.

The disclosure of information regarding the objectives and organizational performance was available on the institutional website as part of the PDI and the Management Report (UFPB, 2019a, 2020a). However, there was a need to improve the internal dissemination of this information, as gaps in the understanding of the goals and institutional mission by the servers are still perceived, especially at the operational level, where it is necessary to develop an alignment with the corporate culture so that the institution achieve the goals established at a strategic level and fulfill its institutional mission, as mentioned in the interviews.

In summary, the results show that the risk management arrangements adopted by UFPB were aligned with the COSO ERM frameworks (COSO, 2017, 2004) and with the ISO 31000:2018 Standard (ABNT, 2018). However, it is worth noting that the practices observed showed different stages of development.

4.2 Discussion of Results

Risk management presents unique challenges from the institutional context where it is implemented (Ahmeti & Vladi, 2017; Palermo, 2014). In this case, its practical articulation in the context of public sector entities can demonstrate complexity as it confronts the prevailing culture of compliance with a culture of risks that have not yet been internalized (Bracci *et al.*, 2021; Mahama *et al.*, 2020; Rana *et al.*, 2020; Rana *et al.*, 2019).

In this research, 12 risk management practices were investigated, 8 of which were identified (66%), mostly from documentary sources. However, from the interaction with the organizational actors, it was possible to deepen the recognition of these practices and perceive their different stages of development.

The documental research pointed, for example, to indications of the institutional commitment to training civil servants in strategic areas. In turn, through the interviews carried out, the need for specific training in risk management was identified due to the lack of familiarity with the theme, perceived by the interviewees when the PDI 2019-2023 preparation meetings took place, where management was implemented risk of the institution's strategic objectives.

The same applies to the verification of the commitment and involvement of senior management with the implementation of risk management since the documentary research pointed to the formalization of this practice, an aspect considered relevant but, in the perception of the interviewed servers, insufficient to demonstrate an involvement "asset" of senior management with this approach. Likewise, the practical commitment to the dissemination/dissemination of the institutional strategy (mission, vision and values) was

highlighted in the interviews as a practice that needs improvement, even with the dissemination of this information on the institutional website.

Table 4 presents the risk management practices identified in this research, according to the established analysis categories, the stages of development of these practices, and the source of evidence that supported the analysis. It should be noted that the practices that make up the "Management Environment" category were the most observed, followed by those that make up the "Information, Communication and Dissemination" category. On the other hand, the practices that make up the category "Risk Management Process" these demand greater attention in the researched institution.

Table 4

Investigated risk management practices and their stages of development

Internship	Analysis Category	Practice	Source of evidence
Early stage	Management Environment	Training of human capital (managers and servants) to deal with matters related to risk	Documentary: PDI 2019-2023 (UFPB, 2019a); and Interviews
	Management Environment	Commitment / "active" involvement of senior management in the implementation of risk management	Documentary: Resolution No. 13, 2020-UFPB; Resolution No. 38, 2018-UFPB; and Interviews
Intermediate stage	Management Environment	Commitment to the dissemination/dissemination of the institutional strategy (mission, vision, and values)	Documentary: PDI 2019-2023 (UFPB, 2019a); and Interviews
	Information, Communication, and Dissemination	Disclosure of information related to strategy, objectives, and organizational performance, as well as related to risk management	Documentary: PDI 2019-2023 (UFPB, 2019a); Management Reports 2019 and 2020 (UFPB, 2020a, 2021).
Advanced stage	Risk Management Process	Establishment of a risk management policy	Documentary: Resolution No. 13, 2020-UFPB; Resolution No. 38, 2018-UFPB; PDI validity 2019-2023 (UFPB, 2019a); and Report on the consolidation of risk mapping of strategic objectives (UFPB, 2019b)
	Management Environment	Assignment of those responsible for risk management	
	Management Environment	Consideration of risk in defining organizational strategy and objectives	
	Information, Communication, and Dissemination	Communication with stakeholders, activities, and results of risk management	

Note. The practices that led to improvements were understood in the "initial" and "intermediate" stages.

Of the practices that were not identified in the research, the following stand out: implementation of plans and the establishment of guidelines and models; definition of standards and criteria for the treatment of risks considered significant; monitoring and measurement of risk management results (items in the "Risk Management Process" category); and use of information systems to boost risk management (a thing that makes up the category "Information, Communication and Disclosure"). The absence of these practices was noticed from the documental analysis, and confirmed by the researchers through the interviews.

