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Mapping the Literature of Internal Auditing in Europe: A Systematic Review and Agenda for Future Research

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Mapping the Literature of Internal Auditing in Europe: A Systematic Review and Agenda for Future Research

Abstract

Purpose: Despite many firms are investing considerable resources in building and designing strong and effective internal auditing (IA) to improve corporate governance and internal control processes, IA literature is still relatively fragmented. This article provides a systematic review of studies on IA in twenty-seven (27) European countries and the United Kingdom (UK).

Design/methodology/approach: Based on the Scopus database, 142 papers published between 1987 and 2022 were analysed. The study focused on evaluating and analysing the characteristics of literature and the themes investigated with a focus on four key aspects: governance, the effectiveness of IA, the relationship between internal auditors and other parties, and risk management to provide directions for future research.

Findings: The study found that IA literature did not provide the integrated knowledge of internal audit functions (IAFs) and the factors that could contribute to their implementation as required. The results showed that UK, Greece and Italy dominate the published literature in terms of the number of studies. There are a few studies that investigate IA in private institutions and non-profit organisations. Interestingly, a vast majority of studies are not based on the theoretical ground. The results also showed that there is an absence of studies that discuss the impact of cultural and political systems as well as the demographic characteristics of auditors on the implementation of IAFs.

Originality/value: This study is useful for researchers, organisations, and regulators as it contributes to the literature by highlighting the intellectual development of IA in the European countries and the UK and providing several directions for future studies. To the best of our knowledge, this research is the first study to use a systematic review approach in evaluating the intellectual development of IA research in the European countries, identifying areas and elements that received less attention in previous studies and providing a roadmap for future studies.

Keywords Internal auditing, Internal audit quality, Risk management, Corporate governance, External auditors, Audit committee, European Union, The UK

Paper type A review

1. Introduction

During periods of high-profile frauds or bankruptcies and accounting scandals across the world (Bufarwa and Elamer 2020; El-Dyasty and Elamer 2021; Feng *et al.*, 2020), from Enron and WorldCom in the United States of America (USA) to Parmalat in Europe, governments, academic scholars, Non-governmental organisations, and managers turn their attention to the role that IA play in corporate governance, internal control processes and the financial reporting process (McLaughlin *et al.*, 2021). This study provides a systematic review of IA research in European countries and the UK. The IA emerged as a tool to verify financial operations and combat fraud in institutions (Botha and Wilkinson, 2020; Coetzee and du Bruyn, 2001; Khelil and Khelif, 2021; Madawaki *et al.*, 2021; Ramamoorti, 2003). In 1941, the Institute of Internal Auditors (IIA) was established, thereby expanding its audit functions and incorporating operational processes such as compliance (Wals, 1963). IA is one of the advisory activities based on independence and objectivity, which aims to improve the institution's operations and add value to it (Mocanu and Ciurea, 2019; Sadler *et al.*, 2008; van der Schyf, 2000). IA also provides many of the services that institutions need, such as assurance services, advice to senior management, and stakeholders such as investors and government agencies, enabling them to properly understand the opportunities and tasks (IIA, 2020).

With the development of technology, the expansion of business, and the development of the regulations governing the profession of auditing and the role of IA has shifted significantly from its traditional function based on combating fraud and protecting the assets of institutions to carrying out further functions related to preserving institutions by adding value to them as well as evaluating the operational performance and organisation of institutions (Hazaea *et al.*, 2020a). Moreover, the roles of the IA expanded to include consulting, developing future plans, assessing risks, reviewing organisational and cultural accounts, assessing the risks of adversarial technology through developing an innovative systematic vision, and preparing visual and dynamic reports (Deloitte, 2018; Marais, 2004; Marx and Voogt, 2010; Venter and du Bruyn, 2002).

In the last period, IA began to be used in the appraisal of performance processes along with other functions (Hazaea *et al.*, 2020b). In Europe, Burnaby *et al.* (2009) argued that the activities of internal auditors had undergone significant changes, in part because of the dynamic organisational environment. These changes were followed by an increasing number of empirical studies to explore various organisational and economic aspects of IA development. Yet, limited effort has been made to evaluate these studies except for a study conducted by Allegrini *et al.* (2006) that only focused on the developments of IA in the EU. Other review

studies on IA concentrated on other countries such as the middle east and North Africa (Al-Akra *et al.*, 2016), China (Hazaea *et al.*, 2021a), and Asia Pacific countries (Cooper *et al.*, 2006). To the best of our knowledge, there has not been a review study on IA in European countries using a systematic methodology. This surprised us, considering this region is one of the most important geopolitical regions, and it is expected that there will be a need for many studies discussing this topic to keep pace with the developments that it requires in light of the continuous environmental changes (Farah *et al.*, 2021). European countries are one of the most important regions that have witnessed changes in governance procedures, especially after the global financial crisis in 2008-2009 and the legal legislation issued by the European Union in 2014 that introduced new requirements for the practice of IA. In addition to the financial crisis that occurred in Greece, indicates that there are important reforms and improvements required for the practice of the profession of IA (Samara *et al.*, 2021). Besides, we believe that reviewing the previously published literature enables us to monitor the limitations of the investigations and works towards solving overlooked problems that can be discovered by scanning the literature and setting directions for future studies. Thus, we have been prompted to conduct a systematic review study to assess the research directions of IA in line with similar studies that used a systematic review to analyse IA (i.e., Hazaea *et al.*, 2021a; Kotb *et al.*, 2020; Nerantzidis *et al.*, 2020).

This approach will contribute to the knowledge by using precise and systematic techniques to review and evaluate the prior studies. It has been suggested that, unlike the critical narrative review, the systematic review follows a rigorous, replicable, academic, and transparent process (Khatib *et al.*, 2021a). This study will, therefore, add to the development of the research literature through two areas; presenting a descriptive investigation to identify the aspects that were researched and show how the investigations were carried out on the IA, as well as identifying the intellectual development of previous research and highlighting gaps for future research. Thus, our aim is to provide a comprehensive analysis of the empirical and critical evidence in the European IA research in order to answer the following questions:

RQ1. How is the IA in the European countries and the UK being developed?

RQ1a: How was the concept of internal audit developed across European countries?

RQ1b: What theories have been investigated in the literature?

RQ1c: How was internal audit research investigated? In what type of organisations was this research investigated?

RQ2. What are the themes related to IA research that attracted researchers' attention in the European countries and the UK?

RQ3. How can perspective literature advance IA in these countries?

To answer these questions, we searched for all studies related to IA in the context of the European countries (27 countries) and the UK indexed in the Scopus database. Using several keywords, the process has resulted in a final sample of 142 articles that were included in this review.

The results indicate that five countries accounted for more than 53% of the total studies, suggesting the need for greater research in countries where the number of studies is low, such as Luxembourg, Portugal, the Netherlands, the Czech Republic, Malta, and France. Interestingly, the findings revealed that a vast majority of the sample literature (87 studies) was not based on any reached theory such as (Abdolmohammadi, 2013; Van Peurseem and Jiang, 2008; Lois *et al.*, 2020; Quick and Henrizi, 2019; Barišić and Tušek, 2016; Betti and Sarens, 2020; Balios and Zaroulea, 2020) and this represents one of the main limitations of studies that were not based on theories. Thus, the absence of theoretical bases in these studies may make it difficult to better understand or explain the results. Additionally, the results showed that the investigation of culturally different markets might enhance the understanding of various IA facets, and hence more cross-country studies are needed in the future. Conducting comparative studies between the European countries and other countries, which are completely different from the European countries culturally and religiously, in addition to the difference in the nature of governments, for example, China, the USA, and the Arab countries, may provide more clarifications and evidence that can be used internationally and locally to present the impacts of religious, cultural, political, and demographic differences and characteristics on the implementation of the IAFs.

This in-depth investigation of the status of IA in 27 European countries and the UK contributes to the body of knowledge by highlighting the status and level of IA practising in European institutions. Using the descriptive and critical analysis helps to identify intellectual development in the practice of IA activities and countries that still need more procedures and appropriate environments to enhance the IAFs and practices.

The rest of this paper is organised as follows. The second section summarises the methodology applied in this article, including the inclusion and exclusion criteria of the sample literature. In the third section, we present the results of the sample studies evaluation, followed by an in-depth discussion on the themes that have been explored in the literature in relation to IA. The fifth section highlights several suggestions and recommendations for future work, followed by a final conclusion in the last section.

2. Research methodology

A literature review study is one of the most popular and widely used tools in the field of business research (Hedin *et al.*, 2019). The systematic review, as opposed to the typical narrative review, follows a rigorous, replicable, scientific, and transparent method. It takes stock of the body of literature to date using precise filtering techniques to screen the articles and evaluate each related study in a critical and justified way (Khatib *et al.*, 2021b). It has been suggested that by investigating the literature that discussed IA, it is possible to know the best practices that have been applied and the worst of them, define guidelines for the proper practice of IA, identify gaps, anticipate challenges that are likely to be faced and work on preparing a program to meet the challenges (Blackmore, 2004). Additionally, studies based on systematic reviews provide more realistic and reproducible results compared to narrative reviews of the literature (Kotb *et al.*, 2020). Using the systematic review method improves the state of investigation of the subject to be discussed and reduces the subjectivity of the review process (Massaro *et al.*, 2016). This methodology adds to the literature by using precise and systematic techniques to review and evaluate the prior studies. It has been suggested that by using systematic review, a deep analysis of the subject that is under investigation can be conducted by evaluating the basic issues that have emerged and their theoretical and practical implications (Hristov *et al.*, 2021; Khatib *et al.*, 2021c). On the other hand, it is possible to provide quantitative and qualitative knowledge of high value by following the method of a systematic review (Goyal & Kumar, 2021).

