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## Article

# Mapping of internal audit research in China: A systematic literature review and future research agenda

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## ACCOUNTING, CORPORATE GOVERNANCE & BUSINESS ETHICS | REVIEW ARTICLE

# Mapping of internal audit research in China: A systematic literature review and future research agenda

Saddam A. Hazaea<sup>1</sup>, Jinyu Zhu<sup>2</sup>, Ebrahim Mohammed Al-Matari<sup>3\*</sup>, Nabil Ahmed M. Senan<sup>4</sup>, Saleh F. A. Khatib<sup>5</sup> and Saif Ullah<sup>6</sup>

**Abstract:** The purpose of this study is to review the field of internal audit (IA) in the Chinese context and provide insights into how the literature of IA has evolved by clarifying criticism of the research published until 2020. Following the structured literature review (SLR) technique, forty-seven (47) studies were identified from two databases. The results show that the IA literature did not contribute significantly to the knowledge of IA functions in the form specified by the Institute of Internal Auditors. The study also revealed that there is more to be explored so as to fully understand the IA aspects and their impact on Chinese institutions. Descriptive research was prevalent, depending on the review of the traditional literature and the historical analysis. On the other hand, the results show that the interpretative research that relied on the case study, questionnaire, and interviews were scarce. The private sector has been little studied compared to that of the public sector. This study highlighted the real IA's

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### PUBLIC INTEREST STATEMENT

This study reviewed the internal auditing literature that focused on the Chinese market. It has evaluated 47 articles retrieved from Web of Science and Scopus databases. Using a systematic literature review, this research covered all the papers published in the English language between 1997 to 2020. The study results showed that the internal auditing literature had contributed significantly to the knowledge of internal auditing functions in the form specified by the Institute of Internal Auditors. However, the investigation also revealed that one still has a great need to know internal auditing aspects and their impact on Chinese institutions. We believe that more quality research will strengthen internal auditing in institutions in light of China's political and cultural challenges. The results of this study help researchers and practitioners to identify the key issues related to internal auditing in China.

practice and identified literature gaps related to the Chinese context. This study is the first comprehensive review that analyse IA research in China. It also contributes to the literature by providing a road map for future studies by interested researchers and academicians, including the Institute of Internal Auditors.

**Subjects: Economics; Finance; Business, Management and Accounting;**

**Keywords: Internal audit quality; internal audit research; Web of science; Scopus; literature review; China**

## 1. Introduction

Scientific research of the financial statements related to auditing's, such as audit contracts, financial incentives, economic incentives, and audit processes, are relatively new. Until the 1970s, auditing was viewed as a practical activity governed by the procedures and technical rules related more broadly to the profession. However, auditing is a professional activity practiced in the broad economy by implementing and monitoring institutions' financial operations (Simunic & Wu, 2009). Auditing was recognised as a profession in the late seventies of the last century. This fact has led to an increase in interest in it as an essential part of higher management in organisations as it provides services to higher management boards through audit committees (Brink & Witt, 1982). A financial operations audit is an important work for many parties, such as shareholders, current and potential creditors, and institutions. Internal audit (IA) is defined according to the Institute of Internal Auditors IIA (1999) as an objective, independent activity that provides advisory services to improve institutions' operations to add value to them. IA enables institutions to achieve their objectives by following the system, regulations, and procedures to improve governance and control.

Institutions rely on IA as one of the main functions of the consulting activity that adds value to institutions Hazaea, Tabash et al., 2020; Nagy & Cenker, 2002). The IA function began with the aim of combating fraud by verifying the institutions' financial operations (Asiedu & Deffor, 2017; Ramamoorti, 2003). The IA functions in management and planning play a fundamental and important role in promoting and improving good governance (Christopher, 2019). IA is one of the internal control mechanisms to improve and strengthen governance (Kotb et al., 2020; Matarneh, 2011). In recent years, the work of auditors has expanded from the traditional job of detecting fraud to carrying out many tasks such as (i) working on electronic risk assessment, (ii) investigating organisational culture, (iii) evaluating general performance, and (iv) ensuring the implementation of general regulations and procedures for protecting financial data through the use of many modern approaches such as analysing the dynamic and visual of reports in addition to the analysis of agile practices (Deloitte, 2018).

According to these procedures and the updates that have occurred, IA's use has become widespread as one of the most prominent mechanisms used in controlling financial statements. Despite this significant and important development in the audit functions, the audit faces significant criticism due to failure to perform the function as defined by the IIA. Enron Company's failure was one of the main reasons for criticising the IA as its inability to carry on its job as required. As a result of the failure that occurred to some companies, IA is facing risks represented in its inability to perform a job as needed; besides, it does not achieve the IIA goal IA functions to add value to institutions. The practical reality is different from what is expected to be done according to international standards. It can be suggested that there is a gap around the IA's role in performing its functions to achieve a value addition to institutions.

According to the results of Christopher (2019), the performance gap in IA functions arises due to a lack of clarity of vision in terms of the organisational position of IA (such as a member of the board of directors versus a management partner), the IA function such as (assurance versus

consulting), the financial or accounting skills and experiences of the internal auditors and the extent their membership in the IIA, and the extent to which the internal auditors comply with the standards that regulate the IA profession when performing their duties. Thus, weak internal auditors' functional arrangements and characteristics are among the main reasons for ineffective internal auditing. As a result of the IA gaps and the reasons that contributed to this gap, this paper aims to analyse how IA research can be developed and the future research directed towards the actual and significant role that IA can play efficiently to ensure effective corporate governance. This is in addition to identifying the factors that contribute to the increase in gaps, analysing them, and providing recommendations to solve them. Moreover, among the incentives for this study is the desire to know the reality of IA research in light of the difference in Chinese culture and the government system Hazaea, Zhu et al., 2020). Also, the study attempts to evaluate the methods and ways that were used in IA research to see the extent of their contribution to improving IA functions (Simunic & Wu, 2009) in light of the reforms launched by the Chinese government to develop IA (Chen et al., 2011) as IA functions lack theoretical guidance (Li & Tang, 2015).