From the perspective of institutional actors, it was possible to understand the difficulties encountered in the implementation process that took place within the UFPB, which were mainly related to the following matters: the lack of understanding of the concept

of risk and training associated with the thematic, one of the impediments to the adoption of risk management in the public sector pointed out by Newman *et al.* (2018); the lack of employee engagement in the process, as also observed by Araújo and Gomes (2021), a result of the low level of internal propagation of the subject; the lack of dissemination of a culture of risks, starting from the top management and permeating the entire organization, another aspect pointed out in the literature (Ahmeti & Vladi, 2017; Braig *et al.*, 2011); and the concern centered on the formality of the process and on meeting the requirements of the control bodies.

It is essential to highlight that it is up to top management to adopt mechanisms to ensure that people in the organization understand their roles and responsibilities in risk management, which contributes to creating an environment favorable to the identification, mitigation, and culture of risks. The creation of a culture of risk is widely disseminated in international frameworks (COSO, 2004, 2017) as one of the pillars for risk management to become effective.

Without this established culture, some stages of the risk management process are compromised. As observed in the research, starting with the identification of risks, there is no clear understanding of what "risks" would be and their impacts on organizational objectives. The same occurs in the critical analysis and monitoring stages, where there are difficulties in establishing metrics to evaluate the effectiveness of the process. Consistent with the literature, the lack of clear risk metrics stems from the difficulty of measuring the impact of risk management in generating value for stakeholders (Ahmeti & Vladi, 2017; Braig *et al.*, 2011), as there is no measure of "value" in the public sector (Fletcher & Abbas, 2018).

Furthermore, there was a lack of focus on risk mitigation and integration of risk information in the management process, which had repercussions on the decision-making process. Regarding these aspects, although the recommendations are for risk management to be integrated into organizational practices and processes (Rana *et al.*, 2019), as well as the decision-making process, it is known that these ideals are difficult to put into practice (Arena, Arnaboldi & Parlemo, 2017; Klein Jr., 2020).

Given the above, we must agree with Klein's (2020) statement that, in order to promote the consolidation of risk management in the public sector, regulators and control bodies need to reformulate the incentives for the transparency of risk information, define how the agents "must inform and justify their actions based on risk (answerability), and how they must be charged for these actions (enforcement)" (Klein, 2020, p.2). The lack of these "incentives," associated with managers' aversion to disclosing information related to risks (Araújo & Gomes, 2021; Rana *et al.*, 2019), can make this approach restricted to formalism, being adopted by entities to document compliance and convey legitimacy (Carlsson-Wall *et al.*, 2019).

5 FINAL CONSIDERATIONS

This article examined how the risk management practices implemented in the context of the Federal University of Paraíba (UFPB) were configured to the recommendations of the international frameworks COSO ERM (COSO, 2017) and ISO 31000:2018 (ABNT, 2018).

The practical articulation of risk management frameworks showed complexity in several aspects, confirming the discussions presented in the literature (Carlsson-Wall *et al.*, 2019; Klein, 2020; Palermo, 2014; Power, 2007), as the public sector operates under an organizational context different from the corporate environment (Ahmeti & Vladi, 2017; Christopher & Sarens, 2018; Palermo, 2014). Moreover, this is a context where the risk

culture is not yet internalized, with the culture of compliance prevailing (Bracci *et al.*, 2021; Mahama *et al.*, 2020; Rana *et al.*, 2019).

However, even in the face of the challenge of creating a risk culture in a public sector entity, the current research results reveal initiatives around implementing risk management practices within a federal university. Overall, of the 12 risk management practices investigated, eight were identified, which represents a percentage of 66% of adherence to the recommendations of the international frameworks, with the exception that some practices still require improvement; however, they left the condition of "non-existent" to an "early" or "intermediate" stage of development.

In the "Management Environment" category, the practices identified in the institution were the following: the commitment of senior management; the attribution of those responsible for risk management; the consideration of risk in defining organizational strategy and objectives; commitment to publicizing the institutional strategy (mission, vision, and values); and the training of human capital in matters related to risk, with the exception that this practice was considered to be at an "initial stage" of implementation, as it was not possible to confirm the existence of courses or training in risk management, but only UFPB's willingness to train civil servants in strategic areas, as provided in its PDI 2019-2023.