We, therefore, followed the methodology used by many systematic studies (Adunlin *et al.*, 2015; Bartolini *et al.*, 2019; Khatib *et al.*, 2022; Khatib *et al.*, 2021a, 2021b; Rialti *et al.*, 2019; Zamil *et al.*, 2021) to avoid any biases in conducting the study. The Scopus database was used to collect the sample literature as it is one of the largest and broadest databases for quality papers (Khatib *et al.*, 2022; Sahi *et al.*, 2021, 2022). As shown in Figure 1, several keywords have been used to identify the relevant literature, including "internal audit- auditing *" **AND** Europ* **OR** "United Kingdom" **OR** UK **OR** Ireland **OR** Irish **OR** German **OR** Germany **OR** Luxembourg **OR** Romania* **OR** Switzerland **OR** Swiss **OR** Ukrain* **OR** Spain **OR** Spanish **OR** Sweden **OR** Swedish **OR** France **OR** French **OR** Belgium **OR** Hungary **OR** Greece **OR** Greek **OR** Malta **OR** Norway **OR** Norwegian **OR** Poland **OR** Polish **OR** Portug* **OR** Georgia* **OR** Finland **OR** Italy **OR** Italian **OR** Austria* **OR** Bulgaria* **OR** Albania* **OR** Armenia* **OR** Netherlands **OR** Czech* **OR** Serbia* **OR** Croatia *).

These keywords were adopted from prior studies (i.e., Nerantzidis *et al.*, 2020), and we searched for these keywords in the titles, keywords, and abstracts of the documents.

The preliminary sample included 682 scientific papers. The search was then restricted to articles published in the English language, yielding 601 documents. This number was decreased to 202 articles by narrowing the search to studies published in business and management fields. After analyzing the abstracts and entire content of the sample literature, papers that did not explicitly treat IA in one of the European contexts were excluded. This procedure resulted in a final sample of 142 articles for this investigation. The research yearly trend, regional distribution, influential works, methodology, theoretical background, thematic analysis modelling, journal name, and year of publication were all examined in these studies.

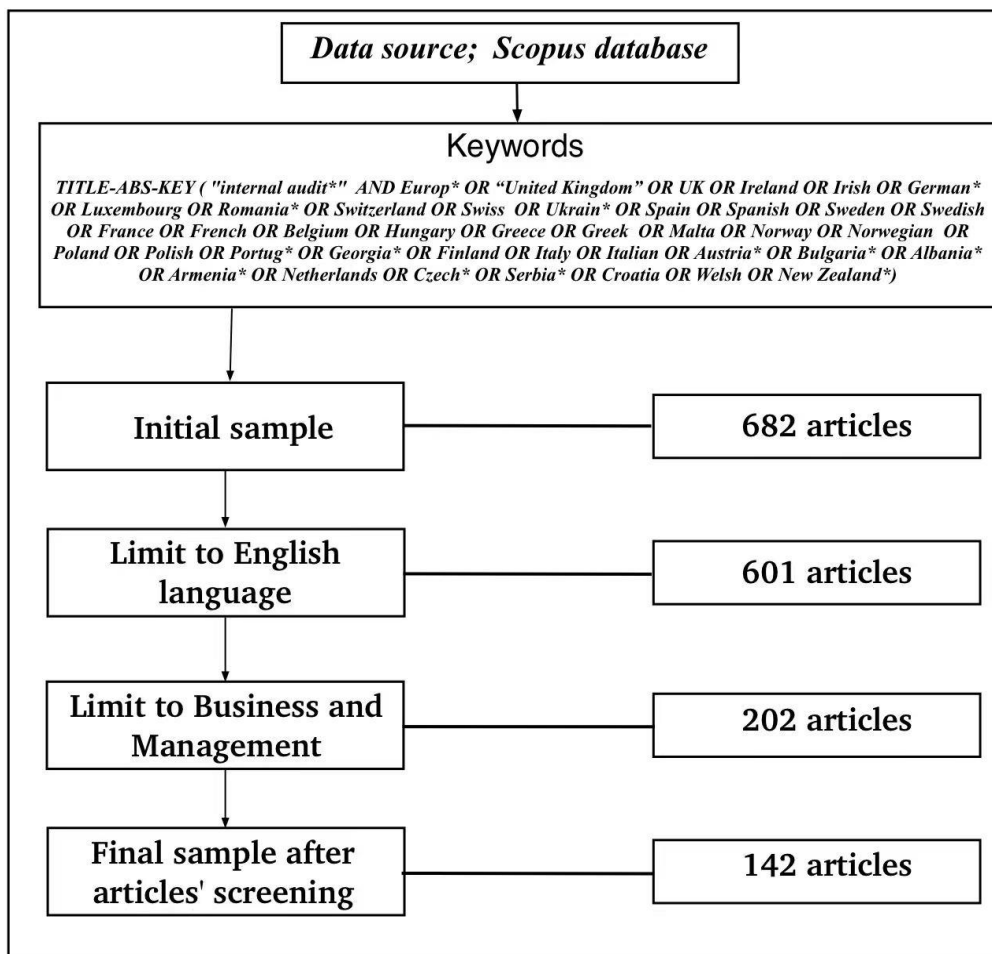


Figure 1. The flow chart of the research method

3. Results and discussion

3.1. Descriptive analysis

Figure 1 indicates that there is an increase in the literature that discussed IA in the years 2011, 2013, 2014 and 2015, and that the publication number has increased dramatically in the last few years, especially between 2018 to April 2022. According to Grabmann and Hofer (2014),

the financial events related to the financial crisis during 2007-2008, the scandals of some audit companies (such as World Com and Enron), and the implementation of the Sarbanes-Oxley (SOX) regulations are factors that contributed to the complexity of IA. This posed a question to those interested in the IAFs to find factors that have an impact on the function of IA, which only academic research has the possibility of finding a solution. Also, there have been significant changes that have occurred during the recent period regarding IA in European countries. The changes have occurred in the laws and regulations for reformation as a result of the financial crisis and fraud scandals in large companies (Jóhannesdóttir *et al.*, 2018). These factors have contributed to the complexity of IA development, which attracted the interest of scholars in the IAFs in recent years. On the other hand, it can be said that the financial crises that occurred in 2008 and the failure of some companies played a major role by asking stakeholders to search for more stringent and transparent regulations and rules and to practice the accountability permanently (Fraser *et al.*, 2020). Consequently, companies have begun to work on achieving sustainability through the practice of IAFs, which requires researchers to conduct many studies related to this activity. The results of a study by Hazaea *et al.* (2021b) indicated that there is a great tendency by researchers to investigate the importance of IAFs in enhancing sustainability and preserving the rights of stakeholders by clarifying the mechanisms and means that can be followed through IAFs to achieve the demands of stakeholders. In general, we argue that there is a great interest by stakeholders in the implementation and practice of IA to maintain the sustainability of institutions, as IA is part of governance and contributes to risk management and control over institutions. Therefore, further research may enhance the understanding of the appropriate mechanism and means to practice IAFs, especially in light of the current crisis represented by COVID-19.

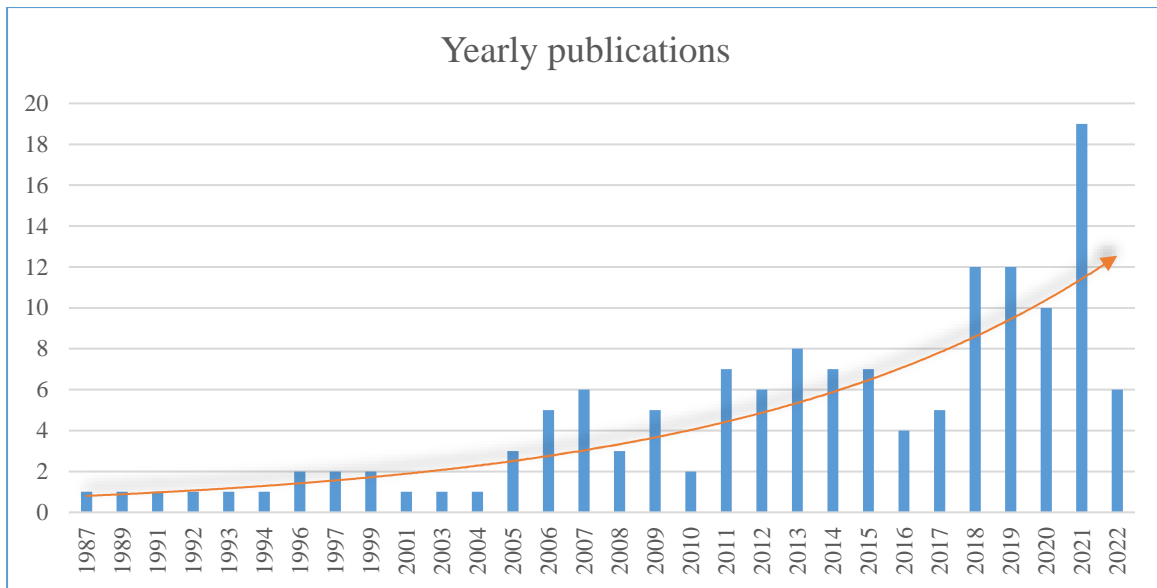


Figure 2. The time distribution of published papers

3.2. Geographical distribution of the literature

Table 1 presents the distribution of studies among the 27 European countries and the UK covered by the current investigation. Several studies have used this classification, such as (Hazaea *et al.*, 2021a; Kotb *et al.*, 2020; Sarens and Abdolmohammadi, 2011). It is clear from Table 1, that the previous studies were concentrated significantly in five countries, namely the UK with 30 articles, Greece with 17 articles, Italy with 14, Romania with 8 articles, and Croatia with 8 articles.