It should be noted that despite the growing interest in IA activities and the empirical investigation of all related aspects in the Chinese context, there is still a lack of a comprehensive review work that summarises the existing body of knowledge and provides suggestions for future research. The existing review research has focused on narrow aspects of the IA in china, like Li and Tang (2015), who concentrated on developing private enterprise internal audit (IA) in china. Similarly, Chen (2012) provided a review of the problems and current internal audit system conditions in china. Hu and Zhang (2015) presented a theoretical study that discussed IA's problems when practicing E-commerce. Li and Yang (2010) discussed the risk-based IA in theory briefly.

Unlike these studies and to achieve the research goal, we analysed the literature related to IA presented in the Scopus and Web of Science database. We performed a critical analysis to identify the ways and means in which future research could improve the IA function. This paper intends to answer four main questions: how has IA research developed in China? What is the level of IA in china? What themes have been investigated? How can future research develop IA's performance?

The study analyses the factors that can enhance performance, especially in the Chinese environment somewhat different from other countries. We used SLR to answer the main research questions suggested by the literature (Busalim & Hussin, 2016). This study expands the published research on IA in two ways (i) a specific period was not specified due to the lack of existing research currently in China, and (ii) we provided a detailed and accurate analysis based on SLR, which can be used to classify studies related to IA based on Affiliation of authors, journal site, year, type of papers, type of journals, nature of research, area influence, methods, and citations.

This work provides a more in-depth understanding that enables us to analyse previous research in a way that contributes to improving IA in the future. In addition to knowing the effects of IA research on the geographical area, we study the organisational factors that can enhance IA research in the future. This study is the first research that used the SLR method to analyse IA's research studies in China. This analysis, therefore, contributes to the provision of information by investigating the status of internal audits in Chinese institutions. This study provides an in-depth and broader understanding of IA functions and the identification of factors affecting the correct practice of IA, which improves the future vision of research, contributing to enhancing and improving the practice of IA functions. In other parts, this paper contributes to identifying areas not discussed in previous studies to work in the future and determining the impact of previous research on improving the practice of IA function.

## 2. Methodology

This study employed the SLR method to analyse IA research in China. Transparent, structured, and reproducible processes are used as recommended in the literature (Littell et al., 2008). A literature

review is one of the most common management research tools (Linnenluecke et al., 2020). The literature review is based on the detailed review of the subject under investigation according to specific rules and procedures (Khatib, Abdullah, Elamer & Abueid, 2021; Petticrew & Roberts, 2008). By reviewing the literature related to IA, it is possible to learn the worst and best practices, identify theoretical gaps in audit practices and guidelines, discover the status of audit performance and expect the challenges that are likely to be faced (Blackmore, 2004). SLR differs from reviewing traditional literature in that it reduces the subjectivity used in analysing the topic and enhances future research (Massaro et al., 2016).

The SLR use to answer specific questions and build new theories away from bias or systematic error (Cronin et al., 2008). Specific and immutable criteria are used in SLR to define and compile the literature, including a list of published studies on known databases or research in new databases largely unused Rothstein & Hopewell, 2009). To avoid the gaps resulting from the implementation of the study for the first time, we focused on the researches in the Scopus and Web of Science database and applied the SLR methodology that was followed by some researchers (Khatib, Abdullah, Elamer & Abueid, 2021; Morioka & de Carvalho, 2016). The study aims to determine how IA can be strengthened in future studies and provide reliable insights on IA research status in China; SLR use is justified. The following section presents SLR steps followed before analysing the data and suggestions for how IA can be developed with future research.

This study designed a review protocol as an illustrative guide for SLR development (see, Busalim & Hussin, 2016; Khatib, Abdullah, Hendrawaty & Elamer, 2021) to understand and apply the recommendations' basic rules of studies that take the same approach (Kitchenham, 2004). It has been suggested that having a protocol helps formulate the main research questions, the study synthesis process, the research strategy, the division of studies according to the specific considerations, and the synthesis of the extracted data (Kitchenham & Charters, 2007). According to this approach, we confirmed our findings' reliability (Massaro et al., 2016). Also, there is a possibility of applying and replicating this study by other researchers (Linnenluecke et al., 2020; Tsalavoutas et al., 2020).

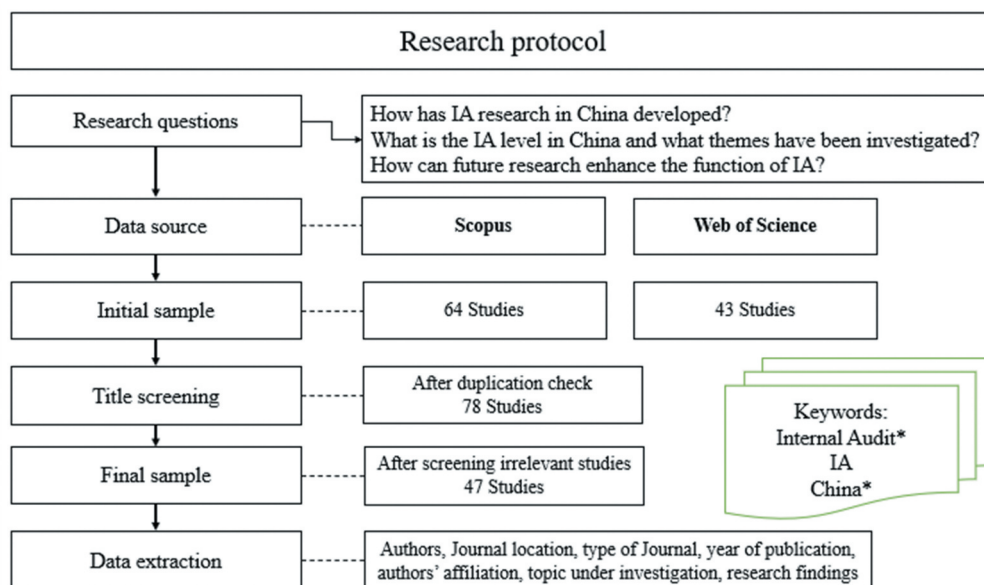
## 2.1. Searching the literature

Our first step was to search for reliable databases for collecting literature. Therefore, we adopted the best sources in terms of the quality of papers and the number of articles and ensured that these papers are fully obtained. When we compiled the literature, we mainly relied on papers from the Scopus database due to the largest number of papers (Nerantzidis et al., 2020). Then we verified the discussion of these papers for IA in China. After that, we compiled the papers on the Web of Science database and compared them to the Scopus database papers. It was found that there are six unavailable papers in the Scopus database, so the total number of papers is 47 (see. Figure 1). Three criteria of selections were used. The first criterion is that included papers that discuss IA only and not audit in general. In the second, we sorted the papers based on several considerations in terms of the literature published in auditing journals, the literature published in comprehensive journals for all management disciplines, and the literature published in conferences. Third, papers published in English only are included.

