

## A BIBLIOMETRIC ANALYSIS OF THE THESES ON INTERNAL AUDIT AND INTERNAL CONTROL IN TÜRKİYE

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### ABSTRACT

*Internal audit and internal control are fundamental to ensuring the efficiency, accountability, and sustainability of organizations, especially in the context of growing complexities in global business environments. These mechanisms play a pivotal role in risk management, compliance, and the achievement of organizational objectives, making them indispensable for modern governance and performance enhancement. Despite their importance, academic research combining these topics remains underexplored in Türkiye. This study undertakes a bibliometric analysis of graduate theses addressing internal audit and internal control in Türkiye, as indexed by the National Thesis Center of the Council of Higher Education. The analysis evaluates key parameters, including thesis type, language, year of publication, university affiliation, research methods, and study focus. The findings reveal that most theses were master's level, written in Turkish, and primarily conducted at public universities, with a notable concentration in business administration. Quantitative methods were the most commonly employed research approach. This study underscores the limited academic focus on integrating internal audit and internal control, despite their growing relevance in contemporary organizational contexts. By mapping existing academic contributions, it provides a valuable reference for future studies, offering insights into trends and highlighting the need for expanded scholarly attention in this critical area of accounting and governance.*

**Keywords:** *Internal Audit, Internal Control, Bibliometric Analysis, Accounting Research.*

### 1. INTRODUCTION

Businesses and organizations operate in environments defined by increasingly complex and dynamic challenges. As they strive to achieve their strategic goals, compliance with established rules, regulations, and principles becomes imperative (Nadler & Tushman, 1999). The audit function, whether driven by internal demands or legal requirements, plays a pivotal role in evaluating adherence to these frameworks, assessing progress toward objectives, and identifying disruptions or deficiencies (Usul, 2023). Consequently, audits serve as a cornerstone for ensuring operational continuity and providing a mechanism for organizational improvement. Among the various forms of auditing, internal audit and internal control stand out as critical mechanisms for enhancing the effectiveness, accountability, and sustainability of organizations (Savčuk, 2007).

The concepts of internal audit and internal control have evolved considerably, adapting to the demands of modern organizations and globalized markets. Internal control is often described as a process initiated by management to ensure reasonable assurance of achieving organizational goals. It encompasses a combination of procedural, structural, and cultural mechanisms aimed at mitigating risks and monitoring financial and operational activities (Bame-Aldred et al., 2013). On the other hand, internal audit focuses on evaluating the effectiveness of the internal control systems, ensuring their alignment with organizational objectives, and providing impartial, evidence-based feedback to senior management. While both concepts are interrelated, they serve distinct yet complementary purposes within an organization (Roussy & Perron, 2018).

In today's interconnected and competitive global economy, the importance of internal audit and

internal control has been amplified. Risk management has become more complex, with organizations facing a multitude of challenges, including technological disruptions, regulatory pressures, and evolving stakeholder expectations. Internal audit functions have transitioned from their traditional roles as compliance and reporting units to more dynamic roles that support strategic decision-making (Kapıcı, 2023). Similarly, internal control systems have expanded beyond basic operational checks to integrate broader organizational aspects, such as behavioral factors and cultural alignment. These developments underline the necessity of robust internal audit and internal control frameworks in ensuring organizational resilience and adaptability (Lustrilanang et al., 2023).

The relevance of internal audit and internal control is further highlighted by their role in fostering transparency, accountability, and ethical governance. As organizations navigate challenges such as fraud, financial mismanagement, and reputational risks, these mechanisms provide a structured approach to identifying vulnerabilities and implementing corrective actions (Usul & Alpay, 2024). For instance, internal control systems establish a foundation for maintaining data integrity, safeguarding assets, and ensuring compliance with legal and regulatory standards. Meanwhile, internal audits offer organizations the tools to assess their preparedness in addressing risks and align their operations with strategic objectives. Together, these mechanisms contribute to building trust among stakeholders, including investors, employees, and customers (Spira & Page, 2003).

Despite their critical importance, academic engagement with the topics of internal audit and internal control remains limited, particularly in Türkiye. While international studies have increasingly focused on these areas, examining their impact on organizational performance and governance, there is a noticeable gap in the Turkish context. The lack of comprehensive research that addresses internal audit and internal control jointly points to a missed opportunity to explore their interconnectedness and collective impact on organizational success (Behrend & Eulerich, 2019).