However, another way of promoting organizational learning was observed, which in this case consisted of holding sectorial meetings with the units' planning agents to address issues related to risk management of strategic objectives. These meetings generated debates about the concept of risks, the methodology for identifying and assessing the risks associated with the institution's strategic goals, and the measures for dealing with these risks, which may have contributed to creating an awareness of risks in the agents involved, favoring the understanding of risk management.

Still in the "Management Environment" category, among the aspects that denoted the need for improvement, the following stand out: the need for the risk management approach to permeate the entire organization, for which the "active" involvement of senior management is essential; the dissemination of the institutional strategy internally, among the servers, an important aspect to maintain organizational alignment at the operational level, consistent with the goals developed at the strategic level (Christopher & Sarens 2015); and, as explained, the training of human capital through training and meetings, to promote organizational learning at all levels, given that risk management is a new theme, which has not yet been internalized.

The only practice identified in the "Risk Management Process" category was establishing an institutional risk management policy. However, this is a significant step towards the institutionalization of risk management and its dissemination throughout the organization. The other practices investigated were not identified at the time of this research, and included the following: the implementation of plans and the establishment of guidelines and models; the definition of standards and criteria for the treatment of risks considered significant; and the monitoring and measurement of risk management results.

Regarding the "Information, Communication and Disclosure" category, the practices identified were as follows: communication with stakeholders about risk management activities and results; and the dissemination of information (throughout the organization) related to strategy, objectives, and organizational performance, as well as that related to risk management. The exception in this category was the use of information systems to boost risk management, a perspective not covered by the UFPB.

Regarding communication with stakeholders, the institution's concern about providing transparency to its internal information was considered an advance in the practice of risk management, highlighting the risks that may affect the achievement of its objectives,

which favors social control. However, it was not known whether this type of disclosure had repercussions for the interested parties or if there was any interaction. Moreover, it is understood that the insertion of citizens is increasingly important and should be encouraged in the public sector, as it favors accountability, both in the financial and managerial dimensions (Pereira & Ckagnazaroff, 2021).

In general, it appears that risk management at UFPB will still require efforts on the part of managers until its implementation becomes improved and its practices integrated into the main organizational processes, also permeating the decision-making process. Thus, risk management can become a useful tool in identifying value-creation opportunities and optimizing strategy and organizational performance. In addition, improving risk management can help the institution evolve in governance and management capacity, considering this is one of its strategic objectives (UFPB 2019a).

The research provided knowledge of the challenges associated with the implementation of risk management in the organizational microdynamics of a public sector entity, and such challenges were mainly related to the commitment of senior management to disseminate a risk culture, the leadership factor and the formation of the human capital, due to the need to promote organizational learning. Another challenge to be considered is the use of information systems to boost risk management, one of the best practices that was not identified in the investigated institution. According to Bracci *et al.* (2021), this perspective makes the risk control process easier through the use of specialized software.

Nearly the study draws the attention of regulators and control bodies to the importance of reformulating the incentives for the transparency of risk information since public agents, due to a behavioral tendency highlighted by Hood (2007), are averse to highlighting internal and structural problems, to protect itself from reputational issues (Hood, 2007; Klein, 2020). Furthermore, faced with pressures to implement formal risk management systems, managers may do so only to meet regulatory requirements and demonstrate legitimacy (Bracci *et al.*, 2021; Carlsson-Wall *et al.*, 2019). In turn, the aspects pointed out in this research need to be considered.

Investigating risk management from a single context, even making generalizations impossible, contributes to advancing knowledge about the challenges of implementing this approach as a management practice that contributes to governance and accountability. However, it should be noted that the present research has limitations, concerning the lack of participation of researchers in the meetings held by UFPB and the impossibility of triangulating information with other employees of the institution, limited to the perception of servers from a single sector, PROPLAN.

Future research can explore other contexts to understand established intra-organizational practices and the contingency factors that affect them and deepen the effectiveness of risk management as a governance and accountability mechanism from the perspective of New Public Management. Risk management practices established in the context of the New Public Governance can also be deepened, that is, within the scope of partnerships and cooperation agreements established by the government for the provision of public services, where it is necessary to implement effective mechanisms of control and inter-organizational risk management.

