# CHAPTER 13

# Relevance of internal audit to public organizations and private: a systematic review of the literature





**S**Crossref **10.56238/pacfdnsv1-013** 

#### Maria Aldinete de Almeida Reinaldi

Professional Master's in Teaching, State University of Northern Paraná-UENP Professor of the Collegiate of Accounting Sciences, at the State University of Northern Paraná – Campus Cornélio Procópio – UENP,

BR 160, Km 0. CEP 86300-000. Cornelius Procopio -Paraná -Brazil Email: maria.reinaldi@uenp.edu.brAutor

# Argeu Lucas Fraga Sebastião

Graduating in Accounting Sciences at the State University of Northern Paraná - Campus Cornélio Procópio-UENP, Brazil.

BR 160, Km 0. CEP 86300-000Cornélio Procópio -Paraná -Brasil Email: lucasipeg\_@hotmail.com

# Paulo Danrlei de Freitas Aguiar

Graduating in Accounting Sciences at the State University of Northern Paraná - Campus Cornélio Procópio-UENP, Brazil.

BR 160, Km 0. CEP 86300-000Cornélio Procópio -Paraná -Brasil Email: pdfa1195@gmail.com

### **Carlos Cesar Garcia Freitas**

PhD in Business Administration, Federal University of Paraná - Curitiba-PR Adjunct Professor at the Administration Collegiate at the State University of

Paraná - Campus Cornélio Procópio - UENP, Brazil. BR 160, Km 0. CEP 86300-000Cornélio Procópio -Paraná -Brasil Email: cesarfreitas@uenp.edu.br

#### **ABSTRACT**

This study aimed to analyze the relevance of Internal Audit (IA) as a management support mechanism in different organizations, given the need for reliable and useful information for decision-making in the context of globalization and increasing competitiveness. To this end, a systematic review of the literature was carried out, based on the Bank of Theses and Dissertations of the Coordination for the Improvement of Higher Education Personnel of the Ministry of Education (CAPES/MEC) from 2016 to 2020. From a universe of 675 surveyed, 45 studies were identified, which showed the important role of AI for the maintenance and growth of the organizations object of analysis of these. Divided into two categories of analysis, the studies aimed at private companies have shown that AI is relevant due to the need to overcome managerial challenges, to achieve goals, to prevent fraud, to achieve the purposes of corporate governance and, consequently, to attract new investors. On the other hand, studies aimed at public institutions showed that AI is relevant due to the possibility of optimizing the use of public resources, greater transparency in the rendering of accounts to society and in the fight against corruption.

Keywords: Internal Audit, Management Tool, Organizations.

# 1 INTRODUCTION

Technological advances and rapid changes in the world of organizations in recent years, have caused greater complexity in the process of decision-making and required changes in the current forms of management of institutions. Per this, organizations have sought to improve their way of conducting activities, having in view of their demands for adaptation to the new demands arising from this new time. With this, it has been increasingly important and necessary to search for new strategies and accounting and management tools that enable the achievement of their purposes in a efficient and effective (MONTOTO, 2018).

Added to this, there is a need for transparency and symmetry in information, which private companies need to attract investors and organizations to justify their responsibility in the use of the public resource. It is worth that the fierce competition in the market and failures in internal control are pointed out among the main reasons that leads to manipulation of numbers by administrators and company employees (ASSI, 2020).

In this context, accounting assumes an extremely important role. Exercising the functions of controlling and communicating economic information for the purpose to assist in decision-making by the administration (TIRLONI, 2020). To exercise this function, Accounting uses four techniques, namely: bookkeeping, financial statements, auditing and analysis of financial statements. In this study special focus is given to the Audit technique, which consists of a set of technical procedures applied for the purpose of analyzing and issuing an opinion to respect of the adequacy of the fundamental principles of Accounting and the determinations relevant legal requirements, in the records and in the preparation of the financial statements of a entity that must portray its real equity situation (CFC, 2003).

In Brazil, this entire accounting measurement and communication process went through major changes, resulting in greater rigor and greater demands on the accuracy of the economic and financial information reported in the financial statements accounting. Such changes occurred from the adoption of the International Standards for Accounting, from the International Financial Reporting Standards (IFRS). This one convergence of Brazilian norms with international ones originated in the expansion of international negotiations between companies due to the sale of products and services and other investments. Thus, in 2005, it was created in Brazil the Accounting Pronouncements Committee (CPC), the body in charge of formulation of accounting pronouncements in line with IFRS, a fact that started the entire process of change mentioned (MOREIRA at al., 2015).

It is worth noting that there are several classes of audits, among which are: internal audit; management audit; computer audit; operational audit, social audit. This work deals specifically with Internal Audit (AI), considered as an impartial and objective practice, which has the function of guaranteeing to the organization the control and the accuracy of transactions. Functioning as the entity's internal sector, it acts as systematic and methodical support in achieving organizational objectives, validating their risk management, control and corporate governance processes, and contributing to proposals to improve its effectiveness (IFACI, 2005).

Considering the aforementioned requirements, it is evident the need for action effective use of AI, both in public and private sector organizations, given that, in addition to providing greater reliability, accuracy and transparency in the information accounting, this tool also contributes to greater efficiency and effectiveness in administration and the achievement of organizational objectives, overcoming financial resources (MAIA, 2016).

Given the prominent role of AI in accounting and administration of different organizations, especially after the adoption of IFRS, there is an interest in to know the evolution of academic research on the subject, which motivated the conducting a study with the objective of analyzing the relevance of Internal Audit (IA) for organizations.