This is especially significant given the growing role of these mechanisms in public and private sector organizations across Türkiye, where economic and regulatory landscapes are undergoing rapid transformation.

Internal audit and internal control are indispensable tools for modern organizations, enabling them to navigate uncertainties, optimize resources, and achieve strategic objectives. Despite their significance, the academic exploration of these topics, particularly in the Turkish context, remains limited. Hence, this study seeks to address this gap by providing a comprehensive bibliometric analysis of graduate theses on internal audit and internal control in Türkiye. By highlighting current trends, identifying gaps, and proposing future directions, this research aims to advance both academic and practical understanding of these critical governance mechanisms.

## 2. LITERATURE REVIEW

Internal audit and internal control are pivotal concepts in the governance and management of organizations. They serve as mechanisms to ensure the alignment of organizational activities with predefined objectives while mitigating risks and promoting accountability (Kutateladze et al., 2020). The intertwined relationship between these concepts has been the subject of numerous academic inquiries worldwide.

A review of the literature reveals several emerging themes in internal audit and internal control research. First, there is a growing recognition of the importance of integrating these functions with broader organizational processes, such as risk management, fraud prevention, and governance. Second, the evolving role of technology is reshaping traditional audit and control practices, offering both opportunities and challenges. Third, human and behavioral factors are increasingly acknowledged as critical components of effective internal control systems.

This section reviews key studies that have addressed internal audit, internal control, and their interaction, providing insights into their significance, methodologies, and findings, with particular

emphasis on their relevance to accountability, risk management, and organizational performance.

Accountability is a cornerstone of effective governance, and the roles of internal audit and internal control in achieving this have been widely recognized. Sari et al. (2017) investigated the effects of internal audit and internal control on the accountability of public service universities in Indonesia. The study, conducted with 90 participants involved in financial management, found that internal control significantly improved accountability, while internal audit did not exhibit a measurable impact. The findings suggest that internal control provides a structured approach to oversight and risk mitigation, whereas the role of internal audit may depend on the organization's specific operational context and maturity level. The study's methodology, employing regression analysis and the WarpPLS application, highlights the importance of robust analytical frameworks in understanding these relationships. However, it also raises questions about the extent to which internal audits are integrated into broader governance structures. Further research could examine whether factors such as audit quality, auditor competence, or organizational culture influence the effectiveness of internal audits in fostering accountability.

Risk management is an essential aspect of organizational sustainability, and its integration with internal audit and internal control has garnered significant academic interest. Özkardeş (2017) explored the relationship between these elements through content analysis of activity reports from companies listed on the BIST KURY Index. The findings indicated a linear correlation between the importance organizations place on risk management and their approaches to internal audit and control. Companies that prioritize risk management were found to allocate more resources to these areas, suggesting a synergistic relationship between risk awareness and governance mechanisms. This study underscores the need for a comprehensive approach to risk management, where internal control systems provide the foundational structure and internal audits ensure the efficacy of those systems. The findings align with global trends emphasizing risk-

based internal auditing (RBIA), which prioritizes audits of high-risk areas. Future research could build on these insights by investigating how technological advancements, such as predictive analytics and artificial intelligence, are transforming the integration of risk management with internal audit and control functions.

The effectiveness of internal control is often linked to the characteristics and competencies of the internal audit function. Oussii and Taktak (2018) examined this relationship using data from 59 chief audit executives in public companies in Tunisia. Their regression analysis revealed that internal control quality was significantly and positively associated with the competence of the internal audit function (IAF), the quality assurance level of internal audits, the follow-up process, and the involvement of audit committees in reviewing internal audit programs and results. This study highlights the importance of human and organizational factors in enhancing the effectiveness of internal control systems. For instance, the competency of internal auditors, their training, and the extent of their independence significantly influence their ability to identify and address weaknesses in internal controls. Moreover, the active involvement of audit committees ensures that findings from internal audits are translated into actionable improvements. These findings could serve as a basis for developing training programs and policy guidelines to strengthen internal audit functions.

The role of information systems in internal audit and control has become increasingly prominent, as evidenced by studies examining their intersection with organizational processes. Yusuf and Kanji (2020) analyzed the impact of internal audit and accounting information systems (AIS) on internal control effectiveness in an automotive trading company in Indonesia. Their findings demonstrated a positive and significant relationship between AIS and internal control, underscoring the importance of integrating technology into governance frameworks.