Many factors can contribute to an increase in research on a specific topic. Greece, for example, is one of the largest countries to have experienced major financial crises. As a result, companies went bankrupt, the national product shrank, and the economy suffered greatly, imposing a reality that necessitated the search for IA aspects as one of the main corporate governance attributes (Mertzanis *et al.*, 2019). According to Mertzanis *et al.* (2019), another reason could be the failure of Follie Corporation in 2018 (one of the most important companies in the Greek market), which required a reconsideration of the importance of the IAFs. One of the most important reasons also, is the enactment of new laws in Greece in 2017, in accordance with European Union Regulation No. 537 of 2014, which introduces new audit requirements. Researchers may be interested in investigating the extent of the new law's impact on financial reports, quality auditing, governance, and all issues related to auditing (Samara *et al.*, 2021). Many factors contributed to the rise in research studies in Italy. This includes an examination of the impact of the issuance of Italian Decree No. 231 on regulating the exercise of IAFs, its benefits in risk assessment and governance, and its role in improving accountability and

transparency(Miglietta *et al.*, 2007). Regulatory releases on compliance (Aziendale and Ferretti 2013; Ferretti, 2013), practice IT auditing in financial institutions (D'Onza *et al.*, 2015), cancellation of ISO 9001 certification from (SMEs) manufacturing companies(Chiarini, 2019) and recent changes as a result of financial scandals in Italy and other countries (Arena and Azzone, 2007). Similarly, The UK represents one of the countries in which great interest appears, especially in light of the presence of organisations and institutions that are interested in the profession of IA. Among the reasons given in the literature is the publication of standards for charitable organisations (Palmer and Palmer, 2006), the significant growth of audit among British institutions (Liu *et al.*, 1997), and the publication of regulations for the development of corporate governance, such as the Turnbull guidelines (Spira and Page, 2003), directing societal and governmental opinion on the importance of IA education (Vinten, 2006) and expansion of the work of trade unions and an increase in their role, in addition to giving them an important role in corporate governance (Vinten, 2005).

The rest of the countries like Luxembourg, Portugal, and the Netherlands have received less attention in the IA literature, with less than three articles for each country and one study for five countries such as France, Malta and Czech. It should be noted that 20 studies have discussed IA among several countries considering IA from various aspects, including the differences in the commercial markets, cultures, and political systems. This may contribute significantly to the knowledge of the factors that improve the IAFs in contrast with the factors which are a challenge to an internal investigation. Comparative studies that discuss IA in more than one country might help researchers and specialists to obtain information about the IA practice from several directions of accreditation in different countries, cultural and political systems, and the possibility of interpreting the IAFs for each country and identifying their pros and cons (Al-Matari and Mgamal, 2019). Krane and Eulerich (2020) examined the internationalization of IAFs using data from three countries (Austria, Germany, and Switzerland) and discussed the factors that motivate institutions to permanently employ internal auditors in the same country. Also, Abdolmohammadi (2013) discussed the mechanisms of outsourcing the implementation of IA activities from seven countries, namely the UK, Australia, Canada, New Zealand, the US, South Africa, and Ireland. The results showed that the investigation of culturally different markets might enhance the understanding of various IA facets. Eulerich and Lohmann (2022) Discussed the reasons for the inconsistency of information and control by investigating the relationship between the characteristics of the company and the size of the IAFs. Using a sample from three countries, Germany, Austria, and Switzerland, the results revealed that there are common characteristics that affect information

and control inconsistency, as well as their impact on the size of IAFs. The involvement of stakeholders and the increase in the number of employees are the most crucial. While the results showed that the inclusion of audit committees as responsible for the audit department's plan contributes to the reduction of IAF size. Thus, studies that rely on comparison between countries may provide a deeper understanding and clear evidence of the factors that improve the practice of IAFs, as well as clarify the environment and factors that negatively affect the practice of IA considering the comparison of differences in all environmental, cultural, political, economic, and social fields. Hence more cross-country studies are needed in the future.

Table 1. The number of studies per country

| Country | IIA membership | Number | % | Country | IIA membership | Number | % |
|----------------|----------------|------------|---------------|----------------------|----------------|-----------|---------------|
| The UK | Yes* | 30 | 21.12% | Albania | No | 3 | 2.11% |
| Greece | Yes | 17 | 11.97% | Finland | Yes | 3 | 2.11% |
| Italy | Yes | 14 | 9.89% | Luxembourg | Yes | 2 | 1.41% |
| Croatia | No | 8 | 5.63% | Portugal | Yes | 2 | 1.41% |
| Romania | Yes | 8 | 5.63% | Netherlands | Yes | 2 | 1.41% |
| Ukraine | Yes | 5 | 3.52% | Czech | Yes | 1 | 0.70% |
| Sweden | Yes | 5 | 3.52% | Malta | No | 1 | 0.70% |
| Belgium | Yes | 4 | 2.82% | Switzerland | Yes | 1 | 0.70% |
| Spain | Yes | 4 | 2.82% | France | Yes | 1 | 0.70% |
| Germany | Yes | 4 | 2.82% | Ireland | Yes* | 1 | 0.70% |
| Serbia | No | 3 | 2.11% | Cross country | | 20 | 14.08% |
| Hungary | Yes | 3 | 2.11% | | | | |
| Total | | 105 | 73.94% | | | 37 | 26.06% |

Notes; the results of our search didn't find single studies in the following countries Armenia, Austria, Georgia, Norway, Bulgaria, Poland/ *for the IIA membership, the UK and Ireland are treated as one entity which is (6755).

Table 1 also shows the number of European countries and the UK that have membership in the IIA, which emphasises the importance of states association with the IIA, where all states have membership except for four countries (Albania, Croatia, Serbia, and Malta). According to Al-

Akra *et al.* (2016), the IIA membership contributes to supporting the audit systems in those countries, expanding the knowledge base of audit members, enhancing confidence, in addition acquiring many skills that contribute to enhancing the value of auditors.

3.3. Journal distributions

In this part, we review the distribution of the study sample based on the scope of the journals. Table 2 shows the distribution of our sample in two parts (Hazaea *et al.*, 2021b). The first section includes journals belonging to auditing and accounting, while the second section displays journals belonging to the administrative, finance, and economics fields. The analysis shows that, among the auditing and accounting journals, Managerial Auditing Journal came first with 25 [36.76%] papers, which is always at the forefront of journals that are concerned with auditing issues, including IA. The International Journal of Auditing ranks second with 6[8.82%] papers, confirming the importance of this research and its impact among those interested in IA. As a result, these journals highlight the role that IA plays in institutions.

However, among governance, economic, and management journals, Economic Research Journal and Corporate Governance ranked first with 5 [6.76%] for each one. Finally, the distribution confirms that recent research publications in journals that favour economics and management are the result of the expansion of the concept of IA in the administrative and accounting fields (Kotb *et al.*, 2020; Hazaea *et al.*, 2021b).

Tale 2. Literature by journals

| Papers divided by journals | Number of Articles | % | Year of publications | Web of Science index | ABS stars (2021) |
|---|--------------------|---------------|----------------------|----------------------|------------------|
| First, Auditing and Accounting | 68 | 47.89% | 1987-2022 | | |
| Managerial Auditing Journal | 25 | 36.76% | 1987-2021 | SSCI | 2 |
| International Journal of Auditing | 6 | 8.82% | 2007-2021 | SSCI | 2 |
| Meditari Accountancy Research | 4 | 5.88% | 2019-2022 | ESCI | 2 |
| Journal of International Accounting, Auditing, and Taxation | 3 | 4.41% | 1992-2020 | ESCI | 3 |
| Others | 30 | 44.12% | 1994-2022 | | |
| Second, Governance, Economic and Management | 74 | 52.11% | 1993-2022 | | |

| | | | | | |
|--|------------|-------------|-----------|------|---|
| Economic Research | 5 | 6.75% | 2008-2021 | SSCI | |
| Corporate Governance | 5 | 6.75% | 2018-2021 | ESCI | 2 |
| Eurasian Studies in Business and Economics | 2 | 2.70% | 2017 | | |
| Economic Annals | 2 | 2.70% | 2011-2016 | | |
| Others | 60 | 83.34% | 1993-2022 | | |
| Total | 142 | 100% | | | |

3.4. Leading research

In this section, we analyse the leading studies of IA in the European context and the UK. Table 3 provides a summary of the 14 most cited studies based on the Google Scholar citation matrix. These studies appeared to focus on two aspects which are the risk management and audit committees in relation to IA. These studies have confirmed the involvement of IA in improving internal controls to provide a significant level of comfort to the audit committee (Sarens *et al.*, 2009). Also, the informal interactions complement formal meetings between them (Zaman and Sarens, 2013) and the interdependence of IA effectiveness on the characteristics of audit committees (Alzeban and Sawan, 2015). At the top of the list of the 14 studies is a study by Spira and Page (2003) which the study reviewed changes in the practices of IAFs and governance requirements concerning risk management. The results of the study confirmed that the developments in the governance reports contributed to providing multiple opportunities for managing and allocating risks, and this was confirmed in the changes that were made to the IAFs. Sarens and Beelde (2006) came second which discusses the role of auditors in risk management. The results indicate that the internal auditors in Belgium play a basic and important role in clarifying risks and working on practice, while the results differ in the US considering that the perceptions of the internal auditors are considered as inputs to the development of the internal control system. It seems that the reason for the presence in the top leading studies is because of its published long age (2003 and 2006) and in the journals specialised in auditing (Accounting, Auditing & Accountability Journal and Managerial Auditing Journal), and its collected more citations (Dumay and Dai, 2014). In addition, the second study is a comparative study between two countries, and therefore the researchers' view of it is interesting (Kotb *et al.*, 2020).