Table 1 shows that many studies have been published on IA in China using the traditional review (critical and theoretical review). However, these studies focused on specific points or a specific topic only as part of the IA, and thus such studies presented a narrow vision in the field of IA. All papers were unstructured and based on traditional reviews and relied on description, narration and did not focus on critical and SLR evaluation, and thus the results are irregular and untenable.

These concerns led to the necessity for a more general, objective, and structured literary analysis of IA. Unlike these reviews, we tried to comprehensively study the scope of IA in China depending on several standards such as the author, time, methods, themes, organisations, journals, and institutions and thus reflect the impact of the recent reforms launched by the Chinese government,

**Figure 1. The protocol utilised in conducting the current study.**



**Table 1. Internal auditing literature reviews in China**

Authors and Years	Focus	Objective	Scope
Canling (1997)	Role of IA	The study aimed to critically investigate three points: the independence of IA, the IA's organisational position, and the role that IA plays	Sinopec
Chuanbing (1997)	IA and the socialist market	Investigation of the IA under the socialist system	
Chi Cheung and Qiang (1997)	IA functions	The study aims to evaluate the IA functions in joint companies	Guangdong Nuclear joint company
Weizhong and Shourong (1997)	Effectiveness of IA	The study aimed to describe the factors that lead to the effectiveness of the IA. The study described the following factors: independence, interrelationships, the influence of the authority system	Public company
Chun (1997)	Functions and objectives of IA	The study aimed to examine the factors that may achieve the objectives and functions of IA	
Cooper et al. (2002)	IA standards	The study aimed to assess the extent to which international internal auditing standards conform to the standards followed by Chinese institutions	

(Continued)



**Table1. (Continued)**

Authors and Years	Focus	Objective	Scope
Wang and Liang (2010)	IA regulatory and reforms	The study aimed to investigate how to reform and activate the IA system from the perspective of corporate governance	
Li (2011)	IA function	The study aimed to assess the IA situation in private universities and to provide the necessary recommendations for the problems faced by the auditors	Private universities
Chen (2012)	Investigate the Constituents of IA	The study aimed to investigate three points: independence, objectivity, and organisational structure of IA	Commercial banks
Liu (2020)	IA risk	The study aimed to investigate how to apply computer simulation technology to reduce IA risks	

All the above are literature review papers in theoretical and critical review type

especially after China joined the World Trade Organisation at the beginning of the twentieth century.

We examined IA's area in China to provide perspicacity into how IA has evolved, clarify criticism of the research published until 2020, and identify the mechanism by which future research can improve IA. Thus, it can be inferred that we are looking for an answer to the following questions: How did IA research in China develop and include (aspects that have been investigated, and how was it investigated)? How can future research improve the function of IA?

### 3. Results and discussion

#### 3.1. Descriptive analysis

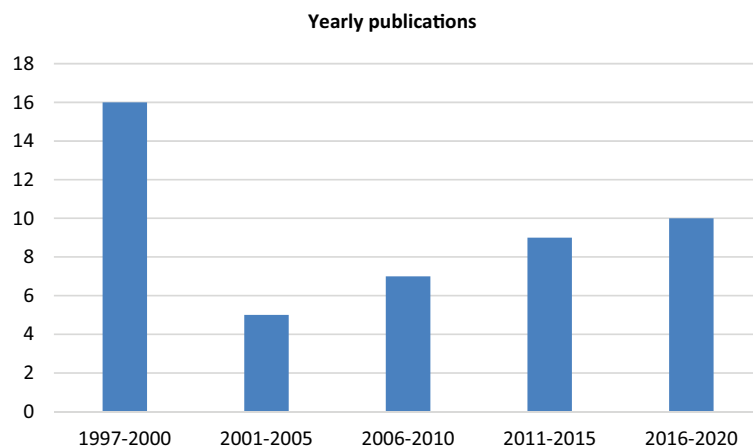
It is evident from Figure 2 that there is a marked fluctuation in research related to IA in China. As the number of papers published in the period between 1997–2000 reached 16, the number of papers decreased from 2001–2005 to only 5. Then, the gradual increase of papers began from 2005 until 2020. We can explain this as the number of papers published between 1997–2000, the majority of them, at a rate of more than 85%, were published in Managerial Auditing Journal. This fact can be explained as: (1) the reasons may be attributed to this journal's interest in researching IA's field in China, as China was not open to international auditing procedures and standards and its compliance with its standards procedures and (2) the gradual increase after the year 2000 may be due to the following: (i) China joined the World Trade Organisation at the beginning of the twentieth century, which means the beginning of openness to international standards and procedures (Macve, 2020) and (ii) the reforms launched by the Chinese government and organisations interested in auditing after 2000 (Chen et al., 2011).

#### 3.2. Internal auditing research impact

Table 2 shows the top 10 literature cited by Google Scholars, while Table 3 ranks the average number of citations for papers shown in Table 2 Citations Per Year (CPY) for one year. There is a discrepancy between the papers in the number of citations, although most of the papers were published in the same year.



