

## UNRAVELING THE FRONTIERS OF ACCOUNTING: CHARACTERIZATION AND ANALYSIS OF ARTICLES ON INTERNAL CONTROL IN THE PUBLIC SECTOR IN NATIONAL JOURNALS



<https://doi.org/10.56238/arev6n3-236>

Submitted on: 10/19/2024

Publication date: 11/19/2024

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### ABSTRACT

This study investigates the approach to internal control in the public sector in the national academic literature in the last decade. The justification of the study lies in the importance of

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internal control for efficiency, effectiveness and transparency in the management of public resources, preventing fraud and corruption. The literature reveals a significant disparity in the quantity and depth of research on internal control in national journals, indicating the need for a more in-depth analysis. Thus, the objective is to map the current panorama of publications on internal control, characterizing the scope of studies, identifying predominant themes and methodologies, and measuring the impact of these researches on academia and practice. The central question is: "What are the main themes, methodologies and impacts of publications on internal control in the public sector in national accounting journals?" The methodology includes the bibliometric analysis of articles published in national accounting journals, using specific inclusion and exclusion criteria. Data collection involves the identification of relevant articles in an academic database, followed by content analysis to characterize the themes and methodologies adopted. The expected results include the identification of an increase in academic interest in the topic, the characterization of the main themes and methodologies used, and the measurement of the impact of these publications on the practice of internal control in the public sector. This study aims to provide information for both academia and professional practice, identifying areas for future research and contributing to the strengthening of internal control and public governance practices.

**Keywords:** Internal control, Public accounting, Transparency, Accountability.

## INTRODUCTION

Efficiency, effectiveness and transparency in the management of public resources are fundamental pillars for good governance and trust in public administration. Internal control in the public sector emerges as a crucial mechanism for achieving these ideals, playing a vital role in preventing fraud and corruption, as well as ensuring the proper application of resources. Despite its indisputable importance, the academic literature reveals a significant disparity in the depth and scope of research on internal control, especially when compared to other areas of accounting. This observation raises important questions about the representation, approach, and impact of these studies within the public sector.

In order to illustrate, in the bibliometric research on the profile of articles published on internal control in the public sector in national and international journals, between 1983 and 2011, Beuren and Zonatto (2014) identified 133 scientific articles indexed in the Scopus database. Of this total, only one had been published in a national journal, the Journal of Public Administration of the Getúlio Vargas Foundation.

Despite the insignificant volume of publications in national journals, the authors observed the growing interest of the scientific community in this theme throughout the concentration period, reaching its peak in 2011, with 20 articles published. In addition, it was identified that the 133 scientific articles acquired were published in 116 different journals, demonstrating that, although there was no continuity of publications on the subject in the detailed journals, there was a significant number of journals interested in giving space to the theme. Souza and Crozatti (2020), in turn, when conducting a bibliometric search on the functions of controllership in the public sector compared to the private sector in articles indexed in the Scopus and Web of Science database and published before 2019, highlight a predominance of national studies specific to the private sector.

In this context, the objectives of this research are to comprehensively map the panorama of publications on internal control in the public sector in national accounting journals in the last decade. Specifically, it seeks to characterize the scope of these publications, identify the main themes and methodologies adopted, and measure the impact of these researches in academia and practice, in addition to identifying gaps that point to future investigations.

Identifying and analyzing these dimensions constitutes the core of the research problem, aiming to contribute to the improvement of public control and management

practices. Consequently, the research question that guides this study is: "What are the main themes, methodologies and impacts of publications on internal control in the public sector in national accounting journals?"

The rationale for conducting this study lies in its ability to provide valuable insights for both academia and professional practice. For academics, it offers a critical analysis of existing literature, highlighting areas for future research. For professionals and public managers, the results have the potential to inform more robust control practices, contributing to more transparent and efficient public management. Therefore, by exploring in depth the field of internal control in the public sector, this work promises to enrich the academic and practical debate, offering guidelines for the strengthening of internal control policies and, consequently, for the improvement of public governance.

## THEORETICAL FRAMEWORK

### ACCOUNTING AND INTERNAL CONTROL PROCEDURES AS TOOLS OF PUBLIC GOVERNANCE

From the sole paragraph of article 1 of the Federal Constitution (1988),<sup>8</sup> it can be inferred that civil society, also called the main society according to the Theory of Agency, as the holder of power and "owner" of public resources, delegates to public managers (agents) the responsibility for the administration of goods and services to promote social welfare. However, from this relationship between principal and agent, conflicts of interest (also called agency conflicts) may arise, which grow as more autonomy public administrators have and less information and control over public resources owners have (TCU, 2020).

Accounting, through its reports, reduces this informational asymmetry, acting as an instrument for evaluating agents and safeguarding the interests of the principal (Machado; Fernandes; Bianchi, 2016). It is not by chance that the registration and disclosure of accounting reports aim to provide relevant, reliable and timely information about the public entity to users, that is, useful information for guidance in decision-making and also for **accountability and accountability** (CFC, 2016).

