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RESEARCH ARTICLE

Impact of Digital Transformation in Internal Audit: Bibliometric Analysis of Research Trends and Perspectives

Moutie Yassine[1], Benazzou Lotfi[2]

[1,2]Organizational Management Research Laboratory. National School of Business and Management (ENCG), Ibn Tofail University, Kenitra, Morocco

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***Corresponding Author:**

yassine.moutie@uit.ac.ma

ABSTRACT

This study report displays the findings from the bibliometric analysis undertaken to understand the impact of digital transformation on the internal audit process. Applying quantitative research, with the support of VOS Viewer software, 128 articles retrieved from Scopus with publication years between 2016-2025, after passing several stages of filtering on keywords such as Internal Audit and Digital Transformation. The result shows an escalating growth in scholarly attempts to merge digital technology like 'ERP' and 'Big Data Analytics' with internal audit. It has been perceived in general literature views that digitalization improves overall internal audit effectiveness. Statistical analysis carried out in response to research questions shows there to be a marked increase in publication over time, with an average contribution rate of 12.8 articles per year and 740 citations in total, with 6.8 on average per article. Most common themes identified include digital transformation in internal audit practice, Big Data, management and security systems, with most activity in China, United States and United Kingdom, while most citations of articles are from Italy and Turkey. Other bibliometrics tools such as citation analysis, keyword mapping, country analysis has also been utilized. It is observed in the research that while technologies such as ERP have the capability to greatly influence the profession of auditors, there are also challenges implicit in these technologies with regard to professional judgment and ethics on the part of auditors. Lastly, the research establishes that there is a gap in studies concerning digital transformation and internal auditing in the context of Africa, specifically in Morocco. It offers an opportunity for carrying out research on the effect of digital tools on the practice of internal audit in the African context.

INTRODUCTION

Digital transformation is reshaping internal audit by introducing advanced analytics, automation, and digital risk considerations that affect audit scope, methodology, and decision-making. This study presents a bibliometric analysis of research on digital transformation impact in internal auditing, using SCOPUS indexed literature published between 2016 and 2025. The study aims to identify research trends, influential authors and affiliations, frequently cited works, thematic relationships, and gaps in the literature to better understand how digital transformation affects audit decision-making. In identifying and structurally mapping one decade of publications (128 documents) using VOS viewer software, this study provides evidence-based insights for advancing future agendas in this field of study.

The key objectives include, to analyze trends associated with time and topics on digital transformation and auditing studies, to establish interlinkage among key themes and subject clusters related to the field, to determine the most productive authors, sources, and countries on digital transformation and auditing topics, and to understand the position of scientific studies within digital transformation and internal auditing contexts. The objectives are to be addressed with 4 research questions:

RQ1: What are the key trends in research on the impact of digital transformation on internal auditing?

RQ2: What is the connection between key themes associated with digital transformation research and its application to auditing?

RQ3: What authors, countries, and publications are most often cited for this subject?

RQ4: What is the status of scientific research in Morocco concerning digital transformation and its role in internal auditing?

This quantitative approach aims to map recent scientific output in order to identify the main themes, networks of authors, and contributing countries, understand the intellectual structure and collaborative dynamics in the field of digital transformation and internal auditing and explore the current state of scientific output in Africa, and specifically in Morocco, with regard to our theme.

It should be noted that the article is divided into three main sections, the first presents the epistemological and methodological framework of the study, based on post-positivism as an epistemological foundation and the bibliometric approach, the second presents the results of the bibliometric study following the analysis of publications: distribution by source, authors, disciplines, and collaboration networks, the third offers an analysis of the results, highlighting scientific production concerning the impact of digitization on internal auditing in Morocco, before concluding with theoretical contributions and future research prospects.

1.LITERATURE REVIEW

Digital transformation has impacted the role of internal audit by bringing advanced data processing capabilities, automation of manual processes, and new analytics techniques to facilitate audit decisions and risk analyses (Joseph and Gaba, 2020; Kokina and Blanchette, 2019). A range of new technologies, robotic process automation, big data analytics, machine learning, have been identified in the literature to bring enhancements to speed and facilitate continuous auditing processes and also to broaden audit evidence beyond current sampling methodologies (Cao et al., 2015; Eulerich and Eulerich, 2020; Wassie & Lakatos, 2024). It has been found in empirical studies that new information technology is restructuring audit processes and relationships in organizations while opening new possibilities for higher order audit judgments (Salijeni et al., 2021).