With regard to risk management, it has been documented that the IA plays a pioneering role in the creation of a higher level of control and risk awareness, a more formalized risk

management system (Sarens and Beelde, 2006), and it is negatively associated with external audit delay (Abbott *et al.*, 2012). Other studies have focused on investigating the role of IA and external auditors (Speklé *et al.*, 2007; Abbott *et al.*, 2012), while the issues related to financial and non-financial facets were not discussed in a large way. For example, Abbott *et al.* (2012) examined the role that IA plays in assisting the implementation of the external audit in a timely manner. This is an indication that one still knows relatively little about the factors that may make IAFs effective in influencing the financial and non-financial aspects of organisations. Moreover, there is relatively ambiguity about how IA can affect the day-to-day business of the organisations. Future studies may look at the aspects of factors that discuss the practice of IAFs in organisations in various financial and non-financial aspects.

Table 3. The leading studies based on the citation number

| Author/s | Citation* | Country and Method | Research focus |
|--------------------------------|------------------|--|---|
| Spira and Page (2003) | 922 | UK Content analysis | Review changes in the practices of IAFs and governance requirements in relation to risk management |
| Sarens and Beelde (2006) | 382 | Belgian and US 10 interviews (CAEs) | Role of internal auditors toward risk management |
| Sarens <i>et al.</i> (2009) | 278 | Belgian 4 case studies | Examine the extent of the approval of the audit committees on the IA department |
| Fraser and Henry (2005) | 236 | UK 17 interviews | How to identify risks by companies and the role of the IA department in achieving it |
| Arena <i>et al.</i> (2006) | 203 | Italy 6 case studies | Researching the effect of IA on a sample of 6 Italian companies |
| Allegrini <i>et al.</i> (2006) | 189 | Review | Investigate how IAFs are practising in line with environmental changes in the business |
| Abbott <i>et al.</i> (2012) | 186 | The UK 134 questionnaires (CAEs) | Examine the role that IA plays in assisting the implementation of the external audit in a timely manner |

| | | | |
|-----------------------------|-----|--|---|
| Alzeban and Sawan (2015) | 137 | The UK 188 questionnaires (CIAs) | Examines the relationship between audit committees and IA |
| Barbadillo and Pe (2012) | 135 | Spanish 108 firms | Testing the quality of financial data by investigating the relationship between the IAFs and audit committees |
| Speklé <i>et al.</i> (2007) | 130 | Netherlands 131 questionnaires (CFOs) | Examines why organisations rely on external sources to carry out IA |
| Zaman and Sarens (2013) | 124 | The UK 187 questionnaires (CAEs) | Investigating the informal factors linking IA and audit committees |
| Vinnari and Skærbæk (2014) | 112 | Finnish Interviews (13 groups) internal auditors and managers | Analysing the relationship between risk management and its role in activating IA activities |
| Davies (2009) | 99 | UK(Welsh) 22 questionnaires heads of IA | Examines the relationship between audit committees and IA |
| Lenz <i>et al.</i> (2014) | 83 | Germany 46 questionnaires (CAEs) | Evaluate the characteristics of IA |

*Citations were taken from Google Scholar on April 21, 2022

* **CAEs** chief audit executives, **CFOs** chief financial officer, **CIAs**, Chief internal auditors.

3.5. Theories

To extract the theories applied in the literature and classify the theoretical aspects, we followed the previous studies (i.e., Khatib *et al.*, 2021; Schmidt and Günther, 2016). As shown in Table 4, the dominant theories were categorized into ten groups. Agency theory is widely used in the literature, as evidenced by its use in eight articles (5.63 % of the sample), followed by institutional theory (4.22%), which considers the IAFs in the view of its practitioners as one of the basic tools for effective corporate governance. The institutional theory was applied in six articles in the sample literature (4.22% of the sample). The rest of the theories, including the economic theory which was applied in two articles, economic industrial theory, contingency

theory, principal-agent theory, and cultural relativism theory, were applied only in one paper. Studies that included many theories were identified and referred to as multiple theories. For example, the study by Krane and Eulerich (2020) used three theories, agency theory, institutional theory, and cost theory, to investigate factors that contribute to the internationalization of the IAFs. Also, Ismael (2019) used two theories, the agency theory and transaction cost economic theory, to investigate the effect of corporate characteristics on the quality of IAFs. Interestingly, the vast majority of the sample literature (87 studies) was not based on any theoretical ground such as (Barišić and Tušek, 2016; Quick and Henrizi, 2019; Abdolmohammadi, 2013; Van Peurse and Jiang, 2008; Lois *et al.*, 2020; Balios and Zaroulea, 2020; Betti and Sarens, 2020). This is one of the major limitations of non-theory-based studies. Given the absence of a theoretical basis in the study, it may be difficult to better understand or theoretically explain the results of the studies. Nerantzidis *et al.* (2020) reported that the studies which are not based on theories are usually descriptive, which may be seen as offering nothing as a new mature vision from the deep investigation. Also, Beck and Stolterman (2016) indicated that studies based on theories might contribute to better-improving research results and their interpretations. The result of the study also indicates that the use of theories may contribute greatly to explaining IAFs and the extent of IA contribution to organisations. Thus, the spread of the research that is not based on a theoretical basis may be one of the reasons for the lack of progress in IA research because it may be a reason for a narrow, non-wide, and in-depth explanation of how social, economic, and cultural changes affect the practice of IAFs. It should be noted that the theories have been directed from three aspects, economic, such as (Economic industrial theory and transaction cost economic theory) social such as (Cultural relativism theory and Cultural value theory) and psychological, such as (Comfort theory) indicate that research based on theories has an important role in developing the results of research work. Thus, the use of new theories based on social, economic, and environmental foundations in research related to IA may enhance the role played by IA towards sustainability assurance. Coyne (2006) also reported that a sustainability audit measures the value of organisations from three aspects, economic, social and environmental.

It should be noted that we have calculated the theories in Table 4 individually, but in the case of calculating the mixed theories that were used in the studies, the number of theories that were requested may vary based on the theory. For example, the agency theory was requested individually in 8 studies and was used with other theories in 12 studies.

Agency theory

This theory is concerned with solving the problems that are expected to arise in dealing within institutions, for example, managers of institutions and owners. These problems cause corporate managers' goals and interests to conflict with shareholders' (Jensen and Meckling, 1976). Agency theory is based on the philosophy and assumption that separating management and ownership leads to transparency in the audit. This theory is the most discussed one in the IA literature. According to Adams (1994), the theory of agency can provide the richest and most meaningful research about IA. Through agency theory, it is possible to investigate the nature of IA, explain the existence of IA, define IAFs as well as discover the nature of the work provided by internal auditors (Adams, 1994). Hence, it is suggested that the agency theory contributes to achieving the goals of institutions as it provides a clear explanation of the characteristics of IA that increase the accountability and transparency of the company. Khatib and Nour (2021) argued that tracking and controlling the characteristics of governance and advisory roles in terms of controlling and directing the activities undertaken by management enhances and improves organisational results from several directions, including reducing agency costs. The IA literature used agency theory to explore and review the role of IA after the financial crisis (Thi *et al.*, 2019), the relationship between internal auditors and external auditors (Argento *et al.*, 2018; Axén 2018), and IAFs and corporate governance (Rabóczy, 2018). In some studies, multiple types of theories have been used together with the agency theory to explore the multiple aspects of IA, such as the impact of firm characteristics on the quality of IA (Ismael, 2019) and to investigate the factors that could affect the internationalization of IAFs (Krane & Eulerich, 2020). However, such a topic is still limited.

Institutional theory

According to institutional theory, IAFs can be developed by investigating normative, coercive, and simulated pressures as drivers that contribute to the development of IA performance (Arena *et al.*, 2006). In the literature, the studies used institutional theory to explain the effectiveness of IA in corporate governance (Vadasi *et al.*, 2020), describe the IA departments and their characteristics (Arena *et al.*, 2006), and the internationalization of the IA (Krane & Eulerich, 2020). However, such topic is still limited, such as the culture and environment towards institutional behaviour. According to this theory, the behaviour of institutions is determined by the environment in all its cultural, religious, political, and social forms (Krane & Eulerich, 2020). Future research may use this theory to investigate the different issues related to IA.

Contingency theory

It is one of the theories that have been used in auditing and accounting research in recent periods (Abushaiba and Zainuddin, 2012). The use of this theory in research depends on the

specific field that has been proposed (Badara and Saidin, 2013). Researchers can follow this theory to help them introduce any factors in an orderly and systematic way that enables them to predict and explain future phenomena (Umanath, 2003). So, through this theory, the expected impact of IA and risk-based auditing can be interpreted and examined, as well as emergency practices that institutions request from the IA department. Despite the recent development of auditing from the practice of traditional auditing to the practice of risk-based auditing, this theory was used in only one study. Therefore, future studies may discuss the importance and impact of using this theory on the practices of IAFs, especially in light of emergency environmental risks.