With regard to *accountability*, the Fiscal Responsibility Law, aiming to foster transparency and social control, determines the availability, in real time and in electronic means of public access, of detailed information on the budgetary and financial execution of

<sup>8</sup>Article 1, sole paragraph, of the Federal Constitution of 1988: "All power emanates from the people, who exercise it through elected representatives or directly, under the terms of this Constitution"

the Union, States, Federal District and Municipalities (art. 48, item II) (Brasil, 2000). The Access to Information Law, in turn, extends this accountability to all activities carried out by bodies and entities (art. 7 and 8) (Brasil, 2011).

As a result, information regarding the transfer of resources to states and municipalities, government spending by area of operation, bids and administrative contracts signed, among others, can be obtained through the Federal Government Transparency Portal created in 2004 by the Office of the Comptroller General of the Union (CGU, 2024), the central body of Internal Control at the federal level. It should be said that this transparency portal, as well as the transparency portals of other federative entities, gather data from financial and administrative management systems, which are used by public agents in the execution of their activities.

That said, this **active transparency** allows access to public data produced or held by the government, regardless of request, and instrumentalizes for the prevention and fight against corruption, in defense of public assets, not only the social control, carried out by citizens, but also the Internal Control Unit responsible for supervising and monitoring the internal control procedures carried out by the management of the agency itself; and the External Control Bodies, whose competence belongs to the representatives of society in the Legislative Branch with the help of the respective Courts of Accounts.

For this reason, the internal control procedures observed by public agents in the exercise of their functions play a fundamental role in the dissemination of information that will be used for decision-making and also for the promotion of *accountability*. These internal control procedures act to reduce the predisposition to errors and fraud and provide reasonable assurance to interested parties of access to legitimate and reliable information (Braga Neto; Valencia; Luca, 2013), thus promoting **reliability** both in the accounting, financial and operational reports disclosed and in the management of the public agency.

Silva, Echternacht, and Silva (2023) argue that the development of an adequate internal control system is indispensable for the public sector that needs to apply scarce resources efficiently. Moraes Júnior, Abreu, and Melo (2022) explain that this internal control system is not only integrated by accounting controls, but also by administrative controls focused on the efficiency and effectiveness of organizations' administrative routines. Thus, the internal control system influences the **response capacity** of the public sector with regard to meeting the expectations of its users in relation to the quantity, quality, and speed of the services provided (TCU, 2020).

However, it should be clarified that the aforementioned internal control system concerns the internal controls of the management of each body and entity. Internal management control involves a set of procedures such as transaction authorization routines and information conferences, among others, operated by all public agents responsible for conducting activities, based on the identification, assessment and management of risks that may impact the achievement of the established objectives (Brasil, 2016).

They should not, therefore, be confused with the activities of the Internal Control System listed in article 74 of the Federal Constitution of 1988, nor with the attributions of internal audit, whose specific purpose is to offer evaluations and advice to public organizations aimed at improving internal management controls (Brasil, 2016).

That said, accountability, transparency, reliability, and responsiveness are nothing more than some of the principles of governance for the public sector (TCU, 2020), which has in internal control procedures a tool capable of strengthening it. Thus, the establishment of an effective internal control system (or internal management control) helps public managers by acting in a preventive manner in the identification, treatment and monitoring of risks, such as errors, uneconomic actions and fraud, enabling the achievement of the objectives of the entities in relation to the reliability of internal and external reports, compliance in the application of laws and regulations and the efficiency and effectiveness of operations (Braga Neto; Valencia; Luca, 2013; Coso, 2013; Brazil, 2016).

## THE EVOLUTION OF CONTROL BODIES IN THE BRAZILIAN PUBLIC SECTOR SCENARIO

The control bodies emerged with the Democratic Rule of Law and the limitation of the sovereign's powers (Bleme; Santos, 2023, p. 16024). In Brazil, however, inspection by internal control bodies focused on budget execution was legally required only with the publication of the sixty-year-old Federal Law No. 4,320/1964, which regulated public accounting (Moraes Júnior; Abreu; Melo, 2022). By means of this rule, the Executive Branch was responsible for the exercise of Internal Control and the Legislative Branch, the External Control with regard to the verification of the probity of the administration, the application of public money and compliance with the provisions of the Budget Law (Brasil, 1964).

Almost three years later, Decree Law No. 200/1967, which established guidelines for the Administrative Reform, determined that control should be exercised at all levels, including control by the competent head, in the execution of programs and observance of the rules by their subordinates, control by the bodies of each system in the exercise of auxiliary activities and control by the accounting and auditing bodies with regard to the application of public money and custody of goods (Brasil, 1967).