The role of human-machine collaboration and its meaning for professional reasoning is contested among researchers. While some researchers highlight augmentation and point to the primarily supportive role of digital tools and advanced analytics for human decision-making processes (Agrawal et al., 2019; Lehner et al., 2021), others point to the potentially increasing use of self-governing agents for independent decision-making processes (Mulgan, 2018; Jarrahi, 2018). This classic challenge between structure and judgment is thus revived here, while technology may standardize and automatize structured tasks, it may also onset new cognitive scripts for auditors to follow (Camic, 1987).

The respective responses of regulation and industry have further impacted the pace and extent to which digital technology is diffused and adopted within internal audit functions. Technical standard setters and regulators have published guidelines covering data management, controls for automated processes, or reliance on third-party analytics techniques, thus acting as mediating factors for adoption pace and intensity (Financial Reporting Council, 2018, 2020; PCAOB, 2018). Concomitantly, major professional service organizations have developed and promoted their own proprietary systems involving digitalization and analytics integration into audit processes, for example, KPMG Clara, PwC Halo, or Deloitte Cortex platforms, thus representing both commercialization processes for audit technology and differential intensity of audit technology implementation among professional service providers.

Studies on organizational and social implications include identity, ethics, and power relationships. There is evidence pointing to the danger of deskilling, reliance on algorithmic results, and exclusion of particular occupational categories if expertise is mainly channeled into technical teams because of automation (Munoko et al., 2020). The possibilities of bias and harm to individuals have raised demands for algorithmic auditing to guarantee fairness and responsibility for digital based audit processes (Obermeyer et al., 2019). It is argued that responsible oversight should involve slowing

down development and ensuring ethics are interjected into development processes to retain trust and values of democracy at all stages.

Despite this conceptual spurt and case studies being plentiful, very few empirical observations have been registered on the impact of digital transformation on audit quality and risk assessment precision or on overall regulatory compliance (Munoko et al., 2020; Issa et al., 2016). As reported in earlier reviews, empirical and large-scale studies have largely focused on affordances and theoretical expectations of change (Frey & Osborne, 2017). Fortunately, bibliometric studies have started to uncover paths to overcome these limitations for tracing graphical representations of topics and author influence within particular subject areas (Salijeni et al., 2018; Yang et al., 2024).

2.Epistemological and methodological framework

Based on its epistemology, post-positivism constitutes the paradigm under which this bibliometric analysis is conducted because it supports our approach (Elharbaoui, E., & Ntebutse, J., 2025). According to Guba & Lincoln, a paradigm development recognizes the existence of objective reality, though its meaning is incomplete and approximate, while at the same time advocating scientific rigor to pursue knowledge (1994, cited by Elharbaoui, E., & Ntebutse, J., 2025).

Our approach founded on this realization, prioritizes carrying out quantitative analysis relating to scientific publications concerning digital transformation within the context of the internal audit function. This epistemological gap between our analysis and scientific publications is imperative to realize for ensuring our analysis's validity. Indeed, our aim to attain objectivity closely correlates with the desire to attain objectivity in post-positivism. This objectification in methodological terms is made manifest in our use of rigorous standardized and reproducible bibliometric indicators, analysis of publication data, analysis of lexical occurrence data to establish terminological networks, analysis of co-occurrences to detect conceptual networks, or analysis of citation data to explore the structures of citation relationships.

The variety of indicators (citations, co-citations, occurrences, co-occurrences, coupling) used to measure scientific journals mirrors a post-positivist understanding concerning the inadequacy of any one indicator alone to fully describe a complex phenomenon. The multidimensionality makes possible a holistic understanding of scientific dynamics, though necessarily imperfect.

The scientific quantification of scientific output in digital transformation in the field of internal audit makes possible not only a specific categorization related to scientific paradigms but also traces a history of structuring concepts. In other words, our methodological approach to scientific study not only argues according to the post-positivist movement that all scientific knowledge needs to be falsified against its contexts but also traces the collaborative efforts between authors, universities, or nations (Chen et al., 2022), which encompasses another principle related to post-positivism the basic principle stating that scientific knowledge needs to be influenced by its social contexts.

1.METHODOLOGY

This study adopts a quantitative bibliometric analysis to ascertain a transparent and replicable assessment of extant literature. A total of 128 Scopus indexed documents published between 2016 and 2025 are considered for analysis. Bibliometric analysis, co-citation analysis, co-authorship analysis, and keyword co-occurrence analysis were performed using VOS viewer software to extract topic communities and development of research fronts (van Eck and Waltman 2010). This particular approach also adheres to rigorous guidelines for bibliometric analysis to facilitate easy interpretation (Donthu et al. 2021; Zupic and Cater 2015).

