

# A SYSTEMATIC LITERATURE REVIEW ON THE IMPLEMENTATION OF INTERNAL AUDIT IN EUROPEAN AND NON-EUROPEAN PUBLIC HOSPITALS

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## Abstract

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This paper aims to investigate the internal audit implementation in European and non-European public hospitals or public bodies. Researchers conducted a systematic literature review based on various fields and countries (European and non-European). Our results revealed differences between countries regarding the role and effectiveness of internal audit of public hospitals in each country. European countries need to address different challenges concerning internal audit in comparison to non-European countries. For instance, European public hospitals need to implement internal audit to develop their risk management practices. In contrast, the public hospitals of non-European countries need to address challenges and issues related to the high corruption rate, the lack of transparency and accountability, and the lack of competent staff. Upon completion, this systematic literature review provided some evidence for further research on the matter under investigation. While recognizing the limitations of our analysis, we believe we have significantly contributed to the evolution of the international and Greek literature concerning the implementation of internal audit in European and non-European countries.

**Keywords:** Internal Audit, Public Hospitals, European Countries, Non-European Countries

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## 1. INTRODUCTION

Most researchers published to date on internal audit focus more on implementing internal audits on local government and less on public hospitals. This systematic literature review aims to identify, select, and critically appraise previous researches on internal audit to reveal opportunities for further

research concerning the implementation of internal audits in European and non-European public hospitals. It is worth saying that the international literature misses comparative studies between countries. Each research examined here focuses on different dimensions of internal audit. As a result, there are differences between countries regarding the role and effectiveness of internal audit of public

hospitals in each country. Additionally, it is essential to note that the international literature lacks research on the internal management of public hospitals. There are, however, general inquiries into internal audit in public administration.

To complete the research aim, we only included studies that provide empirical results concerning the internal audit implementation in European and non-European public hospitals or public bodies. Furthermore, this literature review includes studies only from the disciplines of public administration, economic and management, health policy and management, business economic, and international applied accounting. To select academic articles, we searched Google Scholar, one of the most frequently used databases by researchers across various disciplines.

The rest of the paper is structured as follows. Section 2 refers to the role of internal audit in public hospital functions. Section 3 refers to the factors that affect internal audit's effectiveness. Section 4 revolves around the internal audit in European and non-European public hospitals. Finally, Section 5 contains the conclusions of our research.

## 2. THE ROLE OF INTERNAL AUDIT IN PUBLIC HOSPITALS' FUNCTIONS

In recent years, the lack of transparency, objectivity, and accuracy in financial reports in public bodies of various countries requires the creation of a standard mechanism that can address the vulnerability of economic systems and accounting information (Chambers & Odar, 2015; Christopher, 2018). In this context, the concept of internal control systems has gained tremendous popularity among scholars concerning financial and corporate governance (Koutoupis, 2012).

The internal audits carried out in the public health units aim to provide technical information to the administration with the ultimate goal of making decisions and the effective fulfilment of the duties of the administration members (Alzeban & Gwilliam, 2014). Therefore, the internal auditors, having the appropriate knowledge, make relevant analyzes of the functions and finances of each public health unit. In essence, the primary mission of internal auditors is defined by the Institute of Internal Auditors (IIA) (Negakis & Tachynakis, 2013). One of the primary goals of the Internal Audit Service is to shape the system of corporate processes (Azzolini et al., 2019).

At the secretariat and outpatient clinics, controls and control procedures are also performed (e.g., revenue collection, issuing patient certificates). The accounting department is audited for the rational collection and processing of the accounting data required to prepare the budget. Internal audits at the payroll office-level include taking care of both the issuance and the management of staff payroll procedures. In addition, at the level of the payroll office, the audits for the available accounts are included (Stathopoulou, 2017).

At the level of nursing service, various internal audits are performed (e.g., control of nursing diagnosis based on international protocols). At the same time, at the level of the pharmaceutical department, rules are carried out in various functions such as, for example, the planning of supplies and

the rational management of pharmaceutical material (Stathopoulou, 2017).