In the same line of reasoning, the Three Lines Model created by the *Institute of Internal Auditors*, updated in 2020, guides that all public agents responsible for the delivery of products or services, including the support sectors, play the front-line role in the responsibility for identifying, assessing, and mitigating the risks of the activity. The second-line roles are the responsibility of the responsible sectors, including the agency's own Internal Control Unit, for supervising, advising, and monitoring the risk management activities and internal control procedures performed by the first-line roles (IIA, 2020).

The third-line roles are the responsibility of the Central Internal Control Bodies, the Controllershops, which aim to provide evaluation and advice, based on the assumptions of independence and objectivity, on the adequacy and effectiveness of governance, risk management, and internal controls (IIA, 2020). The Office of the Comptroller General of the Union, created by Federal Law No. 10,683 of 2003, currently represents, at the federal level, the central body of the Risk Management and Internal Control System, the Correction System, the Ombudsman System, and the Integrity, Transparency, and Access to Information System (CGU, 2024).

Going back a little in time, with the redemocratization of the country, the Federal Constitution of 1988 extended to the three branches and spheres of government (federal, state and municipal), the maintenance of the Internal Control System, in an integrated manner, including as a parameter of inspection the legality, legitimacy, and economy of budgetary, financial and asset management (Brasil, 1988).

The Fiscal Responsibility Law No. 101/2000, in turn, instituted with the objective of balancing public accounts through responsible and transparent fiscal management and through actions to prevent risks and correct deviations, expanded the action of Internal Control, attributing to it, together with External Control, the responsibility for monitoring compliance with said rule, as well as by the information provided in the Fiscal Management Report issued by the holders of the Powers and bodies (Brasil, 2000).



For Sousa, Souto and Nicolau (2017, p.159) Law No. 4,320/1964 and Decree No. 200/1967 consolidated the more classic controls of Max Weber and Taylor, with their focus on bureaucracy, while the 1988 Constitution and Complementary Law No. 101/2000 reinforced the need for "institutionalization of concepts and practices for the performance of management systems in the protection of assets and in the search for the effectiveness of public policies, especially fiscal, however still disconnected from an effective practical approach".

## EFFECTIVENESS IN INTERNAL MANAGEMENT CONTROL ACCORDING TO COSO

The *Internal Control - Integrated Framework*, also known as COSO-IC or COSO I, created in 1992 by the *Committee of Sponsoring Organizations of the Treadway Commission* with the objective of guiding organizations regarding the best practices of internal control (Coso, 2013), explains that in order to be effective in internal control, it is necessary to have the presence and proper functioning of five components, namely: control environment, risk assessment, internal control activities, information and communication and monitoring.

In the context of corruption scandals and corporatist use of the public machine, the adhesion of the Federal Court of Auditors to the recommendations of INTOSAI, which had already absorbed the conceptual and component bases of COSO, aligned the public sector with the *Enterprise Risk Management - Integrated Framework*, COSO ERM or COSO II model, created in 2004 to complement the previous model, with greater emphasis on the risk management process, resulting in the publication of Joint Normative Instruction CGU/MP No. 01/2016 (Sousa; Souto; Nicolau, 2017).

As recommended in this normative act, the control environment refers to the set of standards, processes and structures that enable the development of the internal control system in the organization (Brasil, 2016). Thus, for example, the ethical values and the level of knowledge and skills of public agents are elements of the control environment that provide a basis for understanding and execution related to internal control procedures.

Risk assessment, on the other hand, refers to the permanent process of identifying, measuring, and responding appropriately to risk, i.e., the decision to avoid, reduce, share, or accept risk depends on the desirable level of risk mitigation identified (Brasil, 2016). Internal control activities or procedures, in turn, must act by executing actions that mitigate risks (Brasil, 2016). Among the control procedures are the segregation of duties, the



restriction of access to transaction authorization, the routines of verifying transactions as to validity and legality and verification of accounting records for completeness and accuracy.

However, in order for the control procedures not to be carried out only in a reactive manner to charges from external inspection agencies, it is necessary that there is commitment on the part of each public agent. In addition, information produced or received from internal or external sources must be disseminated in all directions (from the higher to the lower hierarchical levels and vice versa and between equivalent hierarchical levels), and must be, among other characteristics, up-to-date, accurate and accessible (Brasil, 2016).

In this sense, the elaboration of a code of ethics and a manual of procedures, such as the Manual of Accounting Applied to the Public Sector (MCASP) prepared by the National Treasury Secretariat (STN), as well as the adoption of a Management Information System, are very useful tools in the dissemination of information and standardization of internal routines.

Santana and Behling (2021) assessed the effectiveness of the communication carried out, through the Special Informative Note of the 5th Army Accounting and Finance Inspectorate (NIEsp), between the Internal Control Unit (UCI) and the 36 (thirty-six) Linked Management Units (UGV) spread across the states of Paraná and Santa Catarina. The authors concluded that the NIEsp, which brings together standards, guidelines and interpretations about the correct way of executing procedures in the administrative, accounting and patrimonial areas, provides relevant support in the way acts are conducted by public agents and has effective participation in the decision-making of managers.