Table 4. Theories applied in the literature.

| Theories | 1987-2000 | 2001- 2009 | 2010-2015 | 2016-2022 | Total | % |
|----------------------------|-----------|------------|-----------|-----------|------------|-------------|
| Agency theory | | 2 | 2 | 4 | 8 | 5.63% |
| Institutional theory | | 3 | | 3 | 6 | 4.22% |
| Contingency theory | | | | 1 | 1 | 0.70% |
| Economic theory | | | | 2 | 2 | 1.40% |
| Economic industrial theory | | | | 1 | 1 | 0.70% |
| Principle agent theory | | | | 2 | 1 | 0.70% |
| Cultural relativism theory | | | 1 | | 1 | 0.70% |
| Multiple theory * | - | 1 | 4 | 17 | 22 | 15.49% |
| Other theories* | | 6 | 2 | 4 | 12 | 8.45% |
| Papers without theory+1 | 12 | 13 | 28 | 34 | 87 | 61.27% |
| Total | 12 | 25 | 36 | 67 | 142 | 100% |

Notes: Multiple theories include; Agency theory (12), Institutional theory (6), Cost theory (1), Transaction cost economic theory (3), Resource dependency (3) Legitimacy theory (1) Hogarth theory (1), Theory of human relationship (1), Resource theory (1), Culture value theory (1), Stakeholder theory (3), Stewardship theory (1), Theory of market economy (1), Extant theory (1), Managerial hegemony (1), Theory of manipulation (1), Upper echelon theory (1), Theory of organizational hypocrisy(1), Role theory(1), Management theory(1), Chaos theory(1), Grounded theory(1), Other theories include; Hogarth theory (1), Comfort theory (1) Actor-network theory (1), Organizational theory (1) P, J fit theory (1), Based audit theory (1) Modern theory (1), Dittenhofer theory (1), Role theory(1), Political theory(1), Cultural theory(1), Attribution theory(1).

3.6. Research settings

Research instruments

Table 5 shows that there were seven approaches utilized in the 142 studies being reviewed, namely historical analysis, reports, case study, interviews/other empirical,

questionnaires/survey, theoretical/critical review, and mixed methods. It is clear from Table 5, that the questionnaire is the most applied tool that was used in 65 (45.77%) studies. This approach has been used in several studies (i.e., Ježovita *et al.*, 2018; Koutoupis *et al.*, 2018; Alzeban and Sawan, 2015; Eulerich and Lohmann, 2022) as it helps to collect more information that cannot be measured by the secondary data. This is an indication that the results of the studies are realistic to some extent, considering that the use of the questionnaire in administrative and social disciplines is one of the most important ways to obtain reliable and real data (Roopa and Rani, 2012).

The second approach applied for theoretical and critical review with 24 (16.19%) studies, followed by quantitative studies based on data collected from firm annual reports with 19 (13.38%) studies. Interviews and mixed-method studies have been utilized in 14 (5.81%) and 10 (7.04%) studies respectively. The case study has been applied in 6 (4.22%) studies. According to Collis and Hussey (2017), collecting data from the IA department by using interviews is very difficult because some institutions don't allow the staff to participate in interviews concerning research. Historical analysis and observation came last with only 4 (2.82%) studies that applied this approach. This finding highlights the need for more research using the qualitative method (interviews) as it is a suitable tool for investigating the opinions, perceptions, feelings, and experiences of auditors in connection with sensitive topics such as audit quality (Argento *et al.*, 2018).

Type of institutions respondents

With regard to the type of respondents in prior studies, it has been found that mixed respondents of internal auditors and other management staff who have been targeted in 20 (14.08%) studies, followed by chief audit executives participated in 14 (9.86%) studies, internal auditors in 10 (7.04%) studies, heads of IA units in 3 (2.12%) studies, chief internal auditors in 3 (2.12%) studies, and others in 61(42.96%) studies. However, 31 studies (21.83%) did not specify the type of respondents (N/A 31 studies). Prior studies have targeted respondents who have a relationship with IA. It is noted that all respondents who have a relationship with IA have displayed their opinions and point of view. Likewise, we see that the results of the studies may be useful as required in order to achieve the benefits, considering that all the respondents have knowledge of the IA system. In addition to the above-mentioned points, we argue that obtaining information from the parties involved in IA and its practice may provide a lot of information about the factors that may contribute to the improvement of the performance of the IAFs.

Moreover, the results of information analysis obtained from the parties related to practising or supervising the audit profession may provide a basis for organisations, including the IIA, in

the legislation of new principles that keep pace with the environmental changes to move the IAFs toward achieving the interests of stakeholders. Some studies obtained the data from two or three respondent types (i.e., Lois *et al.*, 2020) which obtained the data from internal auditors, accountants and, Chief audit executives to investigate the factors associated with the implementation of risk-based IA. The statements expressed by all parties involved in the audit may be more realistic and unbiased to a specific party, which contributes to determining the general mechanisms that must be practised in the audit process to enhance the performance of the IA.

Types of organisations

Additionally, we evaluated the types of organisations that were investigated. Four categories have been identified, namely public sector with 49 studies (34.50% of the sample literature), mixed of public and private firms and publicity with 47 studies (33.09%), private sector and SMEs with 7 studies (4.93%), general/other, and N/A with 39 studies (27.46%). In the first place, it was the research that obtained data from public sector companies at an average rate (34.50%). The interest in the study in the public sector is since it is more vulnerable to risks than the private sector and due to the encouragement of the government side for researchers and providing them with facilities. Hence, government and state educational institutions want to know the roles of auditors and search for the best means to reduce risks, including researching aspects of corporate governance (Kotb *et al.*, 2020; Roussy, 2013). Many reasons may contribute to conducting research based on data from the public sector. The most important of which is encouraging the government side for researchers and providing them with facilities (Hazaea *et al.*, 2021a).

In the second place the studies that obtained data from public and mixed companies with (33.09%) of the sample literature. Studies that obtained data from “stock exchanges” within this type were added to this category. This large number of prior studies concentrated on this sector due to the ease of obtaining data, as it is far from the pressures of information privacy in comparison with the private sector. Interestingly, unspecified research appeared to be one the most frequent in the literature, which is an indication of the prevalence of research that is not specified to any institution. One of the reasons might be that obtaining data from companies faces some difficulties, considering that some companies do not allow auditors to give researchers the companies’ data which is confirmed by (Shields,1997).

Surprisingly, studies that have been conducted on the private sector and SMEs are very few, with only seven studies. Future research could focus on conducting studies on private sector

companies in terms of the possibility of conducting studies in financial and non-financial companies.

Table 5. The research setting of prior studies.

| Item | Category | Number of studies |
|-----------------------------|---|--------------------------|
| Research instruments | Questionnaire/Other Survey | 65(45.77%) |
| | Case study | 6(4.22%) |
| | Interviews | 14(9.86%) |
| | Annual reports | 19(13.38%) |
| | Theoretical/Critical Review | 24(16.19%) |
| | Historical analysis and observation | 4 (2.82%) |
| | Mixed methods | 10(7.04%) |
| | Type of institutions respondents | Chief internal auditors |
| | Internal auditors | 10(7.04%) |
| | Chief audit executives | 14(9.86%) |
| | Head of IA unit | 3 (2.12%) |
| | Internal auditors and others | 20(14.08%) |
| | *Others | 61(42.96%) |
| | N/A | 31(21.83%) |
| Sectors | Public sector | 49(34.50%) |
| | Private sector and SMEs | 7(4.93%) |
| | Mixed (Publicity) | 47(33.09) |
| | General/Other and N/A | 39(27.46%) |

*Notes: a member of IIA, member of the audit committee, employee, external auditors, chief financial officer, managers, Big 4, accountants, students and financial department.

4. Research themes

In this part, we followed Kotb *et al.* (2020) and Nerantzidis *et al.* (2020) to develop the distribution scheme in our study. To identify the subjects of each study and to avoid problems in classifying the subjects of the studies, we identified and summarized the objectives and results of each study separately. This classification helped in identifying the results and gaps of future studies. To avoid bias in the classification of some fundamentally unclear papers, they

were categorized under the ‘other’ theme. Table 6 shows that 13 subjects of the academic papers have been categorized under ‘this theme. It is clear that four subjects attracted the attention of scholars, cooperation between internal auditors and others (24 studies), followed by the effectiveness of IAF (24 studies), Governance role of the IAF (23 studies). Risk management (17 studies), historical developments of IA (9 studies), and other themes are represented by less than seven studies. Although there are multiple research topics discussed in the studies, most of the studies focused on the three areas of governance, cooperation between internal auditors and others, and the effectiveness of IA. This reflects the tendency of stakeholders, interested parties, and academics to search for the role of the IAFs as one of the tools of governance in light of the failure of some companies. In European countries, it has been commonly held that European countries share the same Anglo-culture characteristics that might not significantly affect the practices and development of IA in each country. According to Abdolmohammadi (2013), outsourcing of IA activities is not affected by the country of domicile due to the similar Anglo-culture characteristics.

Modern topics related to IA were absent in the sample of studies, such as IA and sustainability, information technology, the use of artificial intelligence systems, and E-internal auditing. In addition, future studies may discuss audit institutions and whether the countries have institutions that issue special standards in line with the environmental nature of these countries or whether they follow international internal auditing standards while defining the determinants and benefits of both systems. In addition, studies may examine the effects of the COVID- 19 crisis on the practice of IA and what are the lessons learned from it.