The study raises intriguing questions about the evolving role of technology in auditing and control. With the advent of big data, cloud computing, and

blockchain, internal audits and controls are no longer confined to traditional manual methods. Instead, they now leverage advanced tools to provide real-time insights, enhance transparency, and improve decision-making processes. Future studies could explore how emerging technologies are reshaping the boundaries of internal audit and control, including their implications for auditor skillsets and organizational structures.

Focusing on Türkiye, Karavardar and Şahintürk (2020) conducted a detailed examination of academic studies on internal audit and internal control between 2009 and 2019. They analyzed 95 articles, 284 theses, and 14 books, identifying 2019 as the year with the highest research output. The study also highlighted that most publications focused on business administration and were associated with specific universities. These findings reveal an emerging interest in internal audit and control within Turkish academia, although the scope remains limited compared to global trends. The dominance of business administration as a research focus suggests that these topics are primarily viewed through the lens of organizational management rather than as interdisciplinary subjects encompassing fields such as psychology, sociology, or technology. Expanding the scope of research to include these perspectives could enrich the understanding of internal audit and control in Türkiye.

Fraud prevention is one of the most critical applications of internal audit and control systems. Handoyo and Bayunitri (2021) investigated this relationship in PT Pos Indonesia (Persero) Bandung, using a verification method with a sample of 91 employees. Their findings confirmed that internal audit and internal control significantly contribute to fraud prevention, emphasizing their role in safeguarding organizational assets and maintaining integrity. The study's emphasis on fraud prevention aligns with global concerns about financial misconduct and the erosion of stakeholder trust. However, the findings also highlight the need for continuous improvement in these areas. For instance, organizations could adopt advanced fraud detection tools, such as machine learning algorithms,

and combine them with traditional audit and control measures to enhance their effectiveness.

The objective of the research conducted by Savlı and Akın (2021) was to ascertain the extent to which businesses operating within the Antalya Organized Industrial Zone effectively implement internal control and internal audit procedures. This was achieved through the utilisation of a survey methodology. The findings of the research indicate that the majority of the 118 businesses that participated in the study are aware of the significance of internal control and internal audit in accounting and auditing practices. The results suggest that businesses should accord greater importance to internal audit and internal control.

In his research, Koç (2022) seeks to elucidate the interrelationship between internal control structures and internal audits, with a particular focus on the evolution of internal audit structures in general. The study provides a comprehensive analysis of internal audit and offers insights into its future direction, which could inform future research in this field.

Internal control and audit are not solely technical functions but also involve significant human and behavioral elements. Abdo et al. (2022) explored the impact of emotional intelligence (EI) on the perceived effectiveness of internal control in Lebanese companies. Their findings demonstrated that the personality traits of audit team members play a crucial role in creating a conducive control climate. This insight shifts the narrative from a purely procedural view of internal control to one that acknowledges the importance of organizational psychology and behavior. This study provides a compelling case for incorporating soft skills into auditor training programs. Emotional intelligence, teamwork, and communication skills are essential for fostering a collaborative and effective control environment. Further research could delve deeper into the interplay between organizational culture and the efficacy of internal control and audit systems.

The dynamic nature of internal audit and control necessitates continuous evolution in research and practice. Hasanah et al. (2024) examined how internal audit, risk assessment, and AIS influence the

effectiveness of receivables collection in an Indonesian company. Their findings suggested that accounting information systems negatively impacted receivables collection, highlighting potential challenges in aligning technological solutions with organizational processes. This study underscores the need for a nuanced approach to integrating technology into internal control and audit functions. While technology offers numerous advantages, its implementation must be tailored to the specific needs and capabilities of the organization. Future research could explore how organizations can balance technological advancements with traditional audit and control practices to achieve optimal outcomes.

Despite these advancements, significant gaps remain. For instance, there is limited research on the interaction between internal audit and control in non-traditional contexts, such as small and medium-sized enterprises (SMEs) or non-profit organizations. Similarly, the impact of cultural and regulatory differences on the implementation of internal audit and control systems remains underexplored. Addressing these gaps could provide a more comprehensive understanding of these functions and their role in organizational success. As briefly discussed, the literature on internal audit and internal control highlights their critical role in promoting accountability, managing risks, and enhancing organizational performance. While significant progress has been made in understanding these concepts, there is a need for more interdisciplinary and context-specific research. This study aims to contribute to this growing body of knowledge by examining the intersection of internal audit and internal control in Türkiye, providing valuable insights for both academia and practice.