Alves *et al* (2020) evaluated the implementation, results, and receptivity of the Management Monitoring System (SAG) in the internal control activities of the Management Units (UG) of the Brazilian Army Command. The results showed that the developed system is an ally in the generation of management reports that help in the decision-making process by the command of the units as well as, for most of the respondents, it helps in the activities of internal control, enabling the consultation of data for the preparation of the Monthly Accountability Report, monitoring of the budget execution related to the commitments and the control of assets, among others.

Finally, the last component (monitoring) is responsible for evaluating the effectiveness, efficiency, effectiveness and cost-effectiveness in the implementation of the components of internal control in order to timely correct the deficiencies pointed out in this process (Brasil, 2016). Its absence induces recurrent and sometimes easily resolved errors,

such as those found by Gonçalves *et al* (2019) in the accountability reports of research projects funded by the Research Support Foundation of the Federal District (FAPDF).

For the authors, the lack of mapping of the cumulative caveats presented in the accountability reports, combined with inefficient communication about procedures to be adopted, prevented the correction of relevant and low-complexity errors, such as the failure to present three budgets for the acquisition of capital goods or the failure to present an invoice to prove the acquisition of the item. Studies that analyzed the quality of internal control practices evidenced in the Management Report of the Brazilian states Souza Junior and Silva (2016), or from the perspective of organizational actors Souza, Souto and Nicolau (2017), also revealed weaknesses in internal controls, especially in the implementation of monitoring.

Thus, it is also important to highlight that, as prescribed by the *Committee of Sponsoring Organizations of the Treadway Commission* (COSO), the five components mentioned above work together. Therefore, when an inefficiency or absence occurs in any of them, organizations will not have an effective internal control system (or internal management control). Thus, this evaluation and improvement of internal controls must be an ongoing process in order to ensure that they remain adequate over time since they are subject to no longer being applied in the way they were planned or becoming insufficient to support the achievement of new objectives (Coso, 2013).

## METHODOLOGY

The present study aims to comprehensively map the current panorama of publications on internal control in the public sector in national accounting journals, through the bibliometric analysis of articles published in the last decade (2013 to 2023). According to Beuren and Zonatto (2014), bibliometric studies are used to provide evidence about the stages of development of literature, allowing us to understand success stories and identify the main challenges and, thus, provide new research opportunities.

To carry out data collection, an advanced search tool available on the journal portal of the Coordination for the Improvement of Higher Education Personnel (CAPES) was used. A public policy instrument, the portal was created by the federal government in 2000, with the aim of democratizing access to scientific information, and is currently one of the largest collections in the world, offering access to full texts available in more than 38 thousand periodical, international and national publications Miranda and Carvalho (2017).

When accessing the chosen database, in April 2024, the keywords "Internal Control" and "Accounting" were used as a search filter in the titles of the journals and in the titles and subjects of the articles published between 2013 and 2023. The criteria used resulted in 108 articles published with a focus on the accounting area or public management. Of this total, 6 articles were in duplicate.

By further refining the research, in view of the objective of this study, it was verified in which journals the articles had been published and only the abstracts of the articles published in national journals were read. Thus, 3 articles published in international journals, 60 scientific articles on internal control in the private sector, and 11 articles that do not match the objective of the study were excluded, such as the article by Haveroth *et al* (2019) on the relationship between the Internal and External Locus of Control and resilience, according to the social characteristics of Accounting students.

The remaining 28 scientific articles were read in full and analyzed under a quantitative approach, based on bibliometric indicators, following the analysis categories established by Beuren and Zonatto (2014) in order to identify the year of publication, journals in which they were published, number of authors per article, most prolific authors in the analyzed period, and the concentration of bibliographic references. With regard to the typology of the research, the classification of Raupp and Beuren (2003) was adopted regarding the procedures for data collection and the approach to the problem.

Quantitative analysis is characterized by the use of statistical instruments, both in data collection and analysis (Raupp; Beuren, 2003). The data obtained were recorded and processed using Microsoft Excel software, version 2016, and demonstrated through tables and graphs. According to Soares, Picolli and Casagrande (2018) "the absence of quantitative analysis mischaracterizes bibliometric research, which can, depending on the content, be classified as bibliographic research".

Finally, from a qualitative perspective, the articles were analyzed in terms of the subject addressed. The results of the research are presented below.

## **RESULTS AND DISCUSSIONS**

### **THE QUANTITATIVE APPROACH TO DATA**

The quantitative analysis of the 28 articles published on internal control in the public sector was carried out based on bibliometric indicators.

Table 1 shows the journals in which the articles were published and the year of publication. By analyzing it, it is possible to observe that, in the selected period, the 28 articles were published in 19 different journals and that more than half of the journals, 11 in all (57.89%), had only one publication on the subject. The Revista Catarinense da Ciência Contábil do Conselho Regional de Contabilidade de Santa Catarina and the Revista Contemporânea de Contabilidade da Universidade Federal de Santa Catarina, each with 3 publications, were the most prolific journals.