With these approaches, the research makes three contributions to this field of study. First is the compilation of empirical and conceptual studies to uncover discernable trends and themes associated with both digital transformation and internal audit processes. The second contribution is identifying key authors and geographical or institutional concentrations for study on digital transformation and internal audit processes to generate further insights for study and improvement of audit processes using digital transformation techniques. The third is pointing to areas of further development.

The process of selecting and compiling the corpus can be summarized according to the following figure.

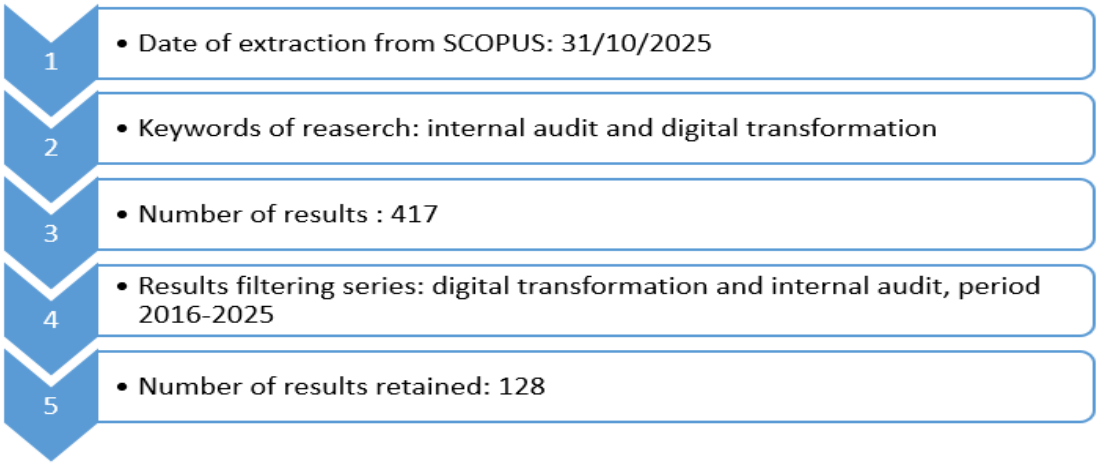

Figure 1: Process for searching and selecting of documents in the SCOPUS database

Source: Authors' own research

In phase two, we employed a variety of complementary quantitative methods to gauge both the relevance and quality of the identified articles using a systematic analysis based on abstracts, keywords, and references. In thematic analysis, we focused on term association to show underlying concepts. In co-citation analysis, we identified common foundations. In yet another method using bibliography coupling, we identified underlying themes in papers.

The third stage includes cartographic representation of data using VOS viewer computer software. In this case, complex data can be presented in visually interpretable forms. The collaborative networks representation enabled an understanding to be gained concerning interactions between diverse components within the literature. Density analysis identified specific areas within the literature where there was heavy activity or importance. In addition, trend analysis enabled an understanding to be gained concerning historical developments within the field of digital transformation in internal audit.

The outcome of the bibliometric assessment is centered on the profile and development process for research, collaboration between researchers and nations, including the role of sources such as journals. Towards enhancing clarity and precision in the outcome of our assessment on digital transformation in internal audit, we have adopted a two-fold methodological approach. These maps created by VOS viewer, together with quantitative tables, enhance clarity in presenting several important parameters for the assessment. These parameters for the assessment include occurrences, co-occurrences (levels of association between concepts), publications, citations, and co-citations.

Network maps are graphical representations of bibliometric information. They have circles to symbolize entities examined (keywords, authors, nations, institutions). Each circle is drawn to represent how often it occurs in documents. The connections between these symbols are made by lines. Each line is drawn to represent how many connections it makes with other entities. The width of each line is related to how often these entities appear in each source analyzed. Thus, by adding maps to tables, it is essential to have this methodological complementarity to grasp digital transformation on all levels in audit.