### 3. METHOD OF THE RESEARCH

The primary objective of this study is to perform a comprehensive bibliometric analysis of postgraduate theses in Türkiye that address the topics of internal audit and internal control within the same title. This analysis aims to provide valuable insights into the academic treatment of these critical subjects and to contribute to the broader field of

accounting and governance. By identifying trends and patterns in the academic output, the study seeks to guide future research and inform educational and professional practices.

The research utilized the database of the National Thesis Center of the Council of Higher Education in Türkiye. This database, which serves as a centralized repository of graduate theses, was accessed on October 2, 2024. To identify relevant studies, the keywords “**internal audit**” and “**internal control**” were entered together in the search bar, using the “**thesis title**” field as the search criterion. This approach ensured that the analysis focused exclusively on theses explicitly addressing both concepts in their titles.

The decision to rely on this database was driven by its comprehensiveness and reliability as an authoritative source for academic theses in Türkiye. However, it is acknowledged that this approach may exclude studies where these topics were discussed without being explicitly mentioned in the title or were explored as secondary themes. Future research could expand on this by considering broader keyword searches or incorporating other academic outputs, such as journal articles or conference proceedings.

To conduct a systematic analysis, the following parameters were selected:

1. **Type of Thesis:** The classification of the theses as either master's or doctoral was examined to understand the level of academic engagement with these topics.
2. **Language of Thesis:** The language in which the theses were written (Turkish or English) was recorded to evaluate the accessibility and potential international reach of the research.
3. **Year of Publication:** The temporal distribution of theses was analyzed to identify trends and shifts in research interest over time.
4. **University of Publication:** The institutions where the theses were produced were analyzed to identify academic hubs and contributors to these fields.

5. **Status of Universities:** A distinction was made between public and private universities to assess differences in research output and focus.
6. **Title of Thesis Supervisor:** The academic rank of the thesis supervisors (e.g., Assistant Professor, Associate Professor, Professor) was examined to understand the level of expertise guiding the research.
7. **Subject of Thesis:** The disciplinary focus of the theses, such as business administration or public administration, was analyzed to identify dominant thematic areas.
8. **Research Methods:** The methodologies employed in the theses (e.g., qualitative, quantitative, compilation, or model building) were categorized to provide insights into the prevailing research approaches.

Two primary analytical methods were employed in this study:

1. **Descriptive Analysis:** Percentage and frequency analyses were used to quantify the distribution of theses across the selected parameters. This method allowed for a straightforward representation of the data, highlighting key trends and patterns.
2. **Content Analysis:** To complement the descriptive analysis, a content analysis method was applied. This approach enabled the interpretation of the underlying themes and contexts of the theses, providing a richer understanding of the research landscape. Content analysis involved categorizing and interpreting the data to draw inferences about the focus areas and contributions of the theses.

The chosen bibliometric approach offers a robust framework for analyzing academic trends in internal audit and internal control research. By focusing on specific parameters, the study provides a multidimensional view of the research landscape, encompassing institutional, methodological, and thematic aspects. The combination of descriptive and content analysis ensures both quantitative and

qualitative insights, making the findings relevant for academia, policymakers, and practitioners.

However, it is important to note certain limitations inherent in this methodology. The reliance on a single database means that the findings are specific to the theses indexed by the National Thesis Center and may not fully capture the diversity of research on internal audit and internal control in Türkiye. Moreover, the focus on titles as the primary search criterion may exclude studies where these topics are discussed implicitly.

This methodological approach is expected to yield valuable insights into the state of academic research on internal audit and internal control in Türkiye. By identifying trends, gaps, and opportunities, the study provides a foundation for future research and encourages greater academic engagement with these topics. Additionally, the findings can inform educational policies and curricula, ensuring that emerging professionals in accounting and governance are equipped with the knowledge and skills necessary to address these critical areas.

#### 4. ANALYSIS AND DISCUSSION OF RESULTS

This section presents and discusses the findings from the bibliometric analysis of postgraduate theses in Türkiye that address the topics of internal audit and internal control. By examining the data through various parameters, the study sheds light on trends, gaps, and opportunities in academic research. Each table is analyzed in detail, with significant findings highlighted and their implications discussed comprehensively.