This is a qualitative research whose data were collected at from a systematic review of the literature, in the Bank of Theses and Dissertations of CAPES, in the area of Applied Social Sciences / Accounting Sciences, in the period of the search from 2016 to 2020. The data were categorized following the precepts of the Analysis Textual Discursiva de Moraes and Galiazzi (2007).

#### 2 THEORETICAL FRAMEWORK

The financial statements are considered as an instrument of great importance in decision making by different users of information accounting, as they contain relevant data regarding the patrimonial, economic and an organization's finances. However, your information must be rigorously reliable so that, in fact, it fulfills its objective and serves as a means of communication between the entity and its stakeholders. In this sense, auditing is the technique accounting to be used in order to provide greater credibility to the information contained in the financial statements (BARTHOLD, 2020).

The aforementioned technique gained even more importance from the new requirements regarding the preparation and disclosure of financial statements by the companies, a fact caused by the adoption of IFRS in Brazil with the disclosure of the 10,303 in 2010. With this, the inspection of accounting practices and verification its compliance with international standards, employs the auditing role of fundamental importance and a prominent position in the literature and research academics (NARDI et al., 2018).

This technique is also conceptualized as accounting specialization to test the efficiency and effectiveness of the equity control implemented with the objective of expressing an opinion on certain data. It is a set of technical procedures that have with the objective of issuing an opinion on the adequacy of the records and statements with the Fundamental Accounting Principles and the specific legislation (CREPALDI; CREPALDI, 2016).

The term "Audit" comes from the Latin audire, defined by the English as an accounting review technique whose practices emerged at the end of the 18th century in the England as a result of the economic changes that took place in the period of the Revolution Industry (IBRACON, 2007).

Among the various audit categories found in the literature, AI has differential, in addition to the inspection, control and communication function that employs greater reliability of accounting information, the possibility of acting as a tool for

management that, through the analysis of records of accounting acts and facts, will remedy possible anomalies and also indicate actions that will bring improvements in the entity's performance audited, thus providing greater efficiency and effectiveness to its management (BARTHOLD, 2020).

However, it must have as much functional independence as possible and must be recognized by the top management in the company's organizational chart as a staff organ of the presidency, general direction or superintendence (FLORENTINE).

Resolution No. 986/2003 of the Federal Accounting Council (CFC) NBC T 12.1.1.4, refers to AI as a set of activities:

[...] structured in procedures, with a technical, objective, systematic and disciplined approach, and its purpose is to add value to the organization's results, presenting subsidies for the improvement of processes, management and internal controls, through the recommendation of solutions for non-conformities pointed out in the reports (CFC, 2003. p.3).

That said, it can be said that AI will be able to resolve any doubts and needs of companies and inhibit irregularities, since its function is to verify veracity of all information presented by the company in relation to documents, such as invoices, contracts, receipts, among others, including verification ownership and possession of the entity (ROSA; MOREIRA; HARANO, 2018). For that, the said activity must be carried out by a trained professional according to determines CFC resolution No. 781/95 that approves NBC PI 01:

[..] the accountant, in the role of internal auditor, must maintain his level of professional competence through up-to-date knowledge of the Brazilian Accounting Standards, accounting techniques, especially in the area of auditing, the legislation inherent to the profession, concepts and techniques administrative and legislation applicable to the Entity (CFC, 1995. p.2).

Considered an important management tool, AI makes it possible to distinguish, analyze, verify and report the information to the board, giving medium-sized companies and large knowledge of their real economic and/or financial situation,

instrumentalize it for the effective reduction of its costs and expenses, besides inhibiting eventual errors and frauds (SILVEIRA, 2004).

Regarding the objective of verifying the veracity of the information acquired for assist in the management processes NBCT - 12.1.1.3 of CFC Resolution No. 986/03 determines that the AI:

[...] comprises examinations, analyses, evaluations, surveys and evidence, methodologically structured to assess the integrity, adequacy, effectiveness, efficiency and economy of processes, information systems and internal controls integrated into the environment and management of risks, with a view to assisting the entity's management in fulfilling its objectives (CFC, 2003. p. 3).

It should be noted that the audit has basic and secondary objects. The first would be those of the opinion of the reliability of the financial statements and even extra-accounting statements, and the second, relating to matters such as discovery of errors and fraud, information about internal control, economic-financial assistance and others (PINHEIRO; CUNHA, 2003). In this regard, the CFC determines that "the term fraud applies to the intentional act of omission and/or manipulation of transactions and operations, document tampering, records, reports, information and financial statements, both in physical and monetary (CFC, 2003, p. 4).

The term error "applies to an unintentional act of omission, inattention, ignorance or misinterpretation of facts in the preparation of records, information and financial statements, as well as the entity's transactions and operations, both in physical and monetary terms" (CFC, 2003, p. 4).

Having highlighted the main concepts related to the AI theme, the next session presents the methodology used in carrying out this research.

#### 3 METHODOLOGICAL CONTRIBUTION

This is a qualitative research, which according to Marconi and Lakatos (2010), emphasizes processes and meanings, having as a basic principle the interpretation of deeper aspects of the researched phenomena, with the providing more detailed analysis of investigations, attitudes and trends.