REFERENCES

- Ahmadabadi, A.A., & Heravi, G. (2019). Risk assessment framework of PPP-megaprojects focusing on risk interaction and project success. *Transportation Research Part A: Policy and Practice*, 24(124), 169-188. <https://doi.org/10.1016/j.tra.2019.03.011>
- Ahmeti, R., & Vladi, B. (2017). Risk Management in Public Sector: A Literature Review. *European Journal of Multidisciplinary Studies*, 2(5), 323-329. <https://doi.org/10.26417/ejms.v5i1.p323-329>
- Araújo, A., & Gomes, A. M. (2021). Gestão de riscos no setor público: desafios na adoção pelas universidades federais brasileiras. *Revista Contabilidade & Finanças*, 32(86), 241-254. <https://doi.org/10.1590/1808-057x202112300>
- Arena, M., Arnaboldi M., & Parlemo, T. (2017). The dynamics of (dis) integrated risk management: A comparative field study. *Accounting, Organizations and Society*, 62, 65-81. <https://doi.org/10.1016/j.aos.2017.08.006>
- Associação Brasileira de Normas Técnicas - ABNT. (2018). ABNT NBR ISO 31000:2018 *Gestão de Riscos: Princípios e Diretrizes*. Rio de Janeiro: ABNT.
- Bracci, E., Tallaki, M., Gobbo, G., & Papi, L. (2021). Risk management in the public sector: a structured literature review. *International Journal of Public Sector Management*, 34(2), 205-223. <https://doi.org/10.1108/IJPSM-02-2020-0049>
- Braig, S., Gebre, B., & Sellgren, A. (2011). Strengthening risk management in the US public sector. *McKinsey & Company*. Retrieved from https://www.mckinsey.com/~media/mckinsey/dotcom/client_service/risk/working%20papers/28_wp_risk_management_in_the_us_public_sector.ashx
- Carlsson-Wall, M., Kraus, K., Meidell, A., & Tran, P. (2019). Managing risk in the public sector – The interaction between vernacular and formal risk management systems. *Financial Accountability and Management*, 35(1), 3–19. <https://doi.org/10.1111/faam.12179>
- Cavalcante, P. (2018). Innovations in the Federal Government During the Post-new Public Management Era. *Revista de Administração Contemporânea*, 22(6), 885-902. <https://doi.org/10.1590/1982-7849rac2018170391>
- Christopher, J. & Sarens, G. (2018). Diffusion of Corporate Risk-Management Characteristics: Perspectives of Chief Audit Executives through a Survey Approach. *Australian Journal of Public Administration*, 77(3) 427-441. <https://doi.org/10.1111/1467-8500.12257>
- Christopher, J. & Sarens, G. (2015). Risk Management: Its Adoption in Australian Public Universities within an Environment of Change Management – A Management Perspective. *Australian Accounting Review*, 25(1), 2-12. <https://doi.org/10.1111/auar.12057>
- Committee of Sponsoring Organizations of the Treadway Commission – COSO. (2004). *Enterprise Risk Management - Integrated Framework*. Committee of Sponsoring Organizations of the Treadway Commission, Nova York. Retrieved from <https://www.coso.org/documents/coso-erm-executive-summary-portuguese.pdf>
- Committee of Sponsoring Organizations of the Treadway Commission – COSO. (2017). *Enterprise Risk Management - Integrating with Strategy and Performance*. Committee of Sponsoring Organizations of the Treadway Commission, Nova York. Retrieved from <https://www.coso.org/Shared%20Documents/2017-COSO-ERM-Integrating-with-Strategy-and-Performance-Executive-Summary.pdf>
- Conselho Federal de Contabilidade - CFC. (2016). NBC TSP – *Estrutura Conceitual para Elaboração e divulgação de Informação Contábil de Propósito Geral pelas Entidades*