As seen in Table 1, the majority of theses addressing internal audit and internal control are master's level (10 out of 12), with doctoral-level research comprising a much smaller share (2 out of 12). This distribution suggests that while internal audit and internal control are recognized as important topics in postgraduate education, they may not yet be a focal point for advanced academic research at the doctoral level in Türkiye. This imbalance could be due to the nascent stage of these topics in Turkish academia or a lack of specialization opportunities at the doctoral level.

**Table 1.** Distribution of Thesis Types

Thesis Type	Frequency	Percentage
Master's Thesis	10	83.3%
Doctoral Thesis	2	16.7%
<b>Total</b>	<b>12</b>	<b>100.0%</b>

This finding underscores the need to encourage doctoral-level research to explore these topics in greater depth, contributing to theory development and advanced practical applications. Universities and funding agencies could incentivize research in these areas through scholarships, grants, and dedicated doctoral programs.

**Table 2.** Distribution of Theses by Language

Thesis Type	Turkish	English	Total
Master's Thesis	10	0	10
Doctoral Thesis	1	1	2
<b>Total</b>	<b>11</b>	<b>1</b>	<b>12</b>

Table 2 shows that the overwhelming majority of theses were written in Turkish (11 out of 12), with only one thesis authored in English. This language preference reflects the national orientation of the research and may limit the international visibility and impact of these studies. Writing in Turkish ensures accessibility for local audiences, including practitioners and policymakers in Türkiye, but it also creates barriers to participation in the global academic discourse.

Promoting bilingual research outputs, particularly at the doctoral level, could enhance the global relevance and recognition of Turkish contributions to internal audit and internal control. This can be achieved by integrating English-language publication requirements into postgraduate programs and offering resources for academic writing in English.

**Table 3.** Chronological Distribution of Theses

Year Published	Master's Thesis	Doctoral Thesis	Total
2010	1	0	1
2011	1	0	1
2016	1	0	1
2018	3	0	3
2019	1	0	1

Year Published	Master's Thesis	Doctoral Thesis	Total
2021	2	0	2
2022	0	1	1
2023	1	1	2
<b>Total</b>	<b>10</b>	<b>2</b>	<b>12</b>

The chronological data, shown in Table 3 reveals a sporadic pattern of thesis publication, with peaks observed in 2018 and 2021. Notably, doctoral-level research only emerged in recent years, with theses published in 2022 and 2023. The recent appearance of doctoral theses may reflect growing academic interest in internal audit and internal control as research areas.

The peak in 2018 could be attributed to increased academic or regulatory attention to internal audit and control during this period. Further analysis of external factors, such as policy changes or economic developments, may help contextualize these trends. Encouraging consistent research output through academic incentives and targeted funding can help sustain interest and production in this field.

**Table 4.** Distribution of Theses by Universities

Universities	Master's Thesis	Doctoral Thesis	Total
Muğla Sıtkı Koçman University	1	0	1
Marmara University	1	0	1
Okan University	2	0	2
Süleyman Demirel University	2	1	3
İstanbul Ticaret Üniversitesi	1	1	2
Ufuk University	1	0	1
İstanbul Bilgi University	1	0	1
Giresun University	1	0	1
<b>Total</b>	<b>10</b>	<b>2</b>	<b>12</b>

Table 4 reveals significant variability in the distribution of theses among universities, with only a few institutions emerging as prominent contributors to research on internal audit and internal control. **Süleyman Demirel University** stands out with three theses, including one doctoral thesis, making it the most active institution in this domain. Other notable contributors include **İstanbul Ticaret Üniversitesi**, which produced both master's and

doctoral theses, and **Okan University**, with two master's theses.

This uneven distribution highlights a concentration of expertise and interest in specific universities, which may reflect the presence of specialized academic programs or faculty expertise in internal audit and internal control. However, the low output from other institutions, including many prominent Turkish universities, suggests that these topics are not yet widely integrated into postgraduate research curricula across the country.

The dominance of a few universities could also be indicative of the localized nature of academic interest and funding opportunities in Türkiye. Expanding research capacity to other institutions through inter-university collaborations, joint research programs, and the establishment of specialized centers could help broaden the scope and impact of research in this field. Furthermore, incentivizing research through grants and partnerships with professional organizations such as the Institute of Internal Auditors (IIA) Türkiye could encourage more universities to engage with these critical topics.