To reach the objective, the Systematic Literature Review was chosen (RSL), based on Kitchenham (2004), as it is a rigorous methodology, reliable, which allows reproduction and makes possible the identification, evaluation and interpretation of all relevant studies, in order to respond to a specific research topic.

The process comprises three steps: 1. Review planning, 2. Execution, and 3.

#### 4 ANALYSIS OF RESULTS

For the planning and development of this study, the following was formulated guiding question: What is the relevance of Internal Audit in the management of Do you agree with the research (theses and dissertations) developed in the last five years?

To answer this question, data were collected from a survey in the Theses and Dissertations Bank of the Coordination for the Improvement of Higher Education Personnel (CAPES), in the assessment area "Public Administration and Companies, Accounting Sciences and Tourism" and the great area of knowledge chosen was "Applied Social Sciences", and the search period used was from 2016 to 2020.

Also, the Brazilian Accounting Standards (NBC) were revised. The realization of research took place in November 2021.

Data were analyzed following the precepts of Discursive Textual Analysis by Moraes and Galiazzi (2007), who define it as a methodology for analyzing qualitative data, which allows new interpretations of the phenomena or researched speeches.

# **5 RESULTS AND DISCUSSION**

Following the established search criteria (Table 1), we found six hundred and seventy-five (675) works, of which forty-five (45) presented in the titles the keywords "Internal Audit", with forty Dissertations and four theses. The works were read carefully in order to identify the evidence the relevance of AI as a tool to support the management of organizations.

Table 1 briefly shows the analyzed database, the criteria for inclusion and the amount of theses and dissertations found.

Banks of Data researched	Inclusion criteria	Number of searches
Theses Bank and dissertations from CAPES	1. Keywords: Internal Audit; 2. Search period: 2016 to 2020; 3. Major Area of Knowledge: "Applied Social Sciences"; 4. Assessment Areas: "Public and Business Administration, Accounting Sciences and Tourism"; 5. Textsin Portuguese;  6. Reading the titles and abstracts of the research found to identifykeywords and select related research to the topic discussed.	41 Dissertations 4 Theses

Tables 2 and 3 show the relationships of the selected works, indicating the title of each research, authors, type Thesis (T) or Dissertation (D), defense date, Higher Education Institution (ES) in which it was carried out and the area of knowledge.

The analysis of the data with the ATD started with an in-depth and attentive reading of the texts followed by the rigorous application of the three phases indicated by the authors that advocated, namely: 1. Unitarization or deconstruction of the research corpus, characterized by the division of the text into units of analysis; 2. Categorization or grouping of units into categories and 3. Capturing the new emerging, constituted for the elaboration of a Metatext (MORAES and GALIAZZI, 2007).

In this study, the selected works were analyzed in compliance with the three phases mentioned above, which resulted in the construction of two categories: 1. Relevance for private organizations and 2. Relevance for public organizations.

The first category – "Relevance for private organizations, brings together the studies that address aspects that indicate the "objectivity" of AI in management as a tool capable of to boost the performance of companies, as shown in Table 2.

Table 2 - First Category of Analysis: Relevance for Private Organizations

	Title	Autor	Type year	IES
1	Relationship of Size, Expertise and Independence of the Audit Committee with Audit Quality	Bruna teixeira	D 2016 UFSCar -SC	Knowledge area C. Accounting
2	Applicability of the Audit to Evidence of Sustainability Practices in the Report. of Coop Management. Agroindustries in western PR	Marcia F. Rubber	D 2016 UFOPA - PR	ADM
3	Small and Medium Enterprises and Mandatory Disclosure: Effects of the adoption of IFRS, Audit and Indebtedness	Francesca N. Guanandy	D 2016 UFES - ES	C. Accounting
4	Audit Committee Characteristics and Performance Economics of Publicly Held Brazilian Companies	Wemerson G. Borges	D 2016 UFU-MG	C. Accounting
5	AI in an Org. Process Audit Approach, Collaborating in Business Decision Making	Sergio V. dos Santos Dias	D 2017 UERJ - RJ	C. Accounting
6	AI's Action Against Corruption: Institutional Logics and the Relationship with Org Strategies. financial	Anderson L. de Souza	D 2017 UNIP - SP	ADM
7	A Methodology for Estimating Audit Risk Based on Detection Software and Game Theory	Jose Felipe P. da Silva	D 2017 UFLA - MG	C. Accounting

8	8 Asymmetry of info. and audit quality: analysis of companies. listed in B³, in the preand post-convergence period to international standards	Tersio A. Junior	D 2018 UNB - DF	C. Accounting
9	Proposal for a Model for Measuring the Results of AI works	Vlademir V. Guedes	D 2018 UPM - SP	Accounting C
10	Analysis of the relationship between auditing, governance and financial performance	Naiara L. dos S. Sant Ana	T 2019 UFMG - BH	ADM
11	Background to the acceptance and adoption of continuous auditing by Internal auditors	Alexandre M.V. Birth	D 2019 PUC – SP	C. Accounting
12	A Theoretical Essay on Opportunities and Challenges for accountant she Auditorium	Sarah Vanin Giasson	D 2019 UNISINOS - RS	C. Accounting
13	Dems Audit Project Management Standards. Financial Services in the Light of Conc. PMO (Project Management Office)	Felipe H. Lopes Luiz	D 2019 UPM - SP	Accounting C
14	Big Data Analytics and the evolution of AI practices: a study on the antecedents of Tec acceptance and adoption. in the Brazilian private sector	Marcio K.	D 2020 USP - SP	C. Contábeis
15	Auditors and Auditees' Perception of AI Practices in an Emp. Basic Sanitation Service Provider	Celso T. Rodrigues	D 2020 UNIALFA - GO	ADM
16	Relationship between the main Audit issues and the Risks Published by Adm.	Francisco F. Diniz	D 2020 FECAP – SP	
17	Effects of Individual and Contextual Factors on the Quality of Audit Moderated by Emotional Intelligence	Cristiane A. S. Moura	D 2020 UFMS - MS	C. Accounting
18	Evolution of academic research on auditing in Brazil not period 1999 to 2018	Shirley Barthold	D 2020 UFU - MG	C. Accounting
19	Communities of Practice: Approaching Auditing and Management	Tiago Benetti	D 2020 URI - RS	ADM
20	Performance Indicators for AI with Business Principles Balanced Scorecard	Daniel Toller Janini	D 2020 UPM - SP	Accounting C.