**Figure 2. The time distribution of published studies.**



**Table 2. Top 10 articles by total Google Scholar citations in China**

#	Author(s)	Year	Article	Journal name	Citation
1	Kachelmeier (1997)	1997*	Internal auditing and voluntary cooperation in firms: A cross-cultural experiment	Accounting Review	177
2	Chun (1997)	1997	On the functions and objectives of internal audit and their underlying conditions	Managerial Auditing Journal	98
3	Said Suwaidan and Qasim (2010)	2010**	Internal audit— an Asia-Pacific profile and the level of compliance with internal auditing standards	Managerial Auditing Journal	39
4	Cooper et al. (2002)	2002	The development of auditing standards and the certified public accounting profession in China	Managerial Auditing Journal	35
5	Jin'e and Li (1997)	1997	Performance audit in the service of internal audit	Managerial Auditing Journal	32

(Continued)

**Table2. (Continued)**

#	Author(s)	Year	Article	Journal name	Citation
6	Shih et al. (2009)	2009	Moderator effects to internal audits' self-efficacy and job involvement	International Journal of Accounting & Information Management.	26
7	Enyue (1997)	1997	Development trends of internal auditing in China	Managerial Auditing Journal	21
8	Chi Cheung and Qiang (1997)	1997	Internal audit at Guangdong nuclear power joint venture company limited	Managerial Auditing Journal	16
9	Jianwua (1997)	1997	The present situation and developing trends of Chinese internal auditing	Managerial Auditing Journal	14
10	Zheng et al. (2019)	2019	The influence of construal of self on internal auditors' judgments on whistle-blowing: evidence from China	International Journal of Auditing	7

\*The data in this paper was collected from three regions: China, Hong Kong, and Canada \*\*The data in this paper was collected from 4 countries: China, Japan, Australia, and New Zealand

**Table 3. Top 10 papers by CPY\***

#	Author(s)	Year(s)	Journal name	Cititons
1	Kachelmeier (1997)	2005	Accounting Review,	27
2	Chun (1997)	2014	Managerial Auditing Journal	14
3	Cooper et al. (2002)	2009	Managerial Auditing Journal	6
4	Chi Cheung and Qiang (1997)	2015	Managerial Auditing Journal	6
5	Said Suwaidan and Qasim (2010)	2015–16-17	Managerial Auditing Journal	5
6	Shih et al. (2009)	2018	International Journal of Accounting & Information Management.	5
7	Zheng et al. (2019)	2020	International Journal of Auditing	5
8	Jin'e and Li (1997)	2014–15-16	Managerial Auditing Journal	4
9	Enyue (1997)	2015	Managerial Auditing Journal	4
10	Jianwua (1997)	2017	Managerial Auditing Journal	2

\*CPY total number of citations per year

**Table 4. IA literature demographics**

#	Authors' Affiliation in China		Authors' affiliations out of China	Total %
	Before 2005* %	After 2005 %	After 2005	
Auditing journals	19 40.5%	3 6.4%	9 19.14%	31 66.0%
Non-auditing journals	1 2.1%	3 6.4%	1 2.1%	5 10.6%
Conference papers	0 0.0%	11 23.4%	0 0.0%	11 23.4%
Total	20 42.6%	17 36.2%	10 21.24%	47, 100%

\*More than 85% of the studies published before 2005 were published in the journal (*Managerial Auditing Journal* in the year 1997)

Our results in Table 3 show a fluctuation in contrast to what is documented in the literature, to which scholars have gravitated to the most recent articles. As presented in these tables, it is clear that the study that was published by Kachelmeier (1997) is the study that had an impact on the academic debate among researchers through the number of citations. The reasons may be because the study's data were collected from 3 countries and not one country (cross-country), indicating that it is interesting among academicians in understanding the contextual differences between countries about IA. Also, the research was published in a journal specialised in auditing. Chun (1997) discussed the factors that can activate IA functions. He identified three factors: independence, organisational status, and objectivity. In addition to that, the study clarified that internal audit is a kind of special control. As for recent studies, Zheng et al. (2019) discussed the impact of the ethical values of auditors on their performance in terms of reporting irregularities, as it got some five citations within one year, perhaps because it was published in a specialised and highly rated journal and, therefore researchers tend to these journals. The remaining studies received a small number of citations despite the period in which these papers were published; such papers were also published in a journal specialised in auditing, but their impact among academics was weak. IA function is a profession that requires both experimental and investigative things. Thus, superficial studies not based on the empirical investigation of academics and professionals' superficial studies are not based on the empirical investigation on academics and professionals are weak. This is in constant with the findings of Kotb et al. (2020), that reported that the studies that are not based on empirical investigation and a deep theoretical basis do not contribute to knowing the practical value of IA functions.

### 3.3. How has Chinese internal auditing research advanced?

This part provides a detailed analysis of the 47 papers to answer the paper's questions. First, we explained the spread of journals, papers, and authors. Then, we concluded the study by a rigorous assessment to highlight future research directions to enhance IA and its functions.

#### 3.3.1. Internal auditing literature distribution

Table 4 provides a comprehensive analysis of the papers' demographic composition published on IA. We adopted the following criteria: Affiliation of the authors, the type of journal, and the year of publication, where we divided studies into recent studies and approved after 2005, while non-recent studies before 2005. Five criteria are used in categorising the sample literature as follows: papers published in auditing journals, papers published in non-auditing journals, papers published in conferences, authors who belong to universities in China, and authors who belong to universities outside China.

The results showed that 66% of the papers were published in journals specialised in auditing, and this is evidence that the specialisation of IA is a subtle and not broad speciality like other administrative fields. Looking at the authors, we find that the majority of studies published before 2005 were published by authors affiliated to universities in China at a rate of 40% of the total

papers in general, while the number of papers published after 2005 by authors belonging to Chinese universities reached 3 papers that rate as 6.4%; this is an indication of a decline in the percentage of research concerning researchers who belong to Chinese universities. In contrast, 9 papers were published in journals specialised in auditing by authors from universities outside China at a rate of approximately 19.14%. This indicates that other researchers are interested in knowing IA's nature in China concerning the governance system's differences in other countries. It may explain because most Chinese researchers publish their research in Chinese journals using the Chinese language and, therefore, future studies need to consider this matter' so that researchers can find out the reasons. As for the papers published in conferences, all the author's affiliations belong to universities in China. The number of articles amounted to 11 papers with a ratio of 23.4% of the total papers. Most of these papers are theoretical studies, except for 2 studies that use a practical aspect.

### 3.3.2. *What have fields of IA been examined?*

As shown in [Table 5](#), the thematic analysis revealed that 9 basic topics were discussed in the literature related to internal auditing. The rest of the topics were considered within the other classification. The discussion of IA's effectiveness and the historical development of IA in China took the largest percentage, as the discussion reached these two topics at a rate of 36.25%. The remaining percentage was distributed to other subjects. As shown in the table, 17 studies discussed the historical development of IA in China and the effectiveness of IA functions. A study carried out by Enyue (1997) discussed the development of IA functions in the socialist system, the audit work under socialist regimes and the role assigned to it, and how the audit function shifted from the traditional finance function to performance audit. The reason for researchers' interest in IA's effectiveness may be due to its consideration of audit success. It has been reached that the participation of internal auditors in the process of control and internal auditing without good knowledge and sufficient experience will cause problems, and therefore this issue deserves research by researchers (Shih et al., 2009).