However, some empirical evidence suggests that the effectiveness of internal auditors may not always be achieved for many reasons (Chambers & Odar, 2015; Christopher, 2018). Various studies in the international literature have highlighted the factors that affect the effectiveness of the internal audit. Some of them are the capacity and size of the internal control department (Bento, Mertins, & White, 2018), the independence and cooperation of internal-external auditors, the complex external and internal environment of public organizations (Ismael & Roberts, 2018), the supportive role of management, etc. (Chambers & Odar, 2015).

## 3. FACTORS THAT AFFECT INTERNAL AUDIT'S EFFECTIVENESS

Internal audit plays a crucial role in assisting public bodies in achieving their objectives and safeguarding their assets (Behrend & Eulerich, 2019). In particular, an effective internal audit plays a critical role in assisting management in combating fraud or irregularities and contributing to transparency and accountability (El Beshlawy & Ardroumli, 2021; Azzolini et al., 2019). For example, public health organizations need effective internal audits because they face high corruption rates. Therefore, public health units need the profession of internal auditor, which assists the managers to gain effective control over public bodies (Azzolini et al., 2019).

The need for internal audit operation arises more in the public sector due to the complexity of objectives (Schillemans & van Twist, 2016) and the multiplicity of procedures (Menza, Aga, & Jerene, 2019). However, some empirical evidence suggests that the effectiveness of internal audits may not always be achieved for many reasons (Chambers & Odar, 2015; Christopher, 2018). There are various researches (Ismael & Roberts, 2018; Alzeban & Gwilliam, 2014) in the international literature, highlighting the factors that affect the effectiveness of the internal audit. For example, Alzeban and Gwilliam (2014) confirmed that the management support, the capacity but size of the internal audit department, the independence and cooperation of internal-external auditors are critical factors that affect the effectiveness of internal audit in the public sector. In addition, previous studies have found conflicting results on the factors that affect the effectiveness of internal audit in a public organization. For instance, some scholars (Chambers & Odar, 2015; Christopher, 2018) report that public bodies' complex external and internal environment influences various aspects and processes of internal audit.

Besides, the complexity of internal audit tasks has been used as a variable that affects its effectiveness (Ismael & Roberts, 2018). However, complexity has received little attention from research papers dealing with the effectiveness of internal control in public bodies (Ismael & Roberts, 2018).

Behrend and Eulerich (2019) leveraged resource-based theory by including factors that affect the effectiveness of the internal audit. Besides,

Alqudah, Amran, and Hassan's (2019) research helped enrich the existing literature and knowledge regarding the factors that affect the effectiveness of internal control in public organizations. For example, the involvement of top management, the independence of internal auditors, and the cooperation of external and internal auditors are essential factors influencing the effectiveness of internal audits. Moreover, the effect of these factors is enhanced or reduced naturally depending on the complexity of each public body. In addition, these factors, according to researchers (Behrend & Eulerich, 2019; Ismael & Roberts, 2018), highlight the real problems that affect the effectiveness of internal control units in the public sector.

The effectiveness of modern internal audit is considered a critical factor in achieving organizational goals (Bananuka, Nkundabanyanga, Nalukenge, & Kaawaase, 2018). Thus, the goals of the public sector's organization internal audit unit should be consistent with the goals set by their institutions to achieve good results (Badara & Saidin, 2014). In this regard, an effective internal audit can support the organization in achieving its goals by assessing compliance with regulations, procedures, and policies. On the other hand, various researchers, such as Drogalas, Pazarskis, Anagnostopoulou, and Papachristou (2017), stated that the lack of effective internal audit departments creates problems for the organizations' functions and performance. Thus, the effectiveness of internal audits is highly critical because they can help public bodies make progress in their everyday activities (Drogalas et al., 2017).

However, Bananuka et al. (2018) confirmed that the effectiveness of internal audits is not measurable. This means that the success of an internal audit can only be determined by stakeholders' expectations and by the organizations' management. This approach requires developing systematic and valid measures to measure the effectiveness of internal control. In this context, Alzeban and Gwilliam (2014) attempted to evaluate the effectiveness of internal control by using a questionnaire to collect feedback from executives of public organizations on their views on the effectiveness of internal control.

To evaluate the effectiveness of internal control, researchers use various theories to explain the issue of the functioning of internal control, such as stakeholder theory, management theory (Badara & Saidin, 2014), and agency theory.