It is also notable that private universities such as **Okan University** and **İstanbul Bilgi University** have contributed to this field, reflecting a growing interest in research beyond the traditionally dominant public institutions. This trend suggests that private universities are beginning to recognize the academic and practical importance of internal audit and control, which could lead to more diversified contributions in the future.

**Table 5.** Distribution of Theses by Ownership of Universities

Status	Master's Thesis	Doctoral Thesis	Total
Public University	6	2	8
Private University	4	0	4
<b>Total</b>	<b>10</b>	<b>2</b>	<b>12</b>

As seen in Table 5, public universities dominate thesis production, with eight theses originating from these institutions, compared to four from private universities. This finding is consistent with the broader trend of public universities being primary contributors to academic research in Türkiye.

The predominance of public universities may reflect their stronger emphasis on research as part of their academic mission. However, the growing presence of private universities in this field highlights an opportunity for collaboration and knowledge sharing between public and private institutions to enrich the research ecosystem.

**Table 6.** Distribution of Theses by Academic Titles of Supervisors

Academic Title	Master's	Doctoral	Total
Assistant Professor	1	1	2
Associate Professor	5	0	5
Full Professor	4	1	5
<b>Total</b>	<b>10</b>	<b>2</b>	<b>12</b>

Table 6 indicates that most master's theses were supervised by associate professors and full professors, while doctoral theses had advisors at all academic ranks. This distribution suggests that experienced faculty members are more likely to guide research in internal audit and control, potentially due to the specialized knowledge required.

The involvement of senior academics is promising as it enhances the credibility and quality of the research. However, increasing opportunities for junior academics (e.g. assistant professors) to participate in this field could diversify perspectives and expand research capacity.

**Table 7.** Distribution of Theses by Subject

Subject	Master's Thesis	Doctoral Thesis	Total
Business	8	1	9
Public Administration	1	1	2
Banking	1	0	1
<b>Total</b>	<b>10</b>	<b>2</b>	<b>12</b>

Most theses focus on business administration, with limited attention to public administration and banking (Table 7). This emphasis reflects the central role of internal audit and control in corporate governance and risk management, but it also highlights a need for broader exploration across sectors.



Expanding research into public administration, healthcare, and non-profit organizations could enhance understanding of how internal audit and control operate in diverse contexts, offering valuable insights for theory and practice.

**Table 8.** Distribution of Theses by Research Methods

Method	Master's Thesis	Doctoral Thesis	Total
Qualitative	1	1	2
Quantitative	6	1	7
Compilation	1	0	1
Model Building	2	0	2
<b>Total</b>	<b>10</b>	<b>2</b>	<b>12</b>

Finally, Table 8 depicts that quantitative methods dominate the research landscape, accounting for seven theses, while qualitative and mixed-method approaches are less common. This reliance on quantitative methods may reflect the suitability of numerical and statistical approaches for analyzing internal audit and control phenomena.

The limited use of qualitative and mixed methods suggests a potential area for methodological diversification. Exploring case studies, interviews, and ethnographic approaches could provide richer insights into the human and organizational dimensions of internal audit and internal control.

## 5. DISCUSSION

The bibliometric analysis reveals that internal audit and internal control research in Türkiye is an emerging field, primarily concentrated at the master's level and in Turkish. The dominance of public universities and quantitative methods highlights strengths but also points to opportunities for diversification in institutional participation, research methods, and thematic focus.

The distribution of theses across universities underscores a concentration of research activity within a few institutions, particularly Süleyman Demirel University and İstanbul Ticaret Üniversitesi. These institutions have emerged as leaders in producing academic work in this field, potentially reflecting their specialized programs or faculty expertise. However, the limited contribution from many other universities, including some of Türkiye's

prominent institutions, suggests an uneven engagement with these topics across the higher education landscape. Expanding research capacity to a broader range of universities is essential to ensure more equitable academic contributions and to build a robust national research framework.

To address this, stakeholders should encourage broader institutional engagement by incentivizing research on internal audit and internal control in underrepresented universities. Resource allocation, such as targeted funding and grants, can play a critical role in enabling these institutions to build capacity in this area. Additionally, fostering inter-university collaborations, particularly between active research institutions and less-engaged universities, could help share expertise, methodologies, and resources. Establishing regional research hubs, with leading institutions like Süleyman Demirel University at the core, could further enhance research networks and create a more cohesive academic ecosystem.