3.Evolution and structure of research in artificial intelligence and internal auditing

During our research, we have used 128 documents on SCOPUS to investigate the evolution in the number of publications related to digital transformation and internal auditing between 2016 and 2025. All information gathered is presented below:

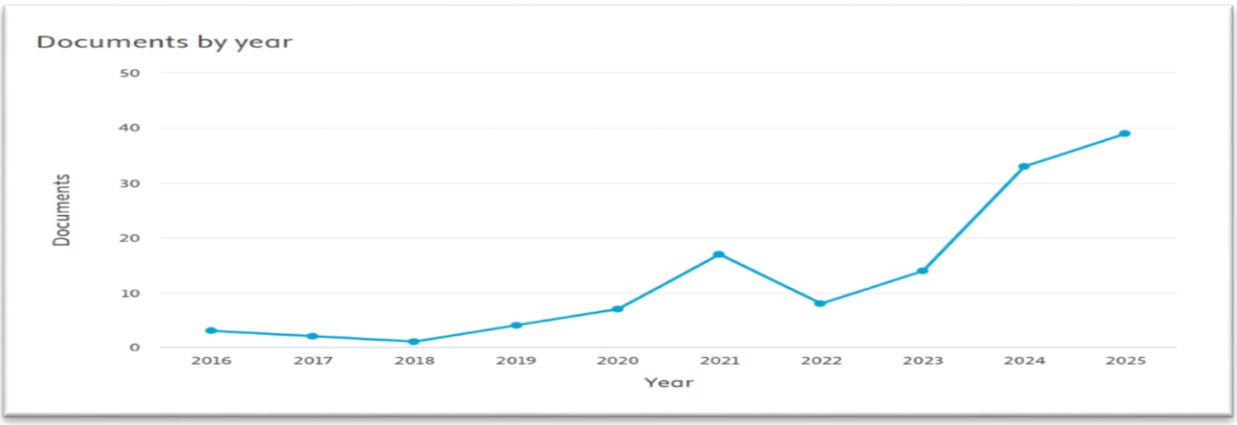

Figure 2: Evolution of articles between 2016 and 2025

Source: Author's own research based on data extracted using SCOPUS

In fact, out of 128 papers, shown in (Table 1), only after 2016 did some papers start to appear that focused on digital transformation in internal audit topics. From there onwards, a period where there's a significant drop in publications can be estimated. From 2016 onwards, there was an increase in publications. Following the Covid-19 pandemic period, there was a considerable number of publications. The year was a reference year in terms of digital transformation because that's when technology was felt in almost every aspect. Humanity used technology for the first time in its macro-level expansion. As a result, everything paved the way for a new era. At least if we can say that. In terms of 2025 publications, there was a greater amount. In fact, the data was extracted up to October 31st, 2025.

Table 1. Evolution of publication number between 2016 and 2025

Year	Publication number	Percentage
2016	03	2.34%
2017	02	1.56%
2018	01	0.79%
2019	04	3.12%
2020	07	5.47%
2021	17	13.28%
2022	08	6.25%
2023	14	10.94%
2024	33	25.78%
2025	39	30.47%
Total	**128**	**100%**

Source: Author's own research based on data extracted using SCOPUS

Using the quantitative scientific mapping research methodology, a bibliometric analysis study was conducted using VOS viewer software, which creates a network to provide an indication of similarity between keywords, concepts, and authors, producing maps that provide an indication of similarity using maximum mathematical precision. Co-occurrence networks for the keywords relating to internal audit and those relating to digital transformation have been developed in this study, where nodes in size is an indicator of frequency of occurrence.

4.RESULTS AND DISCUSSIONS

1.Performance analysis

From research question R.Q.1. What are the research trends concerning the issue of digital transformation in internal auditing? a performance analysis of a data set for the 128 articles published in the SCOPUS database has been carried out. For an even better understanding of this research outcome, different types of graphic representations, in this case, representations using tables, could be used by the researcher. According to (Alam et al., 2021), performance analysis determines an understanding of the implications of scientific study in relation to the business sector, in which either trends in scientific study, as well as importance and implication, are set into clear

perspective by this analysis. This analysis also concentrates on obtaining, interpreting, as well as making meaning from data, for instance, in relation to articles published, total citations, study topics, scientific authors, contributing to study results. Based upon entirely different data, namely, from the SCOPUS database for reviewing the insignificant data based upon a population of 128 articles published from year 2016 until year 2025, an increased level of interest in scientific study in this study exists, although respecting significant study contributions to the implication of digital transformation in internal auditing, to a significant extent, having indicated from the SCOPUS database a total scientific article influence in literature of an impressive level, in this case, offering an impressive total of scientific library citations of 817 citations, 6.38 per article level of influence.

From the point of view of productivity, it can be observed that an average of 12.8 articles per year is published, which reflects a steady trend of increasing academic output in this area of expertise. Furthermore, from an analysis of the level of cooperation between authors, an average of nearly two authors per document is attained, which raises awareness of inter-disciplinary team working as an essential component of result delivery.