Source: the authors (2020).

The second category of analysis, "Relevance of AI in the management of HEIs", (Table 3), groups theses and dissertations that deal with prudence in the performance of good AI practices applied in the management of HEIs with a view to achieving their objectives.

Table 3 - Second Category of Analysis: Relevance for Public Organizations

	Title	Author	Type Year	IES
	1 Public governance at the Federal University of			
	Sergipe: an angular analysis of the relationship	Patricia T. de	D 2016 UFS – PE	
1	between AI, University Council and top management	Araújo	Public	ADM
	The Management Challenges of Institutions' AI Units	Clovis John	D 2017 UFSCAR -	
2	Federals of ES	Schmitz	SC	ADM
		Rubens C.		
3	The Role of AI in Brazilian Federal Universities	Rodrigues	D 2017 UFC - CE	ADM
	The Role of AI in Public Governance: a study based	Douglas R.		
	on the view of the top management of Brazilian	Pine		
4	Federal Public Universities	Tille	T 2017 USCS - SP	ADM
	Risk Management in AI Planning and Monitoring of			
	Audit Recommendations in a Federal Institution of	Priscilla M.		
5	Higher Education	Chaves	D 2017 UFU - MG	ADM
	The Administrative-Operational Structure of a Fed	Arthur P.		
6	Institution AI. teaching: a case study	Brandão	D 2017 UFS-SE	ADM Public
	Balanced Scorecard as a Framework for the Activities	Giovana D. de		
	of Operational Audit in Federal Education Institutions	Lima		
7	Superior	Lilla	D 2018 UFLA - MG	ADM Public
	AI and Management: Case Study at a Federal	Leticia two P.		
8	University at Light of Institutional Theory	P. Days	D 2018 UFRGS - RS	ADM Public

	Innovation and Change in AI from the Federal	Marcius MF		
9	Institute of Education, Pernambuco's Science and Technology: The Contribution of Appreciative Inquiry	Aquinas	D 2018 UFRPE - ON	C. Accounting
7	From the Compliance Audit to the Performance Audit:		D 2016 OFREE - ON	
	an overview of federal public universities from 2008			C. Accounting
10	to 2016	Saulo G. Lins	D 2019 UBR - DF	3.1.1.1
	AI Units as an Assessment Instrument Organizational			
	Performance of the Federal Education Network			
	Professional, Scientific and Technological in the	Maria C. Grove		
11	Northeast Region	GB Matsumoto	D 2019 UFAL-AL	ADM Public
	Expectations Management in the IFRN AI Unit: a	Lawrence P.		
12	case study	Mary	D 2020 UFRN - RN	ADM Public
	The Effectiveness of AI Units in Federal Universities	Natalia G. de		
	Brazilian women: analysis of the perception of AI	Souza		C. Accounting
13	members and senior management	~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~	D 2020 UNB - DF	
	The Role of AI as an Auxiliary Governance	Luiz Eduardo		
1.4	Instrument Public in the Federal Institutions of Higher	C. Jenkins	D 2020 HEDD DD	C. Accounting
14	Education: a case study in a Federal Institute in Paraná		D 2020 UFPR - PR	
	Expectations Gaps of Managers and Internal Auditors			C A
15	in Relation to Performance Indicators at a University Federal Public	Emiss Dussti	T 2020 HESCR SC	C. Accounting
13	Operational Audit at the Audit Court of the State of	Erves Ducati	T 2020 UFSCR - SC	
	Santa Catarina: Current Practices and Prospects for	Roberto S.		
16	Advances	Fleichnab	D 2016 UDESC - SC	ADM
10	The Capacity of AI Activity in the Federal Executive	Leonardo L. C.	D 2010 CDESC SC	TIDIVI
17	Brazilian	Marine	D 2017 UFBA - BA	ADM
1,	Operational Audit using Activity-Based Management		B 2017 CIBIT BIT	710111
	- ABM: Study in a Military Organization of the	Sydney by M.	D 2017 UNISINOS -	C. Accounting
18	Brazilian army	Lisbon	RS	3.1111111111111111111111111111111111111
	Gamification as Strat. of Knowledge Sharing in AI	Raphael v.		
19	processes in the SENAI Test Laboratories	Silva	D 2018 UDESC - SC	ADM
	Accounting and AI in the Brazilian Public Sector:	Luciana D		
	perceptions of Public Accountants facing the	Luciane R. Brands		C. Accounting
20	convergence to the IPSAS/IFAC	Dianus	D 2019 FUCAPE - RJ	
	Essays on Legibility of Accountability and Reporting.	Olavo V.		
	of Auditing and its Impacts on the Accountability			C. Accounting
21	Process in the Public Sector in Brazil	syrups	T 2020 UNB - DF	
	Impact of artificial intelligence on audit activity:			
	equating bottlenecks in transfers from the union to	Sergio Tadeu	D 4040	
22	subnational entities	N. Carvalho	D 2020 FGV-RJ	ADM
	The king's adviser: the role of AI in the corporate	Volnei A. de	D 2017 EGY OB	ADM of
23	governance of banks in Brazil	Freitas	D 2016 FGV - SP	companies
24	The Relevance of AI in Corporate Governance in a	Joseph Luis R.	D 2017 EMIL CD	ADM
24	Mixed Economy Financial Institution	Junior	D 2017 FMU - SP	ADM of
25	Framework proposal for the use of Robotic Process Automation at AI of National Banks	Ana Paula C. T. Penna	D 2020 PUC – RJ	ADM of companies
23		the authors (202		companies