With their empirical research, Chang, Chen, Cheng, and Chi (2019) confirmed that the internal audit department, which works with specialized professionals, can improve the performance of the internal audit. This, in turn, can add value to the organization by improving organizational performance (Ahmad, Othman, Othman, & Jusoff, 2009). Therefore, strengthening top management is a necessary resource in an organization to achieve a high level of efficiency (Hazami-Ammar, 2019). In addition, if an organization has high capabilities, the effectiveness of internal auditors will be enhanced, as the internal audit department needs resources to provide its services. Therefore, internal auditors need the attention and empowerment of their management to achieve audit objectives and be more effective (Hazami-Ammar, 2019).

This empowerment includes participation in the internal audit plan, responding to internal audit reports, providing adequate staff in the internal audit department, and providing an adequate budget for successfully implementing the responsibilities and tasks of internal auditors (Menza et al., 2019). Finally, other researchers have highlighted the effects of independence on the effectiveness of internal auditors. The independence of internal auditors is one of the most important factors influencing their effectiveness (Ismael & Roberts, 2018).

An internal audit department is an organizational unit that must have a wide range of independence to conduct its activities properly (Menza et al., 2019). In particular, international standards stipulate that the internal audit activity should be independent and that internal auditors should be objective in carrying out their work. Independence is defined as "freedom from conditions that threaten objectivity or the emergence of objectivity" (IIA, 2017, p. 3). Thus, internal auditors are quite independent when they can carry out their work objectively, without any intervention from other parts of the organization. Research data have shown that the dynamics of an organization's internal audit units are assessed based on the extent of their independence. Therefore, if the internal auditors are independent, their opinion will improve the reliability of the financial reports (Arens, Elder, & Beasley, 2016). Otherwise, the internal audit findings are not acceptable (Arens et al., 2016).

#### 4. INTERNAL AUDIT IN EUROPEAN AND NON-EUROPEAN PUBLIC HOSPITALS

A systematic review of the literature identified surveys of public bodies in Africa, Jordan, Tanzania, Nigeria, Zimbabwe, Denmark, Poland, Romania, Italy, Portugal, and Greece. Below are the differences of countries concerning internal control either at public administration (e.g., municipalities) or at public hospitals.

The developed European countries (Denmark, Poland, Romania, Italy, Portugal, Greece) have essential differences concerning the role of internal audit in their healthcare systems. More specifically, one of the most significant drawbacks of the internal audits in Danish public hospitals is the lack of evaluation of the effectiveness of these audits for hospital governance (van Gelderen et al., 2017). According to recent research data from a mixed study conducted in Danish public hospitals, internal controls are considered effective in governing patient safety. More specifically, the internal audits help boards of directors to identify patient safety issues, promote patient safety, and inform supervisors about the patient safety situation. The description of the Dutch internal controls makes these controls reproducible to other healthcare organizations in different settings, allowing hospital councils to improve their patient safety management systems (van Gelderen et al., 2017). Additionally, another recent study published by Jóhannesdóttir, Kristiansson, Sipiläinen, and Koivunen (2018) revealed critical differences concerning the internal audit structure and operation in public organizations of Nordic countries. The differences are due to the size of the organization, the budget constraints, and the staff's competency (Jóhannesdóttir et al., 2018).

As is the case with Danish public hospitals, studying the internal audit literature in Polish public hospitals revealed a research gap concerning evaluating the efficiency of internal audits. Nevertheless, this systematic literature review identified two recent critical studies concerning the effectiveness of internal audits in Polish public hospitals. Firstly, a study published by Szczepankiewicz and Zaleska (2018) revealed that university hospitals in Poland have differences in terms of internal audit efficiency. Furthermore, this study has shown that the auditor's role and auditing efficiency perception varies significantly in comparable institutions. For example, some managers perceive internal audits as a statutory obligation. In addition, managers believe that the internal audits do not add added value to improve the hospitals' operation.

On the contrary, another research conducted in Polish public hospitals (Frączkiewicz-Wronka, Ingram, Szymaniec-Mlicka, & Tworek, 2021) revealed that Polish hospitals with well-developed risk management practices are better prepared to find appropriate responses to threats and achieve financial stability. Also, according to the same research data, stakeholder participation acts as a coordinator of the relationship between risk management practices and financial stability. The research results show that with more advanced risk management practices, the involvement of stakeholders in decision-making leads to statistically lower financial instability (Frączkiewicz-Wronka et al., 2021). Finally, Lombards et al.'s (2009) research conducted in 389 public hospitals in Europe showed that Poland, along with Belgium, the Czech Republic, reported that more than 60% of hospitals conduct performance evaluations to their medical staff as part of their internal audit procedures.