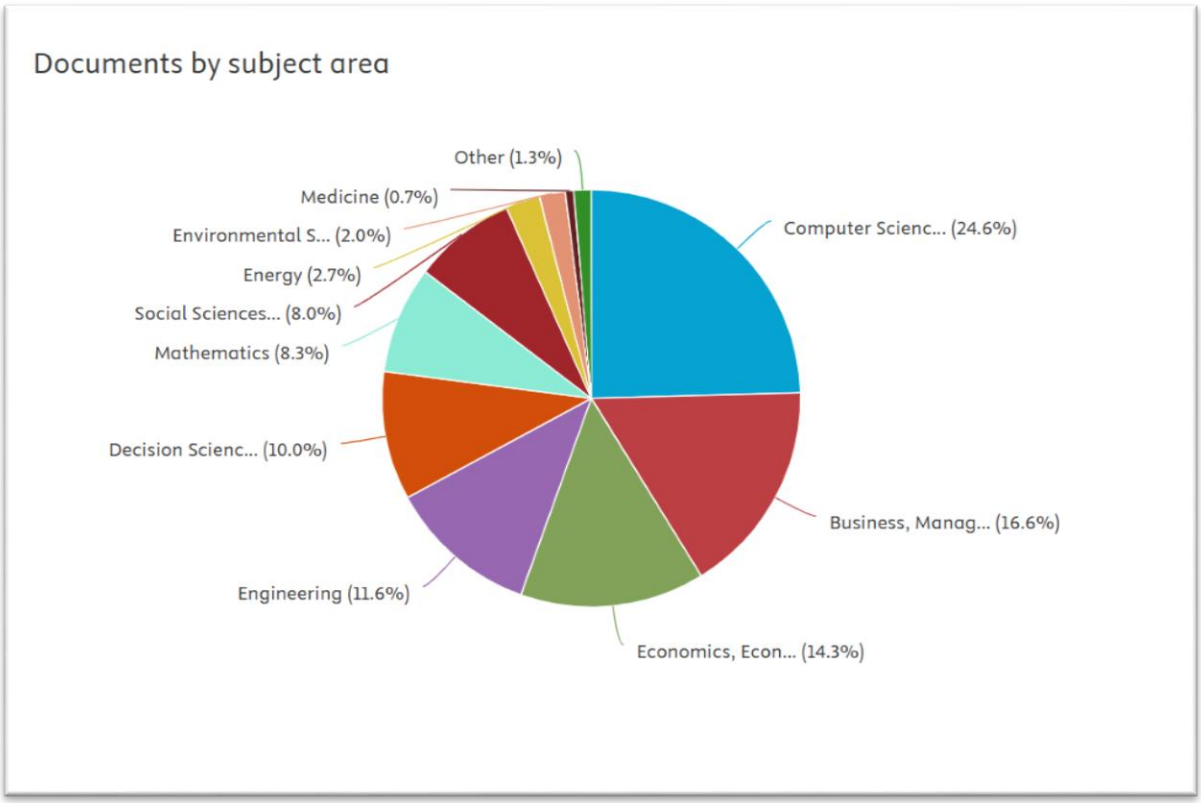

Figure 3: Distribution of articles by subject area

Source: Author's own research based on data extracted using SCOPUS

Current trends in research on digital transformation are evident due to the various applications of the technology, as evidenced by rapid increases in technology. The topic of Digital transformation, and Internal audit is most popular, with 88 articles (24.6%) citing the popularity of the research within the component of computer sciences, (16.6%) indicates the applicability within business and management, and (14.3%) indicates the applicability within Economics. sciences (10%) are fields like social sciences and decision sciences, which emphasize the application of digital transformation in social sciences and decision sciences.

This data indicates a defined trend in the usage of the digital transformation in various disciplines, ranging from the exact sciences and engineering through to the social sciences, and the scope of the publication sources indicates the spread of the various interested fields and collaboration in research currently being undertaken. In order to provide the full analysis, the geographical spread of the sampling of articles analyzed in the first 10 countries with the greatest level of publications can be seen in the figure 4 below.