Moreover, 4 recent studies have discussed IA effectiveness, which is the highest percentage of recent studies of all topics, perhaps because the IA was not affected by the 2007 financial crisis (Lenz et al., 2018). However, from the table, we noted that only 3 studies were experimental, while the rest of the studies were theoretical and literature review. The reasons may be because the organisations on which the studies were conducted, or the organisation in China in general, did not face any threats, especially that the IA in the previous period was focusing on financial activities and compliance activities only (Cooper et al., 2002). This is also confirmed by (Boyle et al., 2012). The difference between IA in China and IA in other countries prompted researchers to search for IA development. Consequently, IA functions differed from what they were in the past, as IA became linked to managing risks and evaluating performance in addition to the work of audit committees.

In evaluating the effectiveness of internal controls, the features of IA in organisations have been added. For example, a study done by Mihret and Grant (2017) showed that IA's role in corporate governance is related to the extent of implementation of previous economic activities and consulting services, considering the relationship between them as a later guarantee. Thus, empirical research in this field must be related to the extent of IA's role in reducing the risks that threaten institutions. This is also confirmed by Hazaea, Zhu, et al. (2020), who reported that China began to use IA to evaluate performance in addition to its traditional functions. In terms of compliance with international auditing standards, 3 studies have discussed this topic. Following the standards that regulate the auditing profession varies from one country to another depending on the system of government, cultures, customs, and the extent to which the auditor has professional and accounting expertise, Cooper et al. (2002) explained that the standards issued by Chinese enterprises are largely similar to international auditing standards but are unique in line with China's transformation into a market economy. The results of a study carried out by Alzeban (2015) showed that the

**Table 5. Research themes**

Themes	Papers per period					Research nature	
	Papers %	1997–2000	2001–2005	2006–2010	2011–2015	2015–2020	Empiric Non-Empiric
The IA							function effectiveness
9 19.15%	5			1	3	3	6
							Historical developments in the IA function
8 17.02%	5	1		2			8
							Compliance with IA standards
3 6.38%	1	1	1			1	2
							Governance role of the IA function
2 4.26%				1	1	1	1
Impact of IT on the IA							function
2 4.26%			1		1		2
							Implication of IA
2 4.26%				1	1	1	1
IA							efficiency
2 4.26%			1	1			2
							Challenges facing IA
2 4.26%	1			1			2
IA							function and corruption
1 1.13%					1	1	
Others	16 34.05%	4	3	4	2	3	5
Total							11
16	5	7	9	10	12	35	47,100%

independence of IA members and their enjoyment of financial and accounting expertise is among the most important factors affecting compliance with auditing standards.

As for the rest of the studies discussed, they came at the same rate at the two studies for each topic. For example, two studies discussed the challenges facing IA in China. Many challenges are facing IA. The challenges may be related to those in charge of auditing's, such as the lack of auditors with professional experience and accountability, lack of audit members' independence, and challenges related to customs, traditions, and government system. One of the challenges encountered in China's auditing profession is the relative ambiguity of the audit guidelines and instructions in many aspects, especially concerning auditors and management's responsibilities in detecting corruption. In addition to that, a change must be made by keeping pace with the updates in the international audit (Chong, 2008). According to Macve (2020), China's current audit lacks complete independence and transparency, affecting the reports' reliability.

Meanwhile, corporate governance has taken two studies. Corporate governance is one of the important parts of internal auditing, especially at present. Internal auditing is one of the important primary components of corporate governance (Narayanaswamy et al., 2019).

Regarding the impact of technology on IA, two studies have discussed this topic, but these two studies are theoretical and not practical. Thus, the need for experimental studies is an important matter through which one can know and analyse the topic accurately. Experimental analysis can achieve two benefits: (i) it provides a more positive and realistic analysis and (ii) through which it is possible to know the required changes in the job and performance by adding the possibility of discovering weaknesses related to the control process (Steinbart et al., 2018). As for the IA role in combating corruption, there is only one study, a recent and practical study. IA is considered one of the most important tools in the fight against corruption Hazaea & Jinyu, 2021). Zeng et al. (2020) aimed to investigate the extent of the institution's executive supervision's influence on enhancing IA functions in combating corruption. Using the data of medium and small size companies for 7 years, the results showed that the oversight based on authoritarianism is negatively associated with IA functions' ability to combat corruption.

The last group of literature was classified because it does not include the main topics of IA, in addition to the fact that around 75% of these papers are conference papers and have not been published in specialised journals that discuss various topics such as Liu et al. (2020) explored the antecedents of internal auditors' voice in environmental-related issues. Also, Kachelmeier (1997) discussed control as one of the audit functions on societal factors. Fa (1997) evaluated the functions of IA departments in achieving the economic issue. Shih et al. (2009) examined the relationship between auditors' self-efficacy and job participation. Finally, the table shows that most of the studies were theoretical or literature review. In addition to that, most of the studies were outdated, and there were no new studies as required. Most of the studies published from 2005 to 2015 are theoretical and non-experimental conference papers. To find out the extent of the impact of research on IA, future studies should focus on practical aspects and address the topics that are crucial to be discussed, such as the impact of culture and governance systems on IA. Finally, the investigation revealed that previous studies had investigated a wide range of the IA function effectiveness and historical developments of the IA function aspects related to IA in China. While the other aspects of IA have received less attention, these themes need more work addressing them.

### 3.3.3. *How has internal auditing been investigated?*

In Table 6, we illustrate 5 methods used in the 47 papers. The literature review method was ranked first, especially in studies published from 1997 until 2000, with a rate of up to 57%. The reasons may be related to the inability to follow modern data acquisition methods due to the Chinese culture and its political system. Future studies need to research this point. The second reason is that most of the theoretical papers are conference papers using questionnaire /survey/ /other empirical/ came in second place with a rate of 23.40%. The questionnaire method is one of the most important methods of obtaining data because it is more reliable. Using a questionnaire to obtain data provides a degree of confidence in the information, making it easier to make recommendations for appropriately solving problems (Fife-Schaw & Questionnaire design, 1995). Usually, questionnaires are used to obtain data, especially in social and behavioural disciplines, as it is considered one of the best ways to get accurate and real data (Roopa & Rani, 2012). Some of the recent studies included in the investigation used the questionnaire tool to obtain data (Zheng et al., 2019; Liu et al., 2020).