In addition, the year in which there were more publications of scientific articles on internal control in the public sector was 2022, with 5 publications, followed by 2013 and 2016 with 4 publications in each. On the other hand, there were no publications in 2023.

Table 1. List of Journals by Quantity and Year of Publication													
Title of Journal / Institution	Qualis (2017 - 2020)	Year of Publication / Number of Articles											
		2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	Total by journal
		3	4	5	6	7	8	9	0	1	2	3	
Universo Contábil Magazine of FURB - SC	A3	1	1										2
Journal of Social Sciences in Perspective of UNIOESTE - PR	-	1											1
CGU Magazine	B2								1				1
Public Management and Citizenship Notebooks at FGV - SP	A3	1											1
Journal of Management and Accounting of UFPI - PI	B1				1		1						2
Revista Catarinense da Ciência Contábil do CRCSC - SC	A3				1			1			1		3
Brazilian Journal of Accounting of the CFC - DF	B2	1		1									2
Management in Analysis Magazine of Unichristus - CE	B2									1			1
Hermes Scientific Journal of FIPEN - SP	B1								1				1
Acerte Scientific Journal of Articulare Editora LTDA - SP	-									1			1
Revista Mineira de Contabilidade da CRCMG - MG	A4				1								1
Contemporary Journal of Accounting of the Federal University of Santa Catarina - SC	A3			1		1					1		3
Journal of accounting and organizations of the University of São Paulo - SP	A3								1				1
Accounting Journal of UFBA - BA	B1			1			1						2
SINERGIA - Journal of the Institute of Economic, Administrative and Accounting Sciences of FURG - RS	B1										1		1
Society, Accounting and Management at UFRJ - RJ	A3										1		1

UNEMAT Accounting Journal of UNEMAT - MT	B2		1			1							2
Brazilian Journal of Scientific Administration of CBPC - SE	B3				1								1
Revista Paraense de Contabilidade do CRCPA - PA	B3										1		1
Total per year		4	2	3	4	2	2	1	3	2	5	0	28
Source: Prepared by the authors													

Continuing with the analyses, the characteristics related to the authors of the articles were verified, which are the number of authors per article and the most prolific authors in the analyzed period. In addition, the authors' titles and the institution represented by them were also verified.

Table 2 shows the number of authors per published article, with a predominance of articles written by more than one author, approximately 78.57%.

Table 2. Number of Authors per Article

Number of Authors	Total Article	Incidence
Only 1 author	6	21,43%
With 2 authors	6	21,43%
With 3 authors	8	28,57%
With 4 authors	7	25%
With 5 authors	1	3,57%
Total	28	100%

Source: Prepared by the authors

With regard to the authors' profile, in the 28 articles analyzed, 75 different authors were identified, with postdoctoral studies (2); doctorate (24); master's degree (11); master's or doctorate in progress (17); and specializations (6), i.e., 80% of the authors had a postgraduate degree, as stated in the article, which reveals the quality of the articles produced in the period. For cases in which the title was not declared in the article, a consultation was carried out on the CNPQ Lattes platform, considering the year of publication of the article in relation to obtaining the authors' title. The other 16% of the authors of the articles were composed of bachelors in accounting sciences, 8 in all, or with an undergraduate degree in progress, 4. It was not possible to identify the titles of 3 authors (4%). However, none of these authors wrote more than one article on the subject in the period analyzed.

Table 3 shows the institutions represented by the authors of the article as well as the states with the highest representativeness, with an approach similar to that employed by Eckert *et al* (2014) in their bibliometric research on accounting fraud. In all, 29 institutions

represented by the authors were identified, since it was not possible to identify the institution of one of the articles and in two articles there was interinstitutional cooperation, so that there were two institutions represented in these articles.