Table 6. The themes of the prior studies

| Themes | Number of studies | | Research nature | |
|--|-------------------|------------|-----------------|---------------|
| | Number | Percentage | Empirical | Non-Empirical |
| Cooperation between internal auditors and others | 24 | | 21 | 2 |
| The effectiveness and quality of IAFs | 24 | | 19 | 5 |
| Governance role of the IAFs | 23 | | 22 | 2 |
| Risk management | 17 | | 13 | 4 |
| Historical developments of IA | 9 | | 5 | 4 |
| IA efficiency | 4 | | 2 | 2 |

| | | | | |
|------------------------------|-----|------|-----|----|
| Impact of IT on the IAFs | 6 | | 6 | |
| Compliance with IA standards | 7 | | 4 | 3 |
| IA in the digital era | 2 | | 2 | |
| Culture | 2 | | 2 | |
| Implication of IA | 5 | | 2 | 3 |
| Corruption | 1 | | | 1 |
| Challenges facing IA | 3 | | 3 | |
| Others | 15 | | 7 | 8 |
| Total | 142 | 100% | 108 | 34 |

4.1. Internal auditors and other parties

In this part, we have clarified studies that discussed the relationship of the internal auditors with other parties. These studies have addressed the interrelation between the internal auditors and members of audit committees (Al-shaer and Zaman, 2018; Alzeban and Sawan, 2015; Davies, 2009; Quick and Henrizi, 2019; Zaman and Sarens, 2013) and the internal auditors and external auditors (Abbott *et al.*, 2012; Argento *et al.*, 2018; Morais and Franco 2019). It has been found that IA helps in saving audit costs in addition to enhancing and improving audit efficiency (Abbott *et al.*, 2012). Also, the nature of the relationship between the internal and external auditors contributes to strengthening the internal control system and activating governance. Furthermore, the findings of the study by Nehme *et al.* (2022) demonstrated that coordination between internal auditors with sufficient experience and assessment of trainees' perceptions in the audit practice would aid in mitigating the practice of ineffective auditing behaviour. These studies may provide benefits by identifying the relationships in which the three parties can work within the framework to improve the quality of IA, but more importantly, it is necessary to investigate the penalties that any party may be exposed to as a result of cooperating with other parties, which may be seen as reducing the degree of independence. Future studies can be addressed in this matter and can also discuss the extent of dependence of audit committees on external auditors.

Table 7. Sample of studies on IA aspects

| Author/s | Country/Method | Summary of the findings |
|--------------------------|----------------|---|
| Quick and Henrizi (2019) | German | The results show that strengthening the relationship between the internal auditors and the external |

| | | |
|------------------------------|---|--|
| | 204 questionnaires external auditors Descriptive | auditors contributes to strengthening the internal control system and activating governance. |
| Morais and Franco (2019) | Portugal Survey -136 internal auditors and 115 external auditors.Descriptive and Logistic regression | The results showed that there were differences in perceptions between the incoming and outgoing auditors in subjects that took a longer dimension. |
| Argento <i>et al.</i> (2018) | Sweden 41 questionnaire internal auditors and eight interviews (BIG4) ML | When the external auditors have more confidence in the internal auditors, they depend on their work. |
| Alzeban and Sawan (2015) | UK 188 questionnaires CIAs ML | The results showed that it is possible to implement IA perceptions if the members of audit committees enjoy complete independence and the extent of their enjoyment of accounting expertise. |
| Abdolmohammadi (2013) | Cross country 1059, CAEs Survey ML and logistic regressions | The results indicate that the outsourcing of the implementation of audit activities is positively and significantly related to the audit committees. |
| Zaman and Sarens (2013) | UK 187 questionnaires(responses) CAEs ML | The results show that the independence of the members of the audit committees and their accounting experience affect the interactions between the two parties |
| Abbott <i>et al.</i> (2012) | UK, 134 CAEs questionnaires ML and OLS | The results show that IA helps in saving audit costs in addition to enhancing and improving audit efficiency. |
| Davies (2009) | UK(Welsh), 22 questionnaires | The results show that building trust between audit committees and IA members is the basis for |

| | | |
|-------------|--------------------------------------|---|
| | heads of IA | determining the relationship between them. Moreover, the results show that the audit committee members' enjoyment of financial and accounting expertise helps in improving the mechanism of working with IA members. |
| Onza (2017) | Italy 78 questionnaires CAE ML | The results indicate that the relationship between internal auditors with senior management would enhance the auditors' capabilities in carrying out their tasks. |

*ML; Multiple Regression, OLS; Ordinary Least Square, CAEs; Chief audit executives, CIA Chief internal auditor

4.2. *The effectiveness and quality of IAF*

Previous studies have raised the knowledge of the factors that can enhance the effectiveness of IA and its functions. With regard to the determinants of the effectiveness of IA, Krane and Eulerich (2020) reported that there are some factors positively related to the effectiveness of IAFs, including support to management, cooperation with audit committees, and cooperation with specialized local experts. Several other factors have been introduced as important drivers of IA quality, including audit fees (Sierra-García *et al.*, 2019), cooperation between internal and external auditors (Gras-Gil *et al.*, 2012), digital business (Betti and Sarens, 2021), cash flows, and firm size (Ismael, 2019), training of audit staff, governance and the use of modern technology (Lenz *et al.*, 2014). The quality of IAFs has been investigated in relation to themes such as IA and financial reports (Gras-Gil *et al.*, 2012; Gros *et al.*, 2017; Alzeban, 2018), internationalization of IAFs (Krane and Eulerich, 2020), factors affecting the audit fees (Sierra-García *et al.*, 2019) firms characteristics and quality of IAFs (Ismael, 2019), and perspectives of IA on enterprises of business quality (Tušek and Sever, 2008). However, few studies have addressed the role of information technology in improving the IAFs (Abdolmohammadi and Boss, 2010). Also, many other areas have not received researchers' attention such as the role of management in activating IAF, the importance of using modern audit systems in activating and improving the audit system, and the control of factors that help in strengthening the audit function. Future studies may examine these topics with an emphasis on studies in different markets that contribute to the knowledge of political, cultural, and economic factors and their impact on the effectiveness and quality of IA.

Table 8. Sample of studies on the effectiveness of IAFs

| Author/s | Country/ Method | Summary of the findings |
|------------------------------------|--|---|
| Krane and Eulerich (2020) | Cross country 295 CAEs 11 interviews ML | The study showed that there are some factors positively related to the effectiveness of IAFs, including support of management, cooperation with audit committees, and cooperation with specialized local experts. |
| Sierra-García <i>et al.</i> (2019) | Spain 965 firms ML&AFM | The study indicates that audit fees are linked to the quality of IA, as well as the audit relationship with audit committees. |
| Gras-Gil <i>et al.</i> (2012) | Spain 47 questionnaires to the internal auditors Multivariate analysis | One of the most important factors that help improve the quality of financial reports is cooperation between internal and external auditors in reviewing and preparing reports. |
| Alzeban (2019) | UK 201 firms 35 questionnaires to the Chief audit executive ML | Submitting IA reports to the audit committees has a positive impact on the quality of the financial reports, while in the case of submitting reports to the CEO or CFO, it is negatively related. |
| Ismael (2019) | UK 213 questionnaires to the heads of IA OLS | An increase in corporate cash flows and firm size is positively correlated with audit quality characteristics. |
| Gros <i>et al.</i> (2017) | German 42 questionnaires CEO ML | The quality of IAFs has a positive effect on financial reports. |
| Lenz <i>et al.</i> (2014) | German 46 questionnaires (CAEs), Cluster analysis | Training of audit staff, governance, the existence of specific regulations to be followed during the implementation of audits, and the use of modern technology are all factors that contribute to improving and activating IAFs. |

| | | |
|-------------------|--|---|
| Alzeban (2018) | UK 307 Firms ML | The quality of financial reports is adversely affected when the chief audit executive participates in making decisions about the chief audit executive. |
| Nordin (2022) | Sweden 18 interviews Descriptive | Moving away from emotion and having a clear vision of the mechanism of the IA practices enhances the quality of the audit |

***AFM**: Audit fees model, **ML**; Multiple Regression, **CAEs**; Chief audit executives, **CEO**: Chief executive officer, **CFO**; Chief financial officer

4.3. Governance

IA works to support the boards of directors of institutions in ensuring the achievement of adequacy and oversight of internal controls and thus constitutes a key part of the corporate governance framework. In this classification, previous studies examined the role of IA in good corporate governance. Several topics were investigated: the independence of IA and its impact on corporate governance (Rabóczy, 2018), characteristics of audit committees (Vadasi *et al.*, 2020), analytical procedures for IA (Ježovita *et al.*, 2018), and the role of IA in risk management as a part of corporate governance during crises (Bekiaris *et al.*, 2013). It has been found that IA significantly enhances the quality of corporate governance and monitoring activities (Eulerich *et al.*, 2013; Vadasi *et al.*, 2019). This is because of the preventive, supervisory, and advisory roles of IAFs (Narcisa and Elena, 2017; Mertzanis *et al.*, 2019). Yet, the literature is not clear about these roles, and some studies have failed to support them. For example, Koutoupis *et al.* (2018) suggested that internal auditors do not exercise an advisory role that contributes to improving the content and quality of corporate governance practices. Moreover, it is noted that four studies out of the total studies presented in Table 9, 24 discussed IA and corporate governance in Europe, especially Greece. The reasons may be because the crisis that passed in Greece made researchers turn to this field. More work is needed on the advisory role of the IA and on topics that were not addressed in these studies, such as the maintenance of trust and legitimacy, the protection of stakeholders and guidelines of IA and its impact on accountability and transparency.