Source: the authors (2020).

After categorizing the data, the third phase of the analysis was carried out with the elaboration of a metatext, called by Moraes and Galiazzi (2007) as "capturing of the new emerging". It is a synthesis of the categorized data, in which the researcher attributes his/her new understanding of the researched phenomenon.

#### Metatext

The first category of analysis, "Relevance to private organizations", presents the grouping of twenty (20) researches, being nineteen (19) dissertations and one (1) thesis. These works aimed to answer the question: what are the relevant aspects identified in the performance of AI in private sector organizations?

Among the answers presented are: 1) the "expertise" and "independence" of the companies' audit committee, such as the factors that validate the quality of AI and its contribution to increasing confidence in financial statements (TEIXEIRA, 2016);

2) the contribution of audit procedures to "evidence" the actions and practices sustainability in the management reports of agroindustrial cooperatives (KUMM, 2016). 3) the "capacity to influence" assertive decisions of managers and users external, using the Process Audit approach (DIAS, 2017); 4) to contribution of AI, as a "control tool" aligned with the strategies institutional, to avoid the occurrence of corporate fraud and corruption to which organizations are subject, despite the establishment of specific rules against these practices (SOUZA, 2017); 5) "agility" in the collection, analysis and synthesis of large amounts of data originating from various sources (IGUMA, 2020); 6) the "orientation for risk control" as the quality of AI (RODRIGUES, 2020).

The second category "Relevance to public organizations" brought together twenty-five four (24) researches, three (3) theses and twenty-one (21) dissertations. These had as scope the investigation about the role of AI in strengthening processes governance within the scope of different public bodies. The results indicated the following factors: 1) The "ability to identify improvement points" model in the AI processes currently developed by the Federal Secretariat for Control Internal; 2) The "inspection" of the performance of the public sector, in the sense of increasing the citizens' trust in relation to those responsible for the management of public resources, in addition to promoting greater commitment on the part of the manager to the results of policies implemented public policies (FLEISCHMANN, 2016); 3) The ability to contribute to solutions for public accounting in the sense of "communication of information reliable" to the most diverse stakeholders. However, in the opinion of accountants working in the public sector, there needs to be greater investment in training, greater interest of top management with the reduction of political pressures and greater cultural adaptation of the bodies against the application of the Brazilian Accounting Standards Applied to the Sector (NBCASP) and the Accounting Manual Applied to the Public Sector (MARKS, 2019).

In addition, aspects were identified that demonstrate the relevance of the of AI in the strategic and risk management of Brazilian public universities, such as: 1) The Improved "interaction" with the university council and the administrative top, in the implementation of the guidelines that govern public governance (ARAÚJO, 2016). 2) The adequate "training" for institutional risk management policy with good staff, computerized systems and the support of the leaders are proposed as actions of strengthening of AI units as outlets to overcome managerial challenges and make an efficient and effective management tool in the "fight against wasted resources", formal failures and, ultimately, corruption (SCHMITZ, 2017); 3) The

"Controls Management" with an operational focus of advice and guidance to managers, monitoring the implementation of recommendations from the control bodies internal/external and issuance of reports promoting "active transparency" on the part of the unit (RODRIQUES, 2017); and 4) " Compliance assessments" and "compliance assessments" performance" in the performance of the manager as it reaches maturity, becoming more efficient in their decisions.

Finally, the second category included aspects about the role of AI as a mechanism for evaluating policies, procedures and processes based on the operational environment of public financial organizations. Among the main factors presented are: 1. The potential of AI as an "input generating mechanism for decision-making", linked to the Corporate Governance System (SGC) of institutions companies operating in Brazil, in addition to "monitoring" their performance in the complex banking operating environment (FREITAS, 2016); 2. The "support for reaching the purposes" of corporate governance in mixed capital financial institutions (REZENDE JÚNIOR, 2017); 3. The possibility of implementing "robotic automation"

of processes in the AI of Brazilian banks (PENA, 2020); and 4. The "effectiveness in performance" of AI with the application of the Balanced Scorecard principles, in the "improvement of the governance process" and assistance to top management in achieving the strategic purposes, using didactic material for the development of Indicators of Performance in Public Financial Institutions (JANINI, 2020).