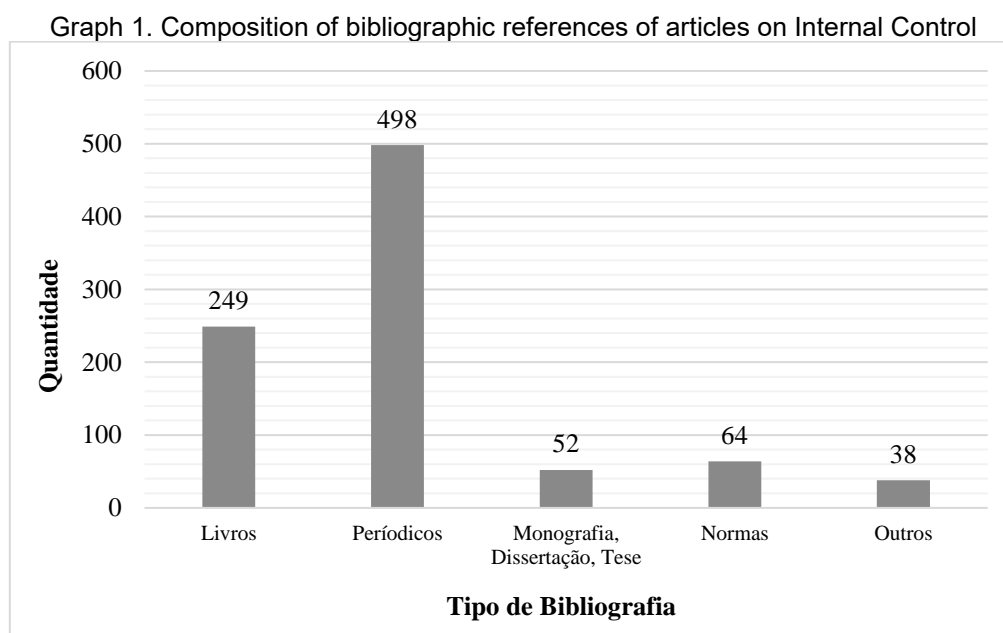
Table 3. Educational institution represented by the authors				
Institution	UF	Article Qty. by Institution	Representativeness by institution (%)	Representativeness by Brazilian region (%)
UNB	DF	2	6,90	11,11
UNEMAT	MT	1	3,45	
UFBA	BA	1	3,45	22,22
UFC	EC	1	3,45	
UFPE	PE	1	3,45	
UFRPE	PE	2	6,90	
UFPB	PB	1	3,45	
UFRA	AM	1	3,45	7,41
JOIN	RO	1	3,45	
UFES	ES	2	6,90	25,93
FUCAPE	ES	1	3,45	
UFMG	MG	1	3,45	
UNIMONTES	MG	1	3,45	
UERJ	RJ	1	3,45	
FECAP	SP	1	3,45	
UFPR	PR	1	3,45	33,33
UCS	RS	1	3,45	
UPF	RS	1	3,45	
PUC SC	SC	2	6,90	
Univali	SC	2	6,90	
UDESC	SC	1	3,45	
UNOESC	SC	1	3,45	
Universidad Complutense de Madrid	-	1	3,45	N/A
University of Aveiro and University of Minho	-	1	3,45	N/A
Total Institutions		29	100%	100%

Source: Prepared by the authors

From the analysis of the data, it is possible to observe that the University of Brasília - UNB, the University Center of the Catholic University of Santa Catarina in Jaraguá do Sul - UNERJ, the Federal University of Espírito Santo - UFES, the University of Vale do Itajaí - UNIVALI and the Federal Rural University of Pernambuco - UFRPE are the institutions with the greatest representativeness, with the publication of two articles in the last decade. In addition, the state with the highest representation is the state of Santa Catarina, with the publication of six articles (20.69%); followed by the states of Pernambuco and Espírito Santo with three publications (10.34%) each; Minas Gerais and Rio Grande do Sul, with two publications (6.90%) each.

With regard to the composition and concentration of references, 1,026 references were found in the 28 articles made available by the Capes journal portal, with the article entitled *The basis for accounting principles*, published in *The Accounting Review* of the *American Accounting Association* and authored by DR Scott, being the oldest reference (1941).

After excluding the repeated references between the articles, 901 different references were obtained, consisting of 498 (54.73%) journals; 249 (27.36%) books; 64 (7.03%) norms; and 52 (5.71%) undergraduate and specialization monographs, dissertations and theses, with a prevalence of dissertations (53.85%), as illustrated below:



Source: Prepared by the authors

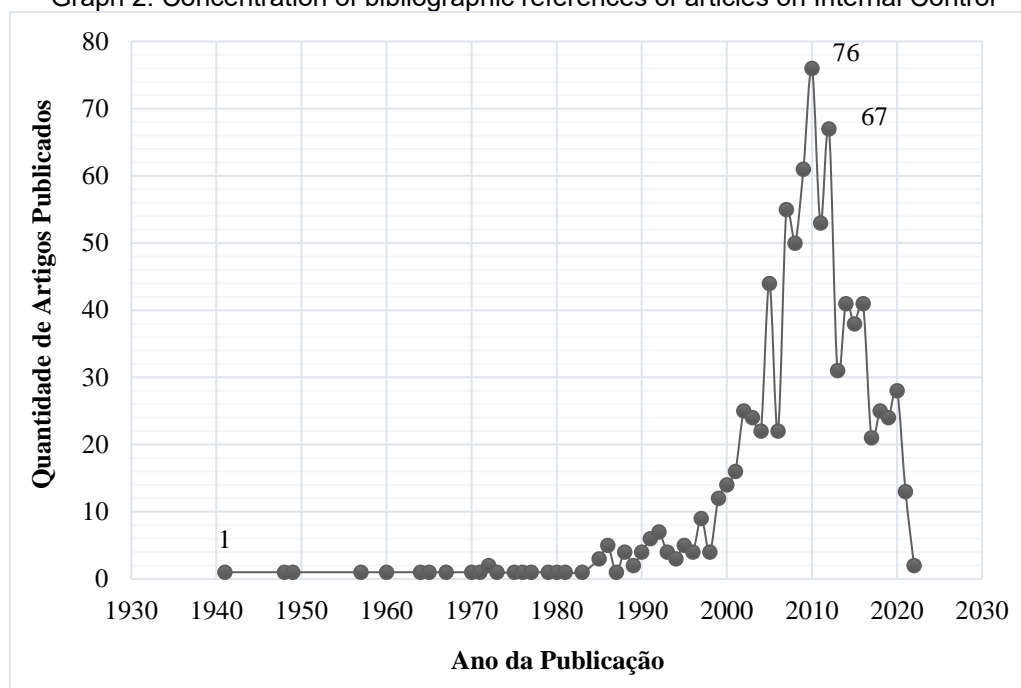
This result differs from that found by Eckert *et al* (2014). Although the authors noted a significant increase in the number of journals in relation to books in 2012, they concluded that 35% of the bibliographic references of the 36 articles analyzed were composed of books and 31% of journals. For the authors, this circumstance indicated a more conservative approach, and did not keep up with the advancement of science, since books take longer to be updated.