Table 9. Sample of studies on corporate governance

| Author/s | Country/ Method | Summary of the findings |
|-----------------------------------|---|---|
| Mertzanis <i>et al.</i> (2019) | Greece 15 internal auditors Interview | The results showed that there is a strong relationship between IAFs and corporate governance, as IAFs |

| | | |
|--------------------------------|--|---|
| | | provide preventive and supervisory advisory services to companies. |
| Vadasi <i>et al.</i> (2019) | Greece 49 CEA 49 Firms ML | The results of the study showed that the contribution of IA as an essential part of corporate governance depends on the quality of the audit committees and the duties of the chief audit. |
| Koutoupis <i>et al.</i> (2018) | Greece 45 questionnaires to internal auditors Descriptive | The results showed that internal auditors might practice good discipline related to compliance with international standards that regulate the audit profession, but they do not exercise an advisory role that contributes to improving the content and quality of corporate governance data. |
| Rabóczy (2018) | Hungary 49 firms Descriptive | The results of the study showed that most companies use the IA system but with varying degrees of independence of their members. Moreover, the results showed a negative impact between the supervisory board and the IA department. |
| Ježovita <i>et al.</i> (2018) | Croatia questionnaires .85 CAE -12 senior IA -46 internal auditors -12 other Descriptive and T-test | The results showed that the internal auditors in Croatia still follow the normal and simple procedures, while the use of complex procedures that benefit companies is very rare. |
| Narcisa and Elena (2017) | Romania 79 questionnaires to employee Descriptive | IA is one of the most important tools to protect funds from inappropriate practices of corporate governance; in addition to that, IA provides basic and important support for corporate management by supervising financial work procedures. |
| Eulerich <i>et al.</i> (2013) | 26 EU 306 members of IIA SEM | IA is one of the most important corporate governance structures by working to add value by addressing problems or setting precautionary measures. |

| | | |
|---|---|--|
| Bekiaris <i>et al.</i> (2013) | Greece questionnaires Descriptive | The results showed that IA must be practised in all its aspects in order to be able to show risks to money and capital and work towards solving these problems. |
| Vadasi, Bekiaris and Andrikopoulos, (2020) | Greece 54 questionnaires ML | The results of the study show that IA contributes to enhancing corporate governance through the quality of the work of audit committees and the duality of the CEO of the company. |

*ML; Multiple Regression, SEM; Structural Equation Modelling, CAEs; Chief audit executives

4.4. Risk management

The IA department is widely and largely related to risk management. However, the role played by auditors may vary according to different systems and countries. According to Zainal Abidin (2017), there is a strong link between the IA department and the risk management, as the quality of the IA may greatly enhance the awareness of the importance of control and work to create a more organized system in risk. In the sample literature, ten studies discussed risk-based IA and the factors associated with the practice of IA (Castanheira *et al.*, 2010; Drogalas *et al.*, 2017; Lois *et al.*, 2020), the role of internal auditors in risk management (Jovkovis *et al.*, 2014; Keclíková and Briš, 2011; Koutoupis and Tsamis, 2009; Sarens and Beelde, 2005), and the implementation of IA activities (Vinnari and Skærbæk, 2014). In general, the result showed that internal auditors contributed to risk management. Indeed, Drogalas *et al.* (2017) found the proper implementation of IA to be the most important factor that enhances risk management effectiveness. Thus, it is clear that the role of the internal auditors requires identifying the risks inherent in the strategic and operational activities so that they can modify the strategies of the audits and provide appropriate insights accordingly, which contributes to adding value to the institutions. Future studies may discuss the role of IA in managing risks considering crises (i.e., COVID-19) and show what factors can help internal auditors to maintain a good level of auditing in accordance with the guidelines and regulations of the Institute of Internal Auditors.

Table 10. Sample of studies on risk management

| Author/s | Country/ Method | Summary of the findings |
|----------------------------------|---|---|
| Lois <i>et al.</i> (2020) | Greece 105 questionnaires internal auditors, accountants & executives ML | Training on risk management, the effectiveness of audit committees, and the existence of a formal system through which risk is managed, all these factors are positively related to implementing risk-based IA. |
| Drogalas <i>et al.</i> (2017) | Greece 118 questionnaires ML | One of the most important factors that can positively affect risk management is the proper implementation of IA. |
| Vinnari and Skærbæk (2014) | Finnish 13 groups interviews Descriptive | The results showed that the implementation of risk management contributed to adding doubts related to the application of the applicable law to find solutions to managing risks. |
| Keclíková and Briš (2011) | Czech 47 questionnaire Employee Descriptive | The results showed that there is a significant role for auditors involved in risk management in health facilities. |
| Castanheira <i>et al.</i> (2010) | Portugal 96, questionnaire Chief internal auditors Descriptive | A risk-based audit factor is a significant factor in the size of the enterprise. |
| Koutoupis and Tsamis (2009) | Greece 3 case studies | The results showed that the Greece banks adopted the risk-based audit approach, which is incomplete, making the practice of this audit sub-standard. |
| Sarens and Beelde (2006) | Belgium and USA 10 Interviews CAE | The results showed a discrepancy between the extent of the auditors' awareness of their role in both Belgium and the USA. |
| Jovkovis <i>et al.</i> (2014) | Serbia 28 banks Practical | The results showed that auditing contributes mainly to protecting banks from risks. |

| | | |
|--------------------|---|--|
| Ferretti (2013) | Italy 51questionnaire Descriptive | The results showed that compliance with IA rules and their systematic application contribute to reducing risks |
|--------------------|---|--|

*ML; Multiple Regression, CAEs; Chief audit executives

5. Discussion and future research directions

In this part, the authors answer the third question by providing a roadmap for future research. We used two strategies to answer this question. In the first strategy, we provide discuss the research directions based on the gaps identified in the analysis of the first question and the second question in earlier sections. In the second strategy, we used the most research articles that attracted researchers' interests based on the number of citations from Google Scholar to identify some avenues for future studies.

5.1. Future directions using the previous assessment

In light of the various environmental changes and financial scandals that have occurred, global interest in knowing the effective practice of IA has increased, including in European countries. In light of this interest, the results of the investigation showed a significant increase and growth in the number of literature discussing IA in recent years. Regarding the geographical distribution of research, we find that four countries accounted for more than 47% of the total studies. This is an indication that there is a need to conduct more studies in countries where the number of studies is limited, such as Hungary, Finland, Netherlands, and others (see Table 1). Also, the result revealed that in most investigated countries, the studies have focused on a few topics in relation to IA. For example, in Greece, which is one of the most to attract the attention of scholars, researchers examined the use of IA as a tool of governance and its economic outcomes.

Additionally, it is noteworthy that one of the main limitations of the prior studies is not being based on the theoretical ground. Given the absence of a theoretical basis in the prior studies, it may be difficult to better understand or theoretically explain the results of these studies. Nerantzidis *et al.* (2020) reported that the studies which are not based on theories are usually descriptive, which may not be seen as offering a new mature vision from the deep investigation. Also, Beck and Stolterman (2016) indicated that studies based on theories might contribute to better-improving research results and their interpretations. The result of the study also indicates that the use of theories may contribute greatly to the explanation of the IAFs and the extent of internal audit's contribution to organisations. Given the importance of theories

that can be used to elicit and extract information about proper IAF practice, expand and add knowledge about IA, and have a clear and deep understanding of environmental, economic, and social factors that can contribute to IA activation. Future studies should be formed on a solid theoretical foundation, employing (economic, behavioural, cultural, philosophical, and social theories) to better explain and comprehend IAF practice. This could lead to a deeper understanding of the mechanism and the significance of IA.

Regarding the quality of research and the method of obtaining data, it seems that there is a need to know the perceptions of internal auditors about the importance of IAFs to stakeholders. There is also a need to conduct studies on the private sector, as the analysis shows that studies that discussed IA in the private sector are scarce. More research using the qualitative method (interviews) is required because it is an appropriate tool for investigating auditors' opinions, perceptions, feelings, and experiences in relation to sensitive topics such as audit quality.

On other hand, the results of the analysis show that there is a need for more practical studies in several aspects, for instance, the role of IA in combating corruption, the importance of information technology in enhancing and improving IAFs, IA and sustainability, the use of artificial intelligence systems, the impact of political systems on the independence and performance of IA, and the possibility of conducting comparative studies with the US, Arab countries, China, and Islamic countries on the impact of cultural and religious differences on the exercise of IAFs. More multi-country studies are also required, which we believe is one of the means to provide clear information and insights on the practice of IAFs in different environments.

Finally, one of the most significant limitations of previous studies is the small sample size used, indicating the need for studies that consider sample size. The figure below shows the literature's limitations.