The historical analysis came in third place with a rate of 12.76%. Despite the importance of using different methods to collect data, it came at a low rate because IA research in China is very few (compared to our sample as 47 papers). In addition to that, most of the studies were published 20 years ago and are theoretical, not practical. According to Malina et al. (2011), mixed data

**Table 6. Research methods**

Themes	Paper(s)	Historical Analysis	Case Study			Questionnaire/ Survey/ /Other Empirical
						Theoretical/Critical Review
<b>Mixed Methods</b>						
The IA function						effectiveness
9	1	1	1	6		
Historical						developments in the IA function
8	2			6		
Compliance with IA standards	3			1	1	1
Role of governance in IA function	2			1	1	
Role of IT on IA function	2	1			1	
Implication of IA	2			1	1	
IA efficiency	2			1	1	
Challenges facing IA	2				2	
IA function and fraud and corruption	1			1		
Others	16	2		5	8	1
Total	47	6	1	11	27	2

collection methods give significant research advantages. In the field of IA, the use of interviewing and archival methods may be extremely difficult. Collis and Hussey (2017) reported that they faced significant and fundamental difficulties in collecting data for their research topic because they prevented their internal auditors from conducting the interviews. According to Shields (1997), the use of methods other than the questionnaire to collect data may face many difficulties, including the reviewers' lack of acceptance of interviewing, lack of data, and reliable sites that may take a long time study one case.

Secondary data (company reports and data from the website) were also used, but very little. For example, Peng and Liu (2013) investigated the extent of the financial statements' quality when adopting IA's subordinate methods. The positivist approach in studies that follow quantitative methods increases dramatically in the United States of America and other countries (Pelger & Grottko, 2017). From the results discussed, we argue that the reasons that negatively affected the quality of research and the extent of its contribution to the promotion and development of IA functions are not relying on experimental studies, through which problems can be identified to contribute to providing more reliable recommendations and solutions. The results showed that



descriptive research was prevalent, depending on the review of the traditional literature, the historical analysis.

### 3.3.4. Theories employed in the literature

The use of theories in the field of IA is quite common. Before 2015, agency theory was used in 2 papers, 4.26%; market economic theory and mathematical theory were used in 2 articles (2.13% for each theory). After 2015, various theories were used. Social exchange theory was used in one article at the rate of 2.13%. Similarly, institutional theory 1 was used in one article with 2.13%, control theory (1 article, 2.13%), organisational support theory (1 article, 2.13%), market economy theory (1 article, 2.13%), voice theory (1 article, 2.13%). 4 articles rated at 8.50% used other theories. The most surprising finding is that 33 papers of IA literature in China are not based on any theorising form. The reason may be due to the naturalness and basis followed in the papers and the journals they were published in, as most of these papers are often descriptions of emerging issues such as comments, conference papers, theoretical papers, and reviewing traditional literature. For example, most of the papers published between 1997–2000 were published in *Managerial Auditing Journal* in the conventional or theoretical review form. We believe that such journals in that period were intended to provide a detailed view of IA issues for non-academics, including auditors.

Given that many of the studies are not based on theories, this may affect the IA literature development because it limits the deep and broad interpretation in the search for how and why economic, social, and cultural changes may affect IA practices. Future studies may be based on various theories to write papers based on a clear and specific theoretical basis that contributes to discussing IA's better practice in China. Finally, we noticed new theories that have been used in the field of IA. For example, Liu et al. (2020) used voice theory to investigate internal auditors' voice precedents with environmental issues. Zeng et al. (2020) employed the fraud triangle theory to investigate the extent of the audit department's executive management's influence in enhancing the IA functions in combating fraud. Mir et al. (2017) applied the institutional theory in exploring the different models for auditing the Chinese public sector. Xiao (2018) used the fuzzy mathematics theory as a basis to investigate the importance of IA in risk management in private enterprises in southwest China. Table 7 provides theories adopted in the articles. Future studies

**Table 7. Theories employed**

Theories	19,997–2005	2006–2015	2016–2020	Total	%
Agency theory	1	1		2	4.25%
Mathematical theory			1	1	2.13%
Social exchange theory			1	1	2.13%
Institutional theory			1	1	2.13%
Control theory			1	1	2.13%
Organizational support theory			1	1	2.13%
Market economy theory	1			1	2.13%
Voice theory			1	1	2.13%
Other theories	1		3	4	8.5%
Papers without theory	17	14	3	34	72.34%
Total	20	16	11	47	100%

Other theories include membership degree theory, fraud triangle theory, the theory of two wings, and strategy theory.

**Table 8. Research settings**

Period	Private SMEs	Private Others	Publicly Listed	Public Sector	General/ Other	Total
1997–2000	1	1		5	9	16
2001–2005		1		2	2	5
2006–2010			1	3	3	7
2011–2015		3		2	4	9
2016–2020	1	1	1	4	3	10
Total	2	6	2	16	21	47

may compare studies based on different theories used in IA. Moreover, the future researcher may also compare IA literature on China with other regions of the World.

### 3.3.5. In what type of institutions has IA been examined?

**Table 8** shows that the research conducted in general ranked first with a rate of 44.68%. This indicates that most of the research discussed IA was studying literature or papers discussed in conferences. Also, this reflects a lack of research depending on experimental analysis. In second place came companies classified as a government sector with a rate of 34%. This can be explained by the possibility of obtaining data at a lower cost and less time than private-sector data. The fact that the government sector cooperates with researchers is more than in other sectors. In addition to that, the government's concern in the necessity of activating IA functions in public sector institutions and activating governance mechanisms may be one of the reasons that prompted researchers to conduct studies that discuss the status and importance of IA in these institutions because public institutions are more vulnerable to risk compared to private institutions. IA jobs have become highly demanded in public sector organisations.