In Graph 2 below, it is possible to see that the year 2010 was the most referenced, with 76 publications, followed by the year 2012, with 67 publications. Through the concentration of bibliographic references cited in the 28 articles analyzed, a predominance of more recent literature is observed, since most of the references, 89.50%, were published



after the 2000s. On the other hand, this data may also mean the low number of publications, before the 2000s, on the subject.

Graph 2. Concentration of bibliographic references of articles on Internal Control



Source: Prepared by the authors

This result converges with that of Beuren and Zonatto (2014), who analyzed 132 international journals and 1 national journal in its 28-year time frame (1983 - 2011) and pointed to 2010 as the most cited year among the authors, as well as identified that 49.82% of the references used referred to articles published in the period from 2000 to 2011. In Graph 2 above, it is also observed that this period is the one with the highest volume of referenced publications, 52.14%.

Finally, with regard to the typology of the research regarding: (i) the procedures for data collection, the authors used documentary research (45.95%), bibliographic research (29.73%), survey (16.22%), case study (5.4%) and participant research (2.7%); (ii) to approach the problem, 46.43% of the authors opted for the qualitative approach; 35.71% by the quantitative approach and 17.86% by the mixed approach.

## THE QUALITATIVE APPROACH TO DATA

Continuing with the analyses, with regard to the subjects addressed, most of the authors (25% of the articles) concentrated their research on the transition period of accounting convergence of the public sector to international standards. From the analysis of

the financial statements, explanatory notes and reports of the Internal Control, or even from the perspective of accounting professionals, in comparison with the Brazilian Standards of Accounting Applied to the Public Sector - NBCASP or the Manual of Accounting Applied to the Public Sector - MCASP, the authors verified the stage, impact and factors capable of influencing the adoption of the accounting reform, as well as established indexes for measuring the *disclosure* of equity accounting procedures.

In common, these studies highlighted that the innovations brought about by the accounting reform, such as the equity approach (NBC T 16.1) with the adoption of the accrual basis (NBC T 16.5) and the adoption of the standard chart of accounts (NBC T 16.5), in addition to the mandatory inclusion of Explanatory Notes (NBC T 16.6), would improve the quality and comparability in the disclosure of equity accounting information for decision making, in addition to increasing the transparency and accountability of the actions practiced by public administrators (Magalhães *et al*, 2013; Three; Rissardo, 2015; Coast; Nunes; Almeida, 2016; Lemos *et al*, 2018). The existence of an active Internal Control Unit (Tres; Rissardo, 2015; Piccini; Bezerra Filho; Marques, 2022; Mata, 2022), as well as the support of senior management (Mata, 2022; Three; Rissardo, 2015), were pointed out as some of the vitally important tools for achieving these results.

However, despite the benefits arising from the accounting reform in the public sector, adherence to the standards is not an easy task, especially for cities with populations below fifty thousand inhabitants and that do not have a physical structure and personnel (Costa; Nunes; Almeida, 2016). The results of the research by Braga Neto, Vasconcelos and Luca (2013) revealed the low number of states, only nine, that disclosed the Internal Control reports, in electronic media, during the rendering of accounts and the low rate of compliance with the provisions of NBC T 16.8 - Internal Control, contrary to the precepts of good governance practices. The maximum number of evidences of compliance with the norm was found in the state of Ceará (24 items, 40%, met out of a total of 60 items investigated), while in Pará, no evidence was found.