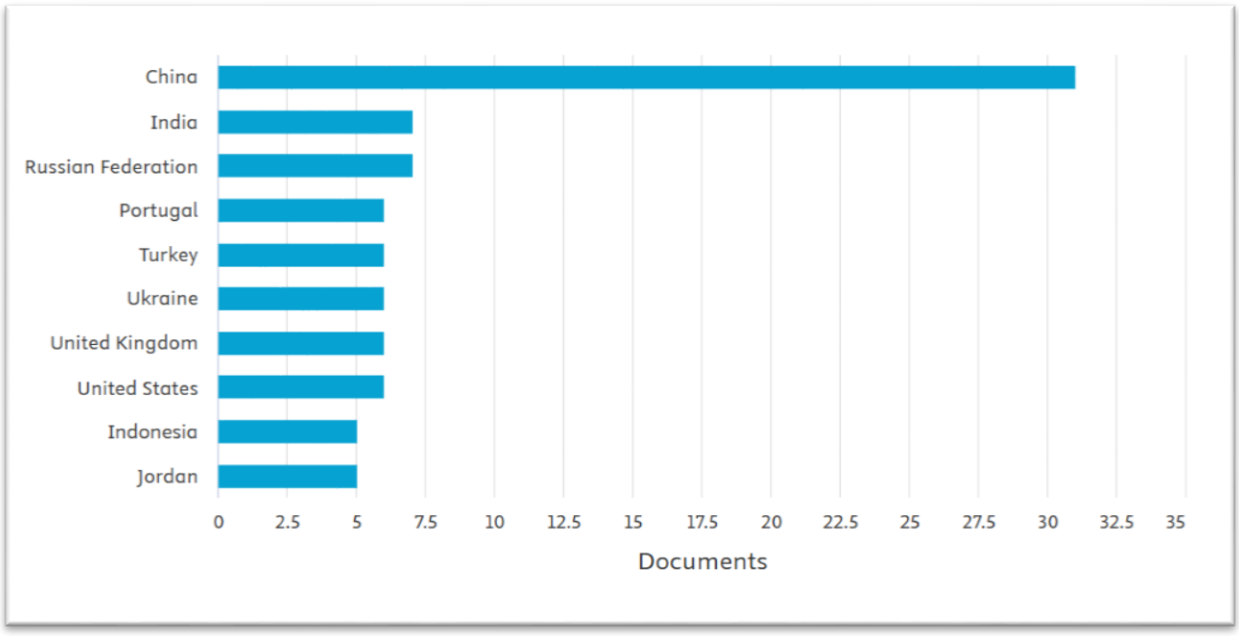

Figure 4: Geographical distribution of publications: top 10 countries

Source: Author's own research based on data extracted using SCOPUS

The analysis indicates the leading countries by the number of publications, China with 16 publications, India, with 7 publications, and Russian federation, with 7, which underlines the leading role of these countries, in the research of digital transformation used in the internal audit. Portugal, Turkey, Ukraine, the United Kingdom and United States monitor 6 Publications for each one, Indonesia is ranked 9th with 5 Publications, and Jordan is ranked 10th with 5 Publications.

2.Scientific mapping

Scientific mapping takes into account the relationships between the research objects themselves, besides the cognitive relationships between the objects, as well as relationships between the objects of scientific research. The scientific mapping techniques include citation analysis, bibliographic coupling, co-citation method, co-participation network analysis, besides researcher collaboration. All these scientific mapping techniques combined have high importance for scientific mapping analysis together with analysis of other networks because it is vital for scientific mapping analysis to comprehend the bibliometric structure and scientific intellectual architecture of scientific research (Donthu et al., 2021).

2.1Citation analysisA citation analysis is seen to represent an important method within scientific mappings in which the citation may indicate not only the level of influence but also the intellectual input of the published work and thus facilitate the identification of key publications as well as an understanding of developments within a particular field of thinking (Garfield, 1972).

This is intended to highlight key documents in the field, as well as comprehend the development of ideas within a particular field of interest.