Therefore, researchers' interest in searching for internal auditors' role and the factors that affect their work performance was a reason for the spread of research applied to public institutions (Roussy, 2013). For example, Mir et al. (2017) conducted a study to investigate the models used for auditing institutions in China and any differences from the models followed in other countries. Then, there came the research that discussed IA functions and their importance in the private sector. Also, Zeng et al. (2020) discussed executive management's role in enhancing IA functions in small and medium-sized enterprises. By looking at the research papers that examined IA in private institutions, most of them were published between 2010–2020. On the contrary, most of the papers that discussed IA in public institutions were published from 1997 to 2010. Future studies may look for reasons for this.

## 4. How can future research advance internal auditing?

In our analysis of the literature that discussed IA in China, it has become clear that the IA literature did not adequately identify the great importance of IA. There is a lack of clarity in identifying the factors that can contribute to activating and practising the IA function following international standards. The IA function is still not known. Therefore, the failure to identify basic factors for assessing and defining the IA function is one of the most important challenges facing those in charge. The reliance on positive (Economic) literature analysis is perhaps one of the main reasons for failing to understand the IA function. Another reason is the lack of extensive empirical research based on deep theorising. (Positive) economic research could be the reason for the lack of awareness of researchers and those interested in the great importance of IA functions because it limits the deep and broad thinking of how and why political, economic, and social factors may affect the IA function's exercise as required.

Moreover, the nature of the political system followed in China may be seen as one of the most critical challenges facing internal auditing. Our research also shows the absence of literature discussing IA in non-profit institutions and small companies. This is also evidence of the lack of literature that discusses auditing in one of the most important economic sectors. We will determine how future studies can enhance the IA function. We will discuss the areas expected to help those interested in the IA function in identifying the factors that can enhance IA effectiveness. These factors may be organisational or ethical. We will also explain how future research can go beyond previous literature that discussed auditing in terms of style and theoretical flattery and attempt to bridge the gaps by clarifying organisational and ethical procedures.

#### **4.1. Towards an effective internal auditing**

Many studies have proven that IA is still viewed as an undiscovered black box, for example, (Lenz et al., 2018). Future researchers can develop a broad and integrated model based on several considerations, including the perceptions of those interested in the audit function such as international organisations, the perceptions of stakeholders, the perceptions of auditors, and studying the extent of interaction and consistency between these perceptions with each other and their applicability based on internal and external variables affecting the audit function.

Future research may clarify how these perceptions were built by comparing them with professional and organisational requirements and identifying factors that may affect the IA. IA is one of the main factors that seek to achieve the organisation's goal of survival. IA is also referred to as providing a consulting service to achieve and add value to institutions, which requires that the IA function be effective. Future studies may address many aspects, such as: what is the effect of following professional standards for the IA function on its effectiveness? Should the IA be subject to an oversight body? What are the necessary measures that must be taken if IA is not practised effectively? What role parties and other procedures can play in the IA process, such as audit committees, implementation of the IIA recommendations, and professional training for auditors?

Nevertheless, we believe that other factors may contribute to IA's effectiveness and are related to those in charge of the audit department. Future studies can cover the following questions: what role can higher departments play to ensure an effective audit? Do social, cultural, and political factors have an impact on the effectiveness of IA? Does the audit function need to be at the top of the organisation's hierarchy to perform its work effectively?

#### **4.2. How to achieve the effectiveness of internal auditing**

Many studies have discussed factors that can contribute to the activation of the IA function. For example, Poltak et al. (2019) reported that the following factors could positively affect the IA functions: independence of internal auditors, auditory perception, and the collaboration between internal and external auditors. Ahmad et al. (2009) summarised the factors that can positively affect IA as a level of auditor qualifications, management support, and auditing reports acceptance by the management. Yang (2016) discussed the effect of big data on IA in Chinese universities and concluded that the activation of IA functions might be affected by the extent to which they are based on the presence of extensive information. Therefore, the best and appropriate use of such data may enhance IA independence, contributing to improving the quality of auditing in institutions. We add that the IA must concentrate on the risks as soon as they arise and look behind the expected risks.

Future studies may explore the following questions: how can internal auditors prepare a manageable audit program subject to change according to the organisation's variables? Moreover, when can this be said? Is it expected that those interested and organising the IA function will negatively impact IA development? We discussed the studies that lacked clarification of the accounting and technical characteristics and skills internal auditors should possess. One of the basic ways to achieve flexibility is the use of modern technology. Future studies may answer how recent innovations such as blockchain audit analytics and artificial intelligence can enhance

the IA function. Also, stakeholders' preferences may be considered concerning auditors' professional certification or traditional certification. Finally, future studies may look at the differences between information technology auditing and the adoption of modern innovations and the degree of cooperation expected between IA functions and information technology in various fields. Future studies must provide a real presentation and research on the factors contributing to activating the IA function. Future studies may include some topics such as: what are the characteristics and skills that IA members should have? How can the adequate and acceptable level of the audit function be achieved? What are the necessary organisational procedures that enhance the effectiveness of internal auditing and discuss the professional ethics that members of IA must-have?

#### **4.3. More theory and practical research relevant to internal auditing**

Our analysis of the studies that discussed IA literature in China clarified that empirical explanatory research is almost absent. The research took the narrative side without proper theorising. Future studies should focus on appropriate theorising and conduct many explanatory studies, especially with private sector institutions. It should be understood that future studies will critique previous studies as much as it is intended to understand IA more and search for cultural and political factors that may affect the IA's effectiveness. From the analysis of studies, it became clear to us that most research is based on (positive) economic theory. Therefore, the research failed to address and provide solutions to problems. Future research can answer the following questions: why do organisations fail to practice IA, and what are the reasons behind that?

Explanatory research may answer these questions by presenting the necessary proposals and recommendations (Mihret & Grant, 2017). Future research may also take other data methods, such as case studies and interviews, given that some of the data based on the questionnaire may be unreliable. Therefore, new future studies can answer problems that previous studies had not discussed through different methods. The results of our analysis showed that the IA examination and its functions in the public sector took the largest percentage, but it is clear that the investigation was limited to some areas. On the other hand, the results of our analysis showed that IA research, whether theoretical or empirical in the private sector, was very few and, therefore, this is one of the gaps facing those interested and researchers in IA. There are many questions that future studies should investigate. This includes the necessary procedures for IA to perform its functions of adding value and protecting institutions from risks? Is there a difference between IA's necessary procedures in both the private and public sectors and the factors facing auditing in both sectors? The Chinese government launched some reforms during the recent period, but the implications of these reforms are? Did these reforms achieve the goals for which they were issued? Future studies should look into this aspect.