# **5 FINAL CONSIDERATIONS**

In order to identify the relevance of AI as a management tool in different types of organizations, a systematic review of the literature was carried out in the Database of CAPES Theses and Dissertations, in order to collect data about the postgraduate research, at the stricto sensu level, carried out in the last five years, in the assessment area "Public and Business Administration, Accounting Sciences and Tourism" and in the broad area of knowledge "Applied Social Sciences". The search resulted in selection of 45 studies, whose titles and abstracts contained the keywords "Audit Internal".

The data were analyzed in the light of the ATD, which gave rise to the construction of two analysis categories, which revealed aspects that validate the relevance of AI in public and private organizations.

Evidence of the relevance of AI in business organizations was identified, which concern their applicability in the disclosure of practices of sustainability in the management of cooperatives, its performance driving of Brazilian Publicly Traded Companies and, consequently, in attracting of investors. In addition, its decisive support in making strategic decisions, its action in the fight against corruption, the reduction or elimination of risk with the use of detection software and the reduction of agency conflicts caused by the asymmetry of information.

In public sector organizations, although there is a need for greater investments in training accountants, the reduction of political pressures and better adaptation of bodies in the application of NBC and MCA applied to the public sector, AI is extremely relevant due to factors such as: its practices as an supervisory authority, the increase of confidence on the part of society in the management of public,

promoting greater manager commitment, fighting corruption and promoting greater responsibility in the management of public resources.

In view of the results presented, it is considered extremely important to implementation and maintenance of AI in public and private organizations, taking into account the countless demands or pressures they are exposed to in order to achieve their objectives, the current demands for reliable implementation of the guidelines that govern the public governance, efficient and effective management in overcoming managerial challenges, as well as as, in the fight against the waste of resources, the formal failures, the corruption and the promoting transparency.

Regarding the limitations of the research, although a result was obtained expressive of the way it was performed, it is worth noting the impossibility of perform the search in other databases, as well as in other areas of evaluation, there is view that would require more time and effort, however, would allow a vision expanded the relevance of the topic.

In this way, it is suggested the development of new researches in other bases data, in other areas of evaluation and knowledge, with a view to identifying of new factors that further encourage the emergence of this theme, considering the need for increasingly transparent and ethical action by different organizations established in Brazil.

#### REFERENCES

ASSI, Mark. Internal controls and organizational culture: how to consolidate trust in business management. Saint Paul, 2020.

AQUINO, MMF Innovation and change in the internal audit of the Federal Institute of Education, Science and Technology of Pernambuco: the contribution of appreciative

research. 2018 125 f. (Master's in Controllership) Federal Rural University of Pernambuco. 2018

ARAUJO, PT Public governance at the Federal University of Sergipe: an angular analysis of the relationship between Internal Audit, University Council and senior management. 2016 75 f. (Professional Master's in Public Administration in National Network)

- Federal University of Sergipe Foundation - SE. 2016

BARTHOLD, S. Evolution of academic research on auditing in Brazil from 1999 to 2018. 2020 139 f. (Master in Accounting Sciences) – Federal University of Uberlândia, Uberlândia-MG. 2020

BENETTI, T. Communities of Practice: Approaching internal auditing and management.

2020 83 f. (Professional Master's in Strategic Management of Organizations) – Integrated Regional University of Alto Uruguai and Missões, Santo Ângelo.

BORGES, WG Audit committee characteristics and the economic performance of publicly traded Brazilian companies. 2016 78 f. (Master in Accounting Sciences) - Federal University of Uberlândia – Uberlândia-MG. 2016)

BRANDAO, AP The administrative-operational structure of an internal audit of a federal educational institution: a case study. 2017 202 f. (Professional Master's in Public Administration in National Network) – Federal University of Sergipe Foundation, Sergipe-AL. 2017.

BRAZIL, Catalog of Theses and Dissertations of the Higher Level Improvement Personal httpso:f//cataloCgooodredteinsaetsi.ocnap—eCs.AgoPvE.bSr./catalogo-teses/#!/. AccesAsveadilaobnl:e in 15 Nov. 2021.

CALDAS, OV Essays on legibility of rendering of accounts and audit reports and their impacts on the accountability process in the public sector in Brazil.

2020 79 f. (Doctorate in Accounting Sciences) – University of Brasília, Brasília-DF. 2020

CARVALHO, STN Impact of artificial intelligence on audit activity: equating bottlenecks in transfers from the union to subnational entities. 2020 114 f.

(Professional Master's in Administration) – Fundação Getúlio Vargas, Rio de Janeiro RJ. 2020

CHAVES, PM Risk management in internal audit planning and monitoring of audit recommendations in a federal institution of University education. 2018 117 f. (Professional Master in Organizational Management) – Federal University of Uberlândia, Uberlândia-MG. 2018

DIAS, LPP Internal audit and management: a case study in a federal university in the light of institutional theory. 2018 119 f. (Professional Master's in Public Administration in National Network) – Federal University of Rio Grande, Rio Grande-RS.

FEDERAL ACCOUNTING COUNCIL - CFC Resolution No. 781/95. Provides for NBC PI 01 Professional Standards of the Internal Auditor, of March 24, 1995.

Brasilia, 1995.

FEDERAL ACCOUNTING COUNCIL - CFC Resolution No. 953/03. Provides for the change in the opinion model referred to in item 11.3. 2.3 of NBC T11–standards for independent auditing of financial statements. Brasilia: CFC, 2003.

CREPALDI, SA; CREPALDI, GS Accounting audit. Gen Group - Atlas, 2016.

DIAS, SVS Internal audit in an organizational process audit approach, collaborating in companies' decision making. 2017 73 f.