- do Setor Público. Recuperado em 23 setembro, 2021, de https://www2.cfc.org.br/sisweb/sre/detalhes_sre.aspx?Codigo=2016/NBCTSPEC&arquivo=NBCTSPEC.doc
- Decreto nº 9.203, de 22 de Novembro de 2017. (2017). *Dispõe sobre a política de governança da administração pública federal direta, autárquica e fundacional*. Recuperado em 1 abril, 2019, de http://www.planalto.gov.br/ccivil_03/_ato2015-2018/2017/decreto/D9203.htm
- Dourado, L. F. (2019). Estado, educação e democracia no Brasil: retrocessos e resistências. *Educação & Sociedade*, 40. <https://doi.org/10.1590/ES0101-73302019224639>
- Fletcher K.C & Abbas A.E. (2018). A Value Measure for Public-Sector Enterprise Risk Management: A TSA Case Study. *Risk Analysis*, 38(5), 991-1008. <https://doi.org/10.1111/risa.12932>
- Hinna, A. Scarozza, D., & Rotundi, F. (2018) Implementing Risk Management in the Italian Public Sector: Hybridization between Old and New Practices. *International Journal of Public Administration*, 41(2), 110-128. <https://doi.org/10.1080/01900692.2016.1255959>
- Hood, C. (2007). What happens when transparency meets blame-avoidance? *Public Management Review*, 9(2), 191-210. <https://doi.org/10.1080/14719030701340275>
- Instrução Normativa Conjunta MP/CGU nº 01, de 10 de maio de 2016. (2016). *Dispõe sobre controles internos, gestão de riscos e governança no âmbito do Poder Executivo federal*. Recuperado em 12 maio, 2020, de <https://repositorio.cgu.gov.br/handle/1/33947>
- Klein, V. H. Jr., (2020). Gestão de riscos no setor público brasileiro: uma nova lógica de accountability? *Revista De Contabilidade E Organizações*, 14, e163964. <https://doi.org/10.11606/issn.1982-6486.rco.2020.163964>
- Mahama, H., Elbashir, M., Sutton, S., & Arnold, V. (2020). New development: Enabling enterprise risk management maturity in public sector organizations. *Public Money and Management*, 0(0), 1–5. <https://doi.org/10.1080/09540962.2020.1769314>
- Mikes, A.; Kaplan, R.S. (2013). *Managing Risks: towards a Contingency Theory of Enterprise Risk Management*. Working Paper. Harvard Business School. <https://dx.doi.org/10.2139/ssrn.2311293>
- Newman, W., Charity, M., & Faith, S. (2018). Effectiveness of risk management systems on financial performance in a public setting. *Academy of Accounting and Financial Studies Journal*, 22(4), 2–7. Retrieved from <https://www.abacademies.org/articles/Effectiveness-of-Risk-Management-Systems-on-Financial-Performance-in-a-Public-Setting-1528-2635-22-4-270.pdf>
- Oulasvirta, L., & Anttiroiko, A. V. (2017). Adoption of comprehensive risk management in local government. *Local Government Studies*, 43(3), 1-26. <https://doi.org/10.1080/03003930.2017.1294071>
- Palermo, T. (2014) Accountability and Expertise in Public Sector Risk Management: A Case Study. *Financial Accountability & Management*, 30 (3), 322-341. <https://doi.org/10.1111/faam.12039>
- Pereira, B. A. D., & Ckagnazaroff, I. B. (2021). Contribuições para a consolidação da New Public Governance: identificação das dimensões para sua análise. *Cadernos EBAP.EBR*, 19(1), 111–122. <https://doi.org/10.1590/1679-395120200104>
- Power, M. (2007). *Organized uncertainty: Designing a world of risk management*. Oxford: *Oxford University Press*. https://doi.org/10.1111/j.1467-9299.2008.00756_2.x
- Rana, T., Wickramasinghe, D., & Bracci, E. (2019). New development: integrating risk management in management control systems-lessons for public sector managers. *Public*