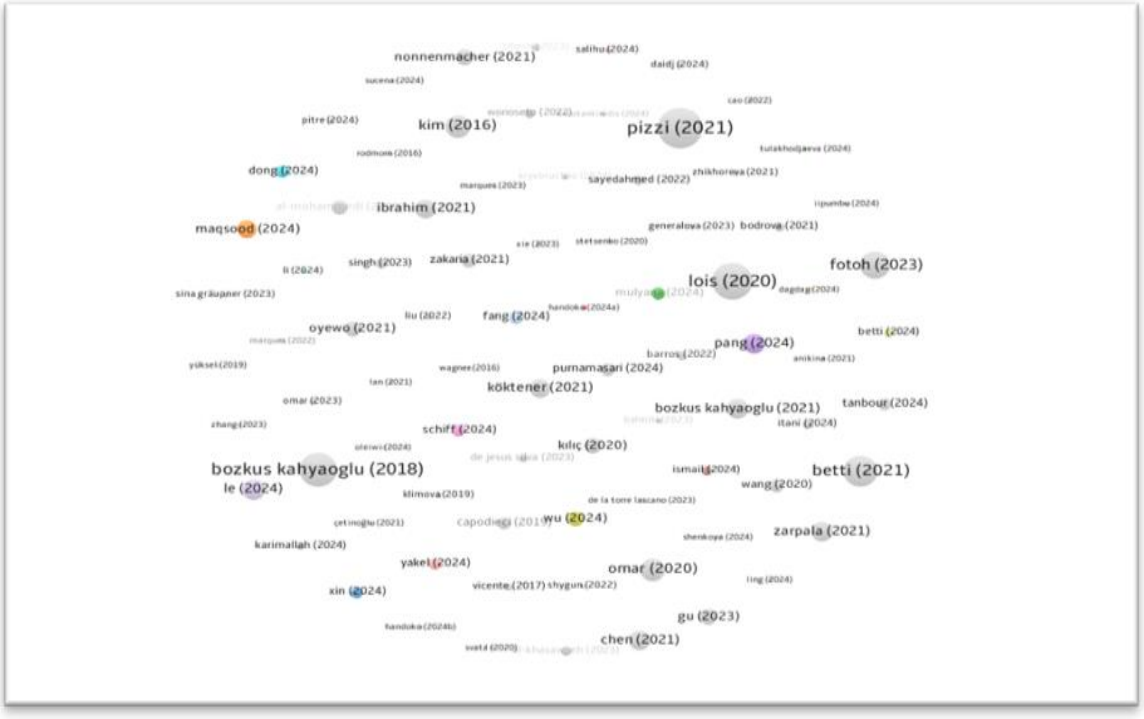

Figure 5: Distribution of citations by number

Source: Author's own research based on data extracted using SCOPUS

The table below shows the most important impact works in the domain of digital transformation in the internal audit area. The first 10 important impact works in the domain are given in figure form below.

Table 2. Top 10 impact documents in the field of digital transformation and internal audit

Authors	Year of publication	Quotes
Simone Pizzi, Andrea Venturelli, Michele Variale, Giuseppe Pio Macario,	2021	108
Lois P, Drogalas G, Karagiorgos A, Tsikalakis K	2020	85
Bozkus Kahyaoglu S, Caliyurt K	2018	71
Betti N, Sarens G	2021	58
Lazarus Elad Fotoh, Johan Ingemar Lorentzon	2023	41
Kim H, Kotb A, Eldaly MK	2016	27
Abdulfattah Omar and Ahmed almaghthawi	2020	26
Tran Duc Le, Thang Le-Dinh, Sylvestre Uwizeyemungu	2024	22
Zarpala, L., Casino	2021	20
Silu Pang, Guihong Hua	2024	19

Source: Author's own research based on data extracted using SCOPUS

From the findings, there was a total of 81 publications that were identified as most relevant, roughly 64% received global citations. Global citations are defined as the total number of citations for the articles from all databases. But there were 24 articles, roughly 18.75%, which were not cited. On the other hand, there were also 13, roughly 10.15%, that only received one citation.

The citation gained by Pizzi et.al was the highest, which was 108, and the article was published in 2021. The next most frequently cited document was authored by Petros et.al in 2020, which received a total of 85 citations, followed by the document authored by Bozkus et al. in 2018, which received a total of 71 citations. The greatest number of documents that received no citation were authored in the recent period of 2024 and 2025, as follows, in the year 2024, there were 39 articles, while in the year 2024, there were 33 articles suggesting the possibility that they might soon be cited as the number of users increases. From the observations made, it could be noted that the year 2021 was the most frequently cited year, suggesting a cumulative sum of 289 citations, as indicated below, 108 citations based on the research work done by Pizzi et al. in the year 2021, while there were also 58

citations related to the research performed by Betti et al. (2021), and 123 other citations by the rest of authors, as indicated in figure 5 utilized in this research.

Publications in the form of research over the last years, particularly in the year 2021, have made the world witness important developments in the area of digital transformation and internal audit. There are recent publications without citations, but it's natural for new research, the impact of which will be observable in the long term. On the other hand, there are research publications in the year 2021, which are extremely influential, having a considerable number of citations.