(Master in Accounting Sciences) – State University of Rio de Janeiro, Rio de Janeiro-RJ. 2017.

DINIZ, FF Relationship between the main audit issues and the risks disclosed by management. 2020 95 f. (Master in Accounting Sciences) – FECAP University Center, São Paulo-SP. 2020

DUCATI, E. Expectations Gaps of managers and internal auditors in relation to performance indicators in a federal public university. 2020 181 f.

(Doctorate in Accounting) – Federal University of Santa Catarina, Florianópolis SC. 2020

FLORENTINO, AM Accounting Audit, 5th ed. Rio de Janeiro: Publisher Fundação Getúlio Vargas, 1988.

FREITAS, VA The king's advisor: the role of internal auditing in the corporate governance of banks in Brazil. 2016 89 f. (Professional Master's in Business Administration) Fundação Getúlio Vargas, São Paulo-SP. 2016

FLEISCHMANN, RS Operational audit at the Court of Auditors of the State of Santa Catarina: current practices and prospects for progress. 2016 248 f. Dissertation (Professional Master's in Business Administration) – Santa Catarina State University, Florianópolis-SC, 2016.

GUANANDY, FN Small and medium-sized companies and mandatory disclosure: effects of IFRS adoption, auditing and indebtedness. 2016 97 f. Dissertation (Master in Accounting Sciences) – Federal University of Espírito Santo, Vitória-ES, 2016.

GIASSON, S V. Blockhain: a theoretical study on the opportunities and challenges for accounting and auditing. 2019 50 f. Dissertation (Master in Accounting Sciences)

University of Vale do Rio dos Sinos, Porto Alegre-RS, 2019.

GUEDES, VV Proposal for a model for measuring the results of internal audit work.

2018 73 f. Dissertation (Professional Master's in Controllership and Corporate Finance)

Universidade Presbiteriana Mackenzie, São Paulo-SP, 2018.

FRENCH INSTITUTE FOR INTERNAL AUDIT AND CONTROL - IFACI. 2005.

In. ALLEGRINI, M.; D'ONZA, G.; PAAPE, L.; MELVILLE, R.; SARENS, G. The European

literature review on internal auditing. Managerial Auditing Journal, v. 21, n. 8, p. 845 – 853, 2006.

BRAZILIAN INSTITUTE OF ACCOUNTANTS. Auditing: records of a profession. São Paulo: Ipsis Gráfica e Editora, 2007.

IGUMA, MK Big Data Analytics and the evolution of internal audit practices: a study on the antecedents of technology acceptance and adoption in the Brazilian private sector. 2020 173 f. Dissertation (Master's in Controllership and Accounting) – University of São Paulo, São Paulo-SP, 2020.

JANINI, DT Performance Indicators for Internal Audit with Balanced Scorecard Principles. 2020 76 f. (Professional Master's in Controllership and Corporate Finance)

Mackenzie Presbyterian University, São Paulo-SP. 2020

JENKINS, LEC The role of internal auditing as an auxiliary instrument for public governance in federal institutions of higher education: a case study in a federal institute in Paraná. 2020 99 f. Dissertation (Master's in Accounting)

Federal University of Paraná, Curitiba-PR, 2020.

JUNIOR, TA Information asymmetry and audit quality: analysis of companies listed in B<sup>3</sup>, in the pre and post-convergence period to international standards. 2018 128

f. (Master in Accounting Sciences) University of Brasília, Brasília-DF. 2018

KUMM, FM Applicability of the audit to evidence sustainability practices in the management reports of agroindustrial cooperatives in western Paraná. 2016 163 f. (Professional Master's in Administration) State University of West Paraná, Cascavel-PR. 2016

LIMA, GD Balanced scorecard as a framework for performance auditing activities in federal higher education institutions. 2018 117 f. Dissertation (Professional Master in Public Administration) - Federal University of Lavras, Lavras-MG, 2018.

LINS, SG From compliance auditing to performance auditing: an overview of federal public universities from 2008 to 2016. 2019 136 f. (Master in Accounting Sciences) – University of Brasília, Brasília-DF. 2019

LISBOA, SM Operational Audit using Activity-Based Management – ABM: Study in a Military Organization of the Brazilian Army. 2017 148 f.

Dissertation (Master in Accounting Sciences) – University of Vale do Rio dos Sinos, Porto Alegre-RS, 2017.

LUZ, FH LS. Project Management Standards for Auditing Financial Statements in the Light of PMO (Project Management Office) Concepts. 2019 95 f. Dissertation (Professional Master's in Controllership and Corporate Finance) – Universidade Presbiteriana Mackenizie, São Paulo-SP, 2019.

MAIA, T. The responsibility of external audits in financial scandals. Magazine Eduicep, São José, v. 1, no. 1, p. 14-32, 2016.

MARIZ, LP Management of expectations in the IFRN internal audit unit: a case study.

2020 155 f. Dissertation (Professional Master in Public Management) – Federal University of Rio Grande do Norte, Natal-RN, 2020.

MARINHO, LLC The Capacity of Internal Audit Activity in the Brazilian Federal Executive. 2017 116 f. Dissertation (Professional Master's in Business Administration)

Federal University of Bahia, Salvador-BA, 2017.

MARQUES, LR Accounting and internal auditing in the Brazilian public sector: perception of public accountants in the face of convergence to IPSAS/IFAC. 2019 97

f. Dissertation (Professional Master in Accounting Sciences) FUCAPE Research and Teaching Limited, Rio de Janeiro-RJ, 2019.