- Money & Management*, 39(2), 148-151.
<https://doi.org/10.1080/09540962.2019.1580921>
- Sax, J. & Andersen, T. J. (2019) Making Risk Management Strategic: Integrating Enterprise Risk Management with Strategic Planning. *European Management Review*, 16(3), 719-740. <http://dx.doi.org/10.1111/emre.12185>
- Silvestre, H. C. A. (2019). *(Nova) governança pública*. (2019). Brasília: Enap. Recuperado em 04 junho, 2022, de <http://repositorio.enap.gov.br/handle/1/4286>
- Souza, F. S. R. N., Braga, M. V. A., Cunha, A. S. M., & Sales, P. D. B. (2020). Incorporação de modelos internacionais de gerenciamento de riscos na normativa federal. *Revista de Administração Pública*, 54(1), 59-78. <http://dx.doi.org/10.1590/0034-761220180117x>
- Tribunal de Contas da União. (2021). Perfil Integrado de Governança Organizacional e Gestão Públicas – iGG 2021. Recuperado em 7 outubro, 2021, de <https://portal.tcu.gov.br/governanca/governancapublica/organizacional/levantamento-de-governanca/levantamento-de-governanca.htm>
- Universidade Federal da Paraíba. (2019a). *Plano de Desenvolvimento Institucional (PDI) 2019-2023*. Recuperado em 30 março, 2020, de http://www.proplan.ufpb.br/proplan/contents/documentos/pdi/pdi_2019-2023_posconsuni-1.pdf
- Universidade Federal da Paraíba. (2019b). *Relatório Mapeamento de Riscos PDI 2019-2023*. Recuperado em 04 junho, 2020, de http://www.proplan.ufpb.br/proplan/contents/documentos/codeplan/relatorio-mapeamento-de-riscos_pdi-2019-2023.pdf
- Universidade Federal da Paraíba. (2020a). *Relatório de Gestão 2019*. Recuperado em 07 outubro, 2020, de <http://www.proplan.ufpb.br/proplan/contents/menu/ploplan/relatorio-de-gestao>
- Universidade Federal da Paraíba. (2020b). *Política de Gestão de Riscos*. Recuperado em 07 outubro, 2020, de https://sig-arq.ufpb.br/arquivos/2020190147cb942533854163ded33a177/BS_39-2020.pdf
- Universidade Federal da Paraíba. (2021). *Relatório de Gestão 2020*. Recuperado em 24 maio, 2021, de <http://www.proplan.ufpb.br/proplan/contents/menu/ploplan/relatorio-de-gestao>
- Vasileiou, K., Barnett, J., Thorpe, S., & Young, T. (2018). Characterising and justifying sample size sufficiency in interview-based studies: systematic analysis of qualitative health research over a 15-year period. *BMC Medical Research Methodology*, 18(1), 1–18. <https://doi.org/10.1186/s12874-018-0594-7>
- Vieira, J. B., & Barreto, R. T. d. S. (2019). *Governança, Gestão de Riscos e Integridade*. Brasília: Enap. Recuperado em 16 novembro, 2021, de <http://repositorio.enap.gov.br/handle/1/4281>

Concepção e Implementação de Práticas de Gestão de Riscos: Uma Análise em uma Instituição Federal de Ensino Superior Brasileira

RESUMO

Objetivo: Compreender como as práticas de gestão de riscos implementadas no contexto de uma Universidade Federal brasileira se configuraram às recomendações dos frameworks internacionais, e seu alcance como mecanismo de controle da governança pública.

Método: O arranjo adotado parte da síntese das práticas de gestão de riscos recomendadas no modelo do Committee of Sponsoring Organizations of the Treadway Commission (COSO), o COSO ERM, e na Norma ISO 31000:2018. Trata-se um estudo de caso, de natureza descritiva e abordagem qualitativa. A coleta dos dados se deu através de pesquisa documental e entrevistas. Os resultados foram analisados utilizando a técnica da análise de conteúdo.


Originalidade/Relevância: O estudo aprofunda o processo de implementação da gestão de riscos na microdinâmica organizacional de uma entidade do setor público, lacuna identificada na literatura devido aos poucos estudos realizados com a perspectiva de refletir a articulação prática dos frameworks internacionais e sua complexidade inerente, no contexto brasileiro.

Resultados: Considerando as 12 práticas de gestão de riscos investigadas, 8 estão em consonância àquelas recomendadas nos frameworks internacionais (66% de aderência). Dentre as práticas convergentes, destaca-se a integração da gestão de riscos ao planejamento estratégico institucional. Por outro lado, há práticas que ensejam aperfeiçoamento, como o envolvimento ativo da alta administração.

Contribuições Teóricas/Metodológicas: Ampliam-se as discussões sobre a gestão de riscos no setor público, onde é imperativo o rompimento de certos paradigmas (cultura de conformidade) em resposta às demandas dos stakeholders por boas práticas de governança e accountability.

Palavras-chave: Gestão de riscos. Implementação. COSO ERM. ISO 31000:2018. Setor público.

Jaqueline Gomes Rodrigues de

Araújo 

Universidade Federal da Paraíba (UFPB), PB,
 Brasil

E-mail: jgr_jaque@hotmail.com

Aldo Leonardo Cunha Callado 

Universidade Federal da Paraíba (UFPB), PB,
 Brasil

E-mail: aldocallado@yahoo.com.br

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