In advancing the field, stakeholders should also promote interdisciplinary research that incorporates perspectives from fields such as psychology, technology, and public administration. International collaboration can provide valuable comparative insights, particularly by engaging with regions where internal audit and internal control are more mature fields of study. Methodological innovation, such as the integration of qualitative and mixed methods alongside traditional quantitative approaches, can provide deeper insights into the complexities of internal audit and control.

By addressing these gaps, researchers can diversify its research contributions and elevate its role in global discussions on internal audit and internal control. This would not only enhance the relevance of Turkish research in governance and organizational sustainability but also position Türkiye as a key contributor to addressing the challenges and opportunities of internal audit and internal control in a globalized economy.

## 6. CONCLUSION

Internal audit and internal control are pivotal elements of organizational governance and sustainability. Their roles in risk management,

accountability, and operational efficiency are critical in a dynamic global business environment. These mechanisms enable organizations to navigate complexities, ensure compliance, safeguard assets, and align operations with strategic objectives. Despite their importance, academic research integrating these topics remains underexplored in Türkiye, leaving significant gaps in understanding their application and interrelation. This study provides a bibliometric analysis of graduate theses in Türkiye that address internal audit and internal control within the same title, offering valuable insights into the academic landscape and laying the groundwork for future research.

Internal audit and internal control are no longer peripheral functions but central to modern organizational success. Internal control serves as a system designed by management to monitor, mitigate, and respond to risks, ensuring that organizational goals are met efficiently and effectively. Internal audit, in turn, evaluates the robustness and implementation of internal control systems, providing independent and objective assurance to senior management. The integration of these functions has gained prominence due to their collective impact on fraud prevention, risk management, compliance, and strategic decision-making. Moreover, the advent of technological advancements, globalization, and heightened regulatory scrutiny has amplified their relevance. Organizations that prioritize robust internal audit and control frameworks are better equipped to foster transparency, maintain stakeholder trust, and achieve sustainable growth. Given these stakes, the academic exploration of these topics is essential for developing best practices and informing organizational policies.

Academic research is crucial for advancing the understanding and application of internal audit and internal control in organizational contexts. Graduate theses, in particular, represent an essential component of this academic engagement, offering in-depth analyses and novel perspectives on these topics. However, a bibliometric examination of graduate theses in Türkiye reveals that studies addressing both internal audit and internal control

are sparse. Most of the existing research focuses on one of the two topics, often treating them as isolated domains rather than interconnected components of a unified governance framework. This fragmented approach limits the ability to derive holistic insights and apply them effectively in practice.

Recognizing this gap, the present study aims to conduct a bibliometric analysis of graduate theses in Türkiye that address internal audit and internal control together. This study's bibliometric analysis of postgraduate theses reveals significant trends and gaps in Turkish academic research on internal audit and internal control. By examining theses available through the National Thesis Center of the Council of Higher Education, this study seeks to provide a comprehensive overview of the academic landscape in this field. Specifically, it evaluates key parameters such as thesis type, language, year of publication, university affiliation, research methodologies, and thematic focus. Through this analysis, the study sheds light on prevailing trends and identifies potential areas for future research.

One of the significant contributions of this research is its potential to inform both academic and professional practices. By mapping the existing body of knowledge, this study highlights gaps that need to be addressed to enhance the understanding and application of internal audit and internal control. Furthermore, the insights generated from this analysis can serve as a foundation for developing targeted educational programs and professional training initiatives. For instance, identifying universities and academic departments that are actively engaged in these topics can help foster collaborations and create opportunities for interdisciplinary research.

Additionally, this study emphasizes the need for a more integrated approach to studying internal audit and internal control. While both concepts are often discussed separately in the literature, their interconnectedness is crucial for addressing complex organizational challenges. For example, the effectiveness of internal control systems is often contingent on the quality of internal audits, which provide the oversight and feedback necessary for

continuous improvement. Similarly, the strategic insights generated by internal audits can only be realized if they are supported by robust internal control mechanisms. By analyzing these interdependencies, this research contributes to a more comprehensive understanding of how internal audit and internal control can collectively enhance organizational performance.