MATSUMOTO, MCSGB Internal audit units as an instrument for evaluating organizational performance of the federal network of professional, scientific and technological education in the northeast region. 2019 140 f. (Professional Master's in

Public Administration in National Network) – Federal University of Alagoas, Alagoas AL. 2019

MONTOTO, Eugenio. General and advanced accounting schematized. Saraiva Educação SA, 2018.

MORAES, Roque; GALIAZZI, Maria do Carmo. Discursive textual analysis. UNIJUÍ: 2007.

# MOREIRA, FS; FIRMINO, JE; SANTOS, AR; SILVA, JDG; SILVA, MC

Audit quality in Brazil: a study of the judgment of independent auditors in the adherence of the adjustment to present value in construction and engineering companies listed on the BM&F-BOVESPA. Society, Accounting and Management, Rio de Janeiro, v. 10, no. 1, p. 63-80, 2015.

MOURA, CAS Effects of individual and contextual factors on audit quality moderated by emotional intelligence. 2020 127 f. (Master's in Accounting Sciences) Federal University of Mato Grosso do Sul Foundation, Campo Grande-RS. 2020

NARDI, PCC; ORSI, LE; BORGES, VP; SILVA, RLM Influence of practices discretionary accounting in the audit fee. Focus Accounting Reflection, Maringá, v.37, n. 3, p. 55-72, Sept./Dec. 2018

NASCIMENTO, AMV Background to the acceptance and adoption of continuous auditing by internal auditors. 2019 107 f. (Professional Master's in Accounting,

Controllership and Finance) – Pontifical Catholic University of São Paulo, São Paulo SP. 2019

PENNA, APCT Framework proposal for the use of Robotic Process Automation in the Internal Audit of National Banks. 2020 102 f. (Professional Master's in Business Administration) – Pontifical Catholic University of Rio de Janeiro-RJ. 2020

PINHEIRO, DR The performance of internal auditing in public governance: a study based on the view of the top management of Brazilian federal public universities. 2017 259 f. Thesis (Doctorate in Business Administration) – Municipal University of São Caetano do Sul, São Caetano do Sul-SP, 2017.

PINHEIRO, GJ; CUNHA, LRS The importance of auditing in fraud detection.

Accounting Vista & Magazine, Minas Gerais, v. 14, no. 1, p. 31-47, Apr. 2003.

Available at:< https://www.redalyc.org/pdf/1970/197018217003.pdf>. Accessed on: 31 May. 2021.

REZENDE JUNIOR, JL The relevance of internal auditing in corporate governance in a mixed capital financial institution. 2017 126 f. (Professional Master's in Corporate Governance) – University Center of Faculdades Metropolitanas Unidas, São Paulo-SP.

2017.

RODRIGUES, CT Perception of auditors and auditees on internal audit practices in a company providing basic sanitation services. 2020 110 f. Dissertation (Professional Master's in Business Administration) Centro Universitário Alves Faria, Goiânia-GO, 2020.

RODRIGUES, RC The performance of internal auditing in Brazilian federal universities. 2017 177 f. Dissertation (Professional Master's in Administration and Controllership) – Federal University of Ceará, Fortaleza-CE, 2017.

ROSE, G; MOREIRA, J.Q; HARANO, FT Internal audit assisting the management process.

Revista Eletrônica Organizações e Sociedade, Minas Gerais, v. 7, no. 8, p. 134- 146, jan./dez. 2018.

SANTANA, NLS Analysis of the relationship between auditing, governance and financial performance. 2019 248 f. (Doctorate in Administration). Federal University of Minas Gerais, Belo Horizonte-MG. 2019

SCHMITZ, JC The management challenges of internal audit units in federal higher education institutions. 2017 160 f. Dissertation (Professional Master's in University Administration) – Federal University of Santa Catarina, Florianópolis-SC, 2017.

SILVA, JFP A Methodology for Estimating Audit Risk Based on Detection Software and Game Theory. 2017 80 f. (Master in Accounting Sciences) – Federal University of Pernambuco, Recife-PE. 2017.

SILVA, RV Gamification as a knowledge sharing strategy in internal audit processes at SENAI Test Laboratories. 2018 140 f. (Professional Master's in Administration) – Santa Catarina State University, Florianópolis-SC. 2018

SILVEIRA, GC Norms, procedures and auditing techniques of the secretary of state of the farm – Santa Catarina. Monography. 2004 70 f. (Bachelor of Science in Accounting) – Federal University of Santa Catarina. Santa Catarina, 2004.

SOUZA, AL The action of internal audit against corruption: institutional logics and the relationship with the strategies of the financial organization. 2017 88 f. (Master in Business Administration) – Universidade Paulista - UNIP, São Paulo-SP. 2017.

SOUSA, NG The effectiveness of internal audit units in Brazilian federal universities: analysis of the perception of internal audit members and senior management. 2020 94 f. (Master in Accounting Sciences) – University of Brasília, Brasília-DF. 2020

TEIXEIRA, B. Relation between the size, expertise and independence of the audit committee and the quality of the independent audit. 2016 81 f. (Master in Accounting)

University of Santa Catarina, Florianópolis-SC. 2016

TIRLONI, AP Accounting as a Control Tool for micro and small companies. Trevisan Magazine, v. 18, no. 173, p. 26 to 37, 2020.