As concerning Romania, internal control practices in public hospitals are not very well developed. The extent to which hospital control is covered depends on the type of hospital (Calu, 2011; Daiana et al., 2019). For instance, recent empirical results published by Daiana et al. (2019) show that some public hospitals in Romania have made progress concerning internal audit compared to others. For example, the County Hospital of Oradea, Romania, has successfully implemented an internal management control system since 2012 (Daiana et al., 2019).

But it is a general truth that the operation of internal auditors in Romanian public hospitals is covered in less than a quarter of the hospitals. However, according to research findings, the directors of Romania's public hospitals believe that internal control adds value to the institution through internal audit evaluation, risk management and corporate governance (Daiana et al., 2019). Also, the directors of the public hospitals of Romania believe that the only way internal control creates added value in the hospital is to reduce or eliminate the unjustified expenses (Daiana et al., 2019).

Similarly, Calu (2011) found that internal audit in Roman public hospitals addresses several challenges primarily due to the insufficient national regulatory framework. Agheorghiesei, Iliescu, Gavrilovici, and Oprea (2014) explained the problems that Romania public hospitals address by examining the ethics of the internal audit. Progression in internal audit ethics should result in good relations of the public hospital with their

patients and respect the employees' moral rights (Agheorghiesei et al., 2014).

In Italy, the internal control of public hospitals focuses significantly on risk management, such as those related to financial risks. However, there are poor risk management practices in Italy, especially about forecasting.

Arena, Arnaboldi, and Azzone (2006), who used as a research methodology the multiple case study in six companies in Italy, concluded that the poor risk management practices are due to the inadequate external regulatory pressures of the institutional framework. That is why Arena et al. (2006), at the end of their research, proposed the need to conduct future research that will investigate the effectiveness of internal control in the light of institutional theory.

In Portugal, research findings focus on the importance of internal control for public administration bodies. The results clearly show a significant and positive relationship between internal control (financial and budgetary information) and its perceived usefulness for decision-making in municipalities.

Finally, as concerning Greece, there is a lack of researches concerning the role of internal audit in public hospitals. A number of studies have contributed to this field. For instance, Koutoupis, Rodakis, Koufopoulou, Antonoglou, and Vozikis (2016) in their paper highlighted the role of internal audit in addressing the budgetary risks of economic crisis. After extensive research, the scholars concluded that the lack of quality in the services provided in combination with the lack of modern management tools makes the operation of Greek public hospitals ineffective, especially in the face of all kinds of risks (Koutoupis et al., 2016).

Moreover, Koutoupis (2012) insisted on the internal audits' effectiveness concerning the risks of public hospitals. However, he concluded that the public hospitals do not have the tangible and intangible sources to implement adequate internal audits to address the various kinds of risks. In the same manner, Koutoupis, Rodakis, Koufopoulou, and Antonoglou (2015) analysed the role of information systems concerning the internal audits of Greek public hospitals. The researchers argued that the internal audit and the information systems in Greece have many problems. The efforts made to optimize them are delayed mainly due to the underfunding of hospitals (e.g., budget cuts) and bureaucracy. The results of this situation are the increase of management errors and the inadequate provision of health services to the citizens (Koutoupis et al., 2015).

In underdeveloped countries (Africa, Jordan, Tanzania, Nigeria, Zimbabwe), internal control has significant shortcomings and problems. The problems that need to address the underdeveloped countries concerning the internal control of public bodies are the high corruption rate, the lack of transparency and the lack of competent staff.

In Africa, for example, and in Nigeria, in particular, research findings have shown that countries lag in terms of internal control. In addition, empirical research has identified several factors, such as ignorance of critical internal audit effectiveness and a lack of professionalism on the part of internal auditors, as factors that prevent the establishment and operation of an internal audit

function in the public sector in Africa (van der Schyf, 2000). Nwannebuike and Nwadiakor (2016), who examined the effectiveness of internal audits in public organizations in Nigeria, also emphasized the lack of internal auditors' professionalism and competencies. Thus, the researchers proposed that the public organizations in Nigeria should turn their efforts to recruiting qualified staff.