#### **4.4. Direction using suggestions from the latest research articles**

The investigation has identified several avenues for further investigation in future work. We have identified the most suggested topics from the latest articles, which we think need to be investigated better and broadly; (1) Conducting studies to research the role of executive management in foreign institutions in enhancing the performance of the IA role and comparing them with the results obtained in this study so that those interested can know the differences in light of the lack of complete disclosure of information in Chinese institutions (Zeng et al., 2020). (2) Conducting studies to know the lenders' vision and perceptions of the efficiency of the IA function by examining the terms of debt contracting, researching whether the quality of the IA functions improves the efficiency of investment, and exploring the importance of the efficiency of IA functions in improving operational processes in new and emerging economies under a system that differs from the system used in Chinese institutions to find out the differences, which contribute to the development of internal audit (Chen et al., 2020); (3) Carrying comparative studies using samples from other countries with a government system that differs from the socialist system followed in China, in addition to taking into account the difference in the culture of the country in which the study is being conducted from the culture of China to examine the vocal behaviour of the auditors in all fields, including governance issues and issues related to the

social environment (Liu et al., 2020). Finally, further work could evaluate the impact of Covid-19 on IA function. This crisis significantly impacted all organizational aspects, including auditing (Khatib, Nour. (2021).

#### **4.5. Towards culture and political system in China**

Some studies discussed the socialist system's effect (Chuanbing, 1997) and Chinese culture on IA (Li et al., 2008). Therefore, the difference in the system of government in China and the government's desire to rely on local work and cultural differences may force future studies to research them. For example: does the government system affect the audit's performance, and what kind of impact does it have? Do auditing institutions in China follow international standards that regulate the audit profession, or do they follow local standards? If they follow the local standards, what is the regulatory gap behind that, or are the local standards issued suitable with China's social and cultural environment? What are the reasons behind the lack of research using the English language? China is the largest country globally in terms of population, so the number of researchers will usually be large, but our results did not confirm this view so that future research may consider this point. Finally, China seeks to achieve competency auditing as the most important element in the development of IA, which is achieved by moving from traditional IA to modern IA (Liu et al., 2010). Future studies may discuss this issue in light of the Chinese environment and compare it with the environment of more developed countries.

#### **5. Conclusions and limitations**

Our study reviewed IA's field in China to provide insights into how IA's literature has evolved, clarify criticism of the research published until 2020, and identify the mechanism by which future research can enhance IA. SLR was used to analyse 47 papers depending on the Scopus and Web of Science database. Prior studies that discussed IA in China did not clarify the important role of IA and did not address the risks that threaten institutions. Moreover, the studies did not provide IA's primary objective to add value to institutions. This indicates that IA's practice may differ from what was stipulated in the standards that regulate the profession of auditing. The factors that could contribute to activating the IA functions and measuring their impact have not been identified. Therefore, the research discussed IA in China could not clarify its importance as an essential governance factor. Our analysis showed that the prevalence of descriptive research was prevalent, depending on the review of the traditional literature, the historical analysis. At the same time, we did not find any studies that used SLR. The investigation also revealed that previous studies had investigated a wide range of the IA function effectiveness and historical developments of the IA function aspects related to IA in China. While the other aspects of IA have received less attention, these themes need more work addressing them.

On the other hand, our study results showed that the interpretative research that relied on the case study, questionnaire, and interviews was scarce. Usually, IA literature is not based on any form of theorising. The investigation (or study) also shows that the private sector has been little studied compared to the studies that discussed IA in the public sector. In general, the analysis showed a large gap represented in the lack of research that discussed IA in China, the lack of interpretative research, but there is some improvement which the empirical research was more compared to before 2010.

Regarding researchers' Affiliation, the analysis showed that most recent studies that have discussed IA in China belong to universities outside China, assuming that higher institutions are interested in internal auditing. Researchers were able to define the functional framework for internal auditing. Future research may help clarify best practices through the following: setting analytical and explanatory programs to study how to implement the IA function in an integrated manner based on risks and compatible with institutions' strategies, investigating the role that IA stakeholders aspire to do, and considering IA as one of the basic pillars in corporate governance. All these factors also may contribute to activating exercising IA as required. On the other hand,

internal auditors' knowledge of the characteristics, skills, financial and accounting expertise, and ethical practices which they may need may also change the scene of practising the IA function.

Similarly, other factors depend on audit analytics and artificial intelligence, and the question is how they will contribute to preserving the traditional functions of internal auditing and its importance in institutions. Our study has many important implications for academics and policymakers related to internal auditing, whether in China or elsewhere. Researchers, especially doctoral students, may benefit from it because it provides a comprehensive and in-depth view of current research, opening new horizons for future studies. Besides, it may help auditors perform their duties appropriately; it may also help policymakers know the effectiveness of internal auditing by reforming organisational work and improving decision-making. There are limitations for each study; therefore, the literature review results are limited to the following options during the analysis. The results may be subjective in some cases, but not in all cases. We have chosen the papers published in the Scopus and web of science database as one of the strictest rules for obtaining data regarding the study of literature. Future studies should enrich our study results by tracking studies that will be published in the coming periods. Finally, SLR provides more reliable and credible results compared to traditional reviews.

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#### Notes

- (1) Details of all 47 papers are included in this paper, except for some papers published in conferences (but are available from the corresponding author upon request)
- (2) Some researchers argue that IA is not so much an accounting topic as it is a management topic. Thus, there may be important research neglected and are related to IA in some journals not indexed in Scopus and Web of Science database. Future studies may search for

necessary research available in the Association of Business School (ABS), Australian Business Dean Council (ABDC), and administrative journals classified using programs such as Publish6 or Publish to overcome this challenge.

- (3) Journals indexed in ABS and ABD by researchers and universities are classified as a measure of the quality of scientific papers (Beattie & Goodacre, 2004)
- (4) Used a CPY scale to mitigate bias toward older studies (Tsalavoutas et al., 2020).

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