2.2 Keywords analysis

The co-occurrence of two or more keywords can be defined as the number of publications in which the keywords co-occur in the title, abstract, or list of keywords (Van Eck & Waltman, 2010). In the process of analyzing the keywords, the bigger the nodes, the bigger the weight in the bibliometric representation. This means if there are two nodes or words, the distance between them indicates the relationship between the nodes, where the shorter the relationship, the stronger the relationship between the nodes (Liao et al., 2018).

The connections between the keywords represent the co-occurrence of the keywords. According to Li et al. (2016), the simultaneous occurrence of the keywords can be used to replicate the core research domain in the fields, as it supports research.

In the current research, the result was the generation of 699 keywords. But when the minimum number of occurrences was set to 2, there were 90 keywords in calculating the total power of the co-occurrence links between the keywords. The first set of keywords obtained are as follows, internal audit, digital transformation, audit, big data, internal control, risk management, blockchain, as shown in Figure 6 below. The keywords occurrence map, Figure 6, produced a result of 9 clusters with a link strength of 885. Digital transformation and internal audit were identified as the keywords having the largest nodes in the model, in addition to the shorter link, depiicting the frequency at which the keywords pairs are applied by the scientists in their research. The rise in the study of digital transformation, therefore, also includes the various applications of the latter in the internal audit function.

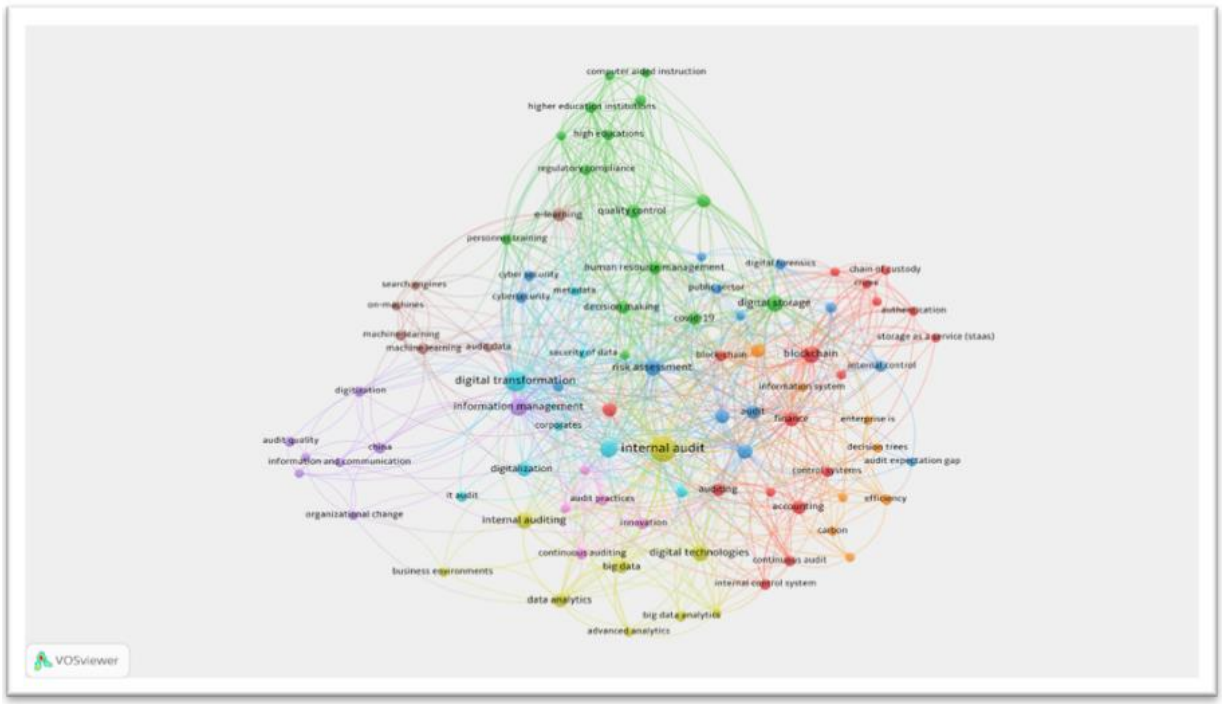

Figure 6: Occurrences of keywords

Source: Author's own research based on data extracted using SCOPUS

The countries where the authors publish the most research articles on the topic of digital transformation in internal audit can be identified in Figure 7.

Therefore, the China is in the top of the countries, as the most visible cluster, followed by United Kingdom, Portugal, and United states.