The results of a survey conducted in public institutions in Zimbabwe are similar. In addition, the findings showed that the independent operation of internal audit plays a role in promoting good corporate governance practices. In Jordan, research findings highlight shortcomings in the internal control of public bodies. According to research findings, the lack of independence of internal auditors and the opacity and lack of accountability are the main problems of the internal control of the public administration of Jordan. Therefore, researchers suggest that decision-makers and regulators introduce new legislation and regulations for the profession of internal auditor in the Jordanian public sector (Alqudah et al., 2019). In Tanzania, the main problem of public bodies concerning internal control is the high levels of corruption. In particular, researchers have identified massive abuses of financial resources among Tanzanian government agencies. Furthermore, according to available research data, auditing practices and procedures do not comply with International Standards on Auditing (ISA). Finally, the internal auditor faces challenges such as a lack of independence and technology (Shishiwa & Hussein, 2020).

## 5. CONCLUSION

This systematic literature review revealed differences between countries regarding the role and effectiveness of internal audit of public hospitals in each country. More specifically, the developed European countries need to address different challenges concerning the internal audit. For instance, Danish public hospitals lack evaluation of the effectiveness of internal audits to the hospitals' governance. But in general, the internal audit of Danish public hospitals is effective, especially concerning patient safety. The international literature lacks studies concerning other aspects of internal audit (e.g., risk management) in Danish public hospitals.

Polish hospitals use the internal audit to conduct performance evaluations for their medical staff. But there are differences among Polish hospitals regarding the effectiveness of internal audit in their healthcare system. Such differences could be attributed to the size of the hospitals as well as to their location. As concerning Romania public hospitals, the internal audit practices are not very well developed. But there are some hospitals, such as the County Hospital of Oradea, that have successfully implemented an internal management control system since 2012. On the other hand, the lack of effective internal audit procedures in Romanian public hospitals could be attributed to managers' negative perceptions about the effectiveness of the internal audit. In addition,

the regulatory framework in Romania is a factor that influences the decision-makers' decisions to implement or not to implement internal audit in hospitals.

Internal audit of public hospitals in Italy focuses significantly on risk management. But the role of internal audit in the prevention of risks in the public sector needs further investigation. Public bodies and hospitals in Portugal seem to recognize the role of the internal audit in the effectiveness of organizational performance and operation. Finally, Greece is a country that implements internal audit in public hospitals. But the country needs to address several challenges, including the lack of IT development, the insufficient regulatory framework, and the lack of modern management tools. Both international and Greek literature need studies that investigate the role of internal audit in Greek public hospitals.

As developed countries, underdeveloped countries, such as Africa, Jordan, Tanzania, Nigeria, and Zimbabwe have significant problems concerning the implementation of internal audit in public hospitals. The systematic literature review revealed that the internal audit's practices are not well-developed in underdeveloped countries. Some of the significant internal audit problems in underdeveloped countries are the high corruption rate, the lack of transparency and accountability, and the lack of competent staff. Moreover, during the systematic literature review, it was contemplated that internal auditors of the public hospitals of underdeveloped countries lack professionalism and other professional competencies as well.

The initially stated overarching aim of this research was to identify, select and critically appraise previous studies on internal audit in European and non-European public hospitals to reveal opportunities for further research. While recognizing the limitations of our analysis, we believe we have significantly contributed to the evolution of the international and Greek literature concerning the implementation of internal audit in European and non-European countries. Specifically, this review, on the one hand, revealed the challenges of internal audit at the national and global level and, on the other hand, brought to the surface research deficiencies.

Upon completing this review, it is suggested that further research is needed concerning the implementation of internal audit in Greek public hospitals. Future scholars need to analyze the level and degree of internal audit performance in Greek public hospitals. To achieve this, the researchers need to conduct quantitative researches with structured questionnaires. Especially during the pandemic when public hospitals face several risks and challenges, it is necessary to study the internal audit of Greek public hospitals.

Additionally, future research should fill the gap in the literature regarding the lack of comparative studies between different countries for the implementation of internal audit in public hospitals. Finally, future research should address the gaps existing in the literature concerning the role of internal audit in risk management strategies of European and non-European public hospitals.

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