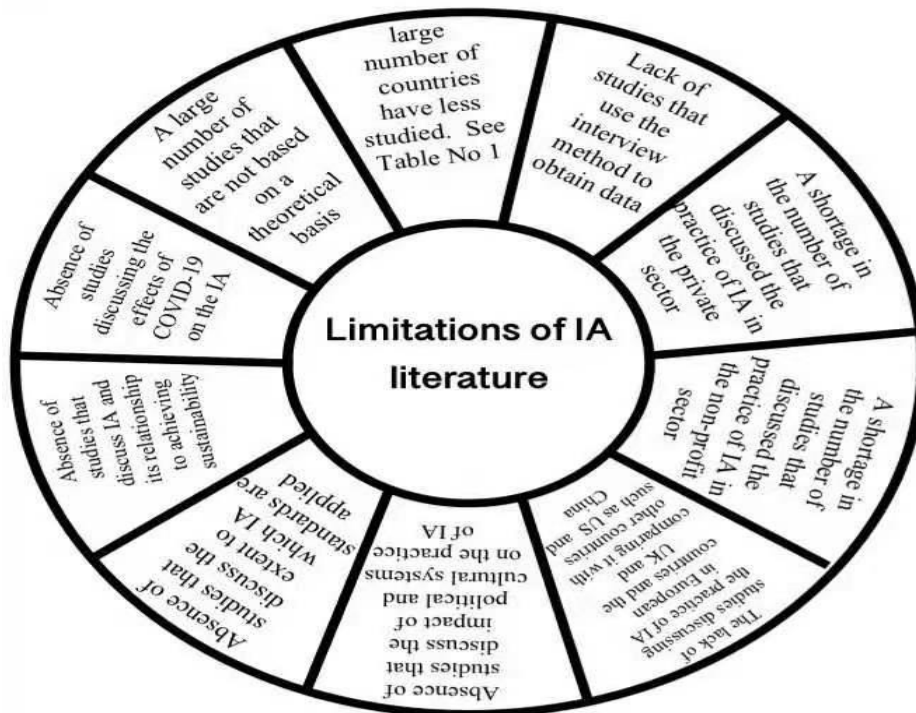


Figure 3. Limitations of IA literature

5.2. Future directions using the most influential studies

Through the investigation of the 142 studies analysed in this review, nine studies with a significant impact in the field were selected based on the number of citations from Google Scholar obtained by each study. This classification helped us in identifying trends that future studies could work on considering the researchers' interests. We have summarised the most important recommendations discussed by the nine studies and excluded what was repeated in more than one study. Table 11 summarises the recommendations for future work based on the most influential studies.

Considering the environmental developments that change because of economic crises, researchers could provide new insights and investigate the extent of benefit from risk-based auditing. Also, future studies could be conducted to investigate the factors that ensure the success of this type of auditing in different geographical environments considering the political system and cultural environment. This makes it possible to provide new insights into the role that auditors play in risk management among different markets. As suggested by several studies, more work should be conducted in different political and economic environments so that researchers can show results in all cases (i.e., Castanheira *et al.*, 2010; Sarens and Beelde, 2005). Furthermore, researchers can also investigate the motives of audit committees to seek assistance from IA. The possibility of conducting studies that examine the potential consequences that the audit committees will face as a result of their reliance on the IA

department (Sarens *et al.*, 2009) and external auditors (Abbott *et al.*, 2012) would enhance our understanding further of the interrelation between IA, external audit, and audit committee functions. Future empirical studies based on theories such as institutional theory can also be conducted, through which recommendations that contribute to developing the use of IAFs can be made (Arena *et al.*, 2006)

Table 11. Sample of future research directions based on most influential studies

| Author/s | Suggestions for future research | Country |
|-----------------------------|--|-----------------|
| Sarens and Beelde (2005) | Expanding investigations in the search for the role of internal auditors in risk management with a focus on studying the extent of the impact of outsourcing the IA department, also the possibility of studying the role of internal auditors in managing risks in different environments in terms of culture and governance system and in light of the size of institutions whether big or small. | Belgium and USA |
| Sarens <i>et al.</i> (2009) | Conducting studies that discuss the factors that motivate audit committees to request assistance from the IA department in light of various environments, different geographical areas, and institutions of different sizes. Investigating the extent to which the audit committees consider IA independent of the institutions' departments and the effect of this perception on the relationship between them. | Belgium |
| Arena <i>et al.</i> (2006) | Expanding the study of the development of IA departments based on the institutional theory may contribute in a way to knowing the importance of IA | Italy |
| Abbott <i>et al.</i> (2012) | Conducting studies related to determining the effect of IA assistance on external auditors and how this affects the quality of the audit process | The UK |
| Speklé <i>et al.</i> (2007) | The possibility of studying factors that contribute to the organisation of IAFs, such as examining the role of uncertainty | Netherland |

| | | |
|----------------------------------|--|----------|
| Alzeban and Sawan (2015) | Conducting studies that discuss the impact of IA characteristics (age, gender) on perceptions of actual implementation of the required IA | The UK |
| Castanheira <i>et al.</i> (2010) | Future studies should investigate risk-based IA in different geographical regions and compare the factors that contribute to and limit the implementation of this type of audit. | Portugal |
| Zaman and Sarens (2013) | Future studies should examine the extent to which company characteristics and international differences affect the informal interactions and relationships of audit committees with IA. | The UK |
| Spira and Page (2003) | Investigate the extent of the ability of the internal auditors to manage risks, in addition to the possibility of conducting studies to verify the impact of the introduction of any guidelines such as Turnbull on corporate governance | The UK |

6. Conclusion and limitations

Theoretical and empirical contributions to IA have flourished in the last two decades. Despite its popularity, the paucity of generalizable research findings on the role of IA in managing risks in different environments has become evident. Our investigation aims to answer three questions;

RQ1. How is the IA in the European countries and the UK being developed?

RQ1a: How was the concept of internal audit developed across European countries?

RQ1b: What theories have been investigated in the literature?

RQ1c: How was internal audit research investigated? In what type of organizations was this research investigated?

RQ2. What are the themes related to IA research that attracted researchers' attention in the European countries and the UK?

RQ3. How can perspective literature advance IA in these countries?

To answer these questions, we applied a systematic literature review to collect the sample literature that was included in the investigation. It has been suggested that by using systematic review, an in-depth analysis of the subject that is under investigation can be conducted by evaluating the basic issues that have emerged and their theoretical and practical implications.

To answer the first question (**Q1**), some criteria were used to analyse the literature review, namely verification of the state associated with the IIA, the number of papers published in each country, the type of institutions in which the research was conducted, the type of respondents, the research tools, and the theories used in the research. The results show that the United Kingdom, Greece, and Italy dominate the literature published so far in terms of the number of studies. There is an absence of studies that investigated IA in private institutions and non-profit organisations. 87 studies are not based on theories. Furthermore, the results revealed that the questionnaire and theoretical/critical review were used more frequently than secondary sources and interviews.

For the second question (**Q2**), we have divided the studies' themes into thirteen topics, and then the rest of the unconfirmed studies have been classified in a specific framework to 'other'. The findings revealed that four themes required 88 studies: governance, the effectiveness and quality of IAFs, cooperation between internal auditors and others, and risk management. While the rest of the studies were distributed among the other subjects, it seems that there are reasons that made the study of IA and governance, the effectiveness and quality of IAFs, and cooperation between internal auditors at the top of the ranking list. Among these reasons are the crises experienced by some European Union countries, such as Greece, in which studies that discussed governance have been widely spread. Many topics have been discussed by a few studies pointing to the need for more work on these fields in future research.

Generally, the IA literature did not provide the integrated knowledge of IAFs and the factors that could contribute to their implementation as required. Therefore, it is expected that the practice of IA is not as required in accordance with international standards. The results indicate that the literature also did not agree on defining specific mechanisms and a regulatory mechanism in which effective auditing can be practised. Therefore, the literature did not contribute in a broad and significant way to highlighting the position of IA in the organisation as required. On the other hand, the results showed that there is an absence of studies that discuss the impact of cultural and political systems as well as the demographic characteristics of auditors on the implementation of IAFs. In addition, there is an absence of studies that discuss the role of IA in protecting funds from corruption. Modern topics related to IA were also absent in the sample of studies such as IA and sustainability, information technology, and the use of artificial intelligence systems. Finally, several gaps have been identified for the purpose of guiding future studies in addressing **Q3** presented in section 5.

There are many practical implications through the analysis that was carried out in this study. It is possible to identify the gaps that future studies must work on. This study also identifies a

roadmap for future research, which those interested in research in these countries can work on, as well as organisations interested in IA such as the IIA. We believe considering the current environmental changes because of the impact of COVID_19, more practical and theoretical research can enhance and contribute to improving the performance of IA. Future studies may take the resilience of the IA system and discuss the mechanism through which audit can be practised in a risk-based manner considering environmental changes. Future studies can also try to clarify the ingredients and characteristics that internal auditors should have to exercise the profession of IA effectively and uncover the role of information technology and artificial intelligence in developing programs and implementing IA plans. In addition, to that, the paper will be useful for future investigations, for European regulators, public policy decision-makers, and for society in general. This paper can be used in teaching, either on the theme, it addresses or in seminars or classes on the preparation of a literature review, as an example of how to prepare a systematic review.

Despite the numerous implications derived from the study, it has limitations. This study relies on the research documents indexed in Scopus only. This means that there might be some studies from other databases that were not included in this study. Hence, future work could use data from multiple databases such as the Web of Science. Also, this study has developed a searching string that utilized several terms to search the literature titles, keywords, and abstracts. These terms might not cover all related literature. We, therefore, encourage future research to further develop our search string that would cover all relevant literature.

Notes:

1+-Following the study by (Kotb *et al.*, 2020; Van Helden, 2005), the study does not refer to any specialist theory categorized as no theory.

2- Most of the 142 studies are cited in this paper; the rest are available from the first author upon request.

3- Regarding the research studies that discussed IA, there may be studies with influence between researchers and stakeholders that are not present in the Scopus database. As some researchers argue that IA is an administrative and accounting function. Therefore, future studies may look at (ABDC) base and (ABS) base in addition to searching in classified, administrative journals.

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