The findings of the study highlight that most theses in the field are master's level, with doctoral research making up a smaller proportion. This indicates that while there is interest at the introductory postgraduate level, deeper theoretical and empirical exploration at the doctoral level remains limited. Encouraging doctoral research could bridge this gap and provide more advanced insights. The overwhelming majority of theses are written in Turkish, with only one authored in English. This finding reflects a localized academic focus, limiting international accessibility and participation in global discussions. Promoting bilingual research outputs, especially for doctoral theses, could enhance the global impact of Turkish research.

A few universities, notably Süleyman Demirel University and İstanbul Ticaret Üniversitesi, dominate the research output. This uneven distribution highlights the need for broader institutional engagement, inter-university collaborations, and resource allocation to underrepresented universities. Quantitative methods dominate the field, while qualitative and mixed-method approaches are underutilized. Incorporating diverse methodologies, such as case studies, interviews, and ethnographic research, could provide richer insights into the human and organizational dimensions of internal audit and control. Most theses focus on business administration, with limited attention to public administration or banking. This narrow thematic scope indicates an opportunity to explore the applicability of internal audit and control across various sectors, such as healthcare, non-profit organizations, and public governance. The publication of theses has been sporadic, with peaks in certain years. The emergence of doctoral theses in recent years suggests growing academic interest, but

consistent research output is necessary to sustain momentum.

This study contributes to the literature by mapping the academic landscape of internal audit and internal control research in Türkiye. The findings provide a comprehensive overview of existing research trends, institutional contributions, and methodological approaches. By identifying key gaps, the study lays a foundation for targeted academic and professional initiatives. Specifically, it highlights the importance of developing theoretical frameworks. Most research focuses on practical applications, with limited theoretical exploration. Encouraging studies that develop and test theoretical models could enrich the academic discourse and inform global best practices. The dominance of quantitative methods suggests a preference for numerical analysis. However, the integration of qualitative and mixed methods could provide deeper contextual insights and address complex organizational dynamics. Internal audit and internal control intersect with fields such as psychology, sociology, technology, and public administration. Interdisciplinary studies could enhance understanding and applicability across diverse organizational contexts. The focus on Turkish-language research limits international visibility. Publishing in English and engaging in cross-cultural studies could position Turkish academia as a significant contributor to global discussions on internal audit and control.

The findings also have practical implications for organizations, policymakers, and educational institutions. Organizations should emphasize the integration of internal audit and control as complementary functions that enhance governance and strategic decision-making. Investment in training programs to equip internal auditors and control professionals with interdisciplinary skills, including technological literacy and behavioral insights, would be valuable. Policymakers should develop regulatory frameworks that mandate robust internal audit and control practices across sectors and provide funding and incentives for academic research that addresses gaps in understanding and application. Educational institutions should integrate internal audit and control into postgraduate

curricula, emphasizing their practical and theoretical importance. Establishing research centers and networks to foster collaboration among universities, practitioners, and policymakers would further advance the field.

This study identifies several avenues for future research. While business administration dominates current research, future studies could explore internal audit and control in public administration, healthcare, non-profits, and SMEs. Research could investigate how emerging technologies, such as artificial intelligence, blockchain, and data analytics, are transforming internal audit and control practices. Examining how organizational culture, leadership styles, and national culture influence the effectiveness of internal audit and control could provide valuable insights. Future research could integrate perspectives from psychology, sociology, and behavioral sciences to explore the human dimensions of internal audit and control. Cross-country studies could provide comparative insights into the adoption and impact of internal audit and control practices, highlighting best practices and contextual differences. Tracking the evolution of internal audit and control practices over time could offer insights into their adaptation to changing organizational and environmental conditions.

This study underscores the importance of these functions by analyzing academic research trends in Türkiye, identifying key findings, and highlighting opportunities for growth. While the study reveals strengths, such as the emerging interest in these topics and the contributions of leading universities, it also exposes significant gaps in language, methodology, and thematic focus. Addressing these gaps requires a concerted effort from academia, industry, and policymakers to advance the field and ensure its relevance in addressing contemporary organizational challenges. By promoting interdisciplinary research, encouraging global engagement, and expanding thematic and methodological diversity, Turkish academia can play a pivotal role in shaping the future of internal audit and control. These efforts will not only enhance the academic and practical understanding of these functions but also contribute to their adoption as

integral components of governance and sustainability worldwide.

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