The limitations imposed on the performance of the duties of professionals in the Internal Control Units (ICU), as well as the challenges faced, were also the object of study in the articles analyzed. Moreno *et al* (2017) demonstrated the origin of the weaknesses of the internal control system in the state of Rondônia, based on the legislation that deals with the institutionalization of the Internal Control Unit - UCI. The authors highlighted the importance of the regulations addressing issues about the subordination of the UCI and the

form of hiring in order to guarantee the autonomy and independence of civil servants, avoid manipulations in the analyses and interventions in the activities, in addition to continuous expenses with training and improvement of non-stable civil servants and without accountability for the acts performed.

Bona (2022), in turn, mapped 15 activities among the most performed by the 295 comptroller's offices in Santa Catarina, identified in the list of 337 activities of the Comptroller General of the Union. These activities were distributed among the 6 macro functions of the controllership: support for external control, auditing, internal control, ombudsman, transparency and correction. The results revealed that 82% of the mayors of 232 municipalities in Santa Catarina with up to 50,000 inhabitants maintain an insufficient amount of human resources to fulfill institutional purposes, with units composed of only one civil servant.

The author also identified that 60% of the work efforts are applied to activities to support external control, such as issuing an opinion on daily allowances or advancing resources, to the detriment of support for the improvement of management and the functioning of the anti-corruption cycle arising from the interaction with the other macrofunctions.

Luz, Clazer and Ribeiro (2016) pointed out, among the difficulties encountered by the municipal internal controllers in the AMCESPAR - PR region, the lack of legal support with guidance on current legislation and applicable sanctions to support decisions in correction and accountability activities. The authors also highlighted the underestimation, by managers, of the advisory function in budget planning and execution activities, with an impact on accountability. In this sense, Cordão and Ramos (2014) suggest, from the perspective of managers, that the holding of courses would increase their perception of the importance of Internal Control, as well as the updating and dissemination of information.

Throughout the Theoretical Framework of the present study, the research of Gonçalves *et al* (2019), Souza Junior e Silva (2016) and Souza, Souto and Nicolau (2017) was evidenced, which highlighted the maturity of the internal controls implemented in public bodies and entities in accordance with the components of COSO.

Finally, only two success cases were identified among the articles and also evidenced throughout the Theoretical Framework. These studies referred to the implementation of tools that add value to the exercise of internal control, such as the use of a manual of procedures (Santana; Behling, 2021) and the implementation of an information

management system (Alves *et al*, 2020) in order to assist in the communication of the Internal Control Unit with the Management Units, as well as in decision-making.

These results corroborate the bibliometric research by Beuren and Zonatto (2014) who identified that most studies explored themes related to the causes of problems and few sought to analyze successful cases. Thus, it is left as a suggestion for future investigations since the analysis of success cases "can contribute to the understanding of how the investigated theme contributes to the improvement of public management processes, as well as the situations that contribute to or favor the improvement of the services provided and the resources applied" Beuren and Zonatto (2014, p. 1153).

## CONCLUSION

The present study investigated the approach to internal control in the public sector, through bibliometric research. Based on the established selection criteria, the research carried out identified 88 articles on internal control published in national journals between 2013 and 2023. These data reveal an increase in national production on internal control in the last decade, as diagnosed in the study by Beuren and Zonatto (2014) whose research, although it returned only 1 scientific article on internal control published in a national journal, between 1983 and 2011, drew attention to the growing interest of the scientific community on this topic throughout the period analyzed, as well as the significant number of journals willing to give space to the theme.

However, the number of articles published is still small compared to the relevance of the theme and, above all, when of this total, there is greater interest in the private sector (68.18%) in relation to the public sector (37.89%). This result corroborates that of Souza and Crozatti (2020) who, when investigating the functions of controllership in both sectors, identified the predominance of national studies focused on the private sector.

Regarding the number of authors per article, although a total of 75 authors were identified for the 28 articles, none of them wrote more than one article on the subject made available in the Capes database in the period analyzed. This result converges with the study by Beuren and Zonatto (2014). In their research, only 4 of the 106 different authors identified wrote more than one article on this topic, that is, 2 articles. The authors attributed the result found to the low interest of researchers in continuing their investigations on internal control in the public area.

In the present research, it was also observed that although these authors represent institutions from all regions of the country, which is equivalent to saying that the study is disseminated throughout the country (Eckert *et al*, 2014), the southern region has the largest number of institutions represented by the authors (33.33%), followed by institutions in the southeast (25.93%) and the northeast, which, despite being numerous in states, is in third position (22.22%).

Regarding the qualitative analysis of the data, some points that deserve attention for the implementation of an effective internal control system were detailed, especially in small municipalities, such as the need for legal, legal and senior management support, the qualification of professionals and the adequate number of civil servants to fulfill the duties, which is not restricted to advising external control bodies, but also managers, including with regard to budget planning and execution and actions for risk management.

It is expected that this research will provide insights for the academic area and also contribute to professional practice, by highlighting the points that deserve attention and improvement given the importance of implementing an effective internal control system to ensure, in addition to compliance with the legislation, the reliability and reliability of accounting reports, the promotion of operational efficiency and the safeguarding of the assets of the public body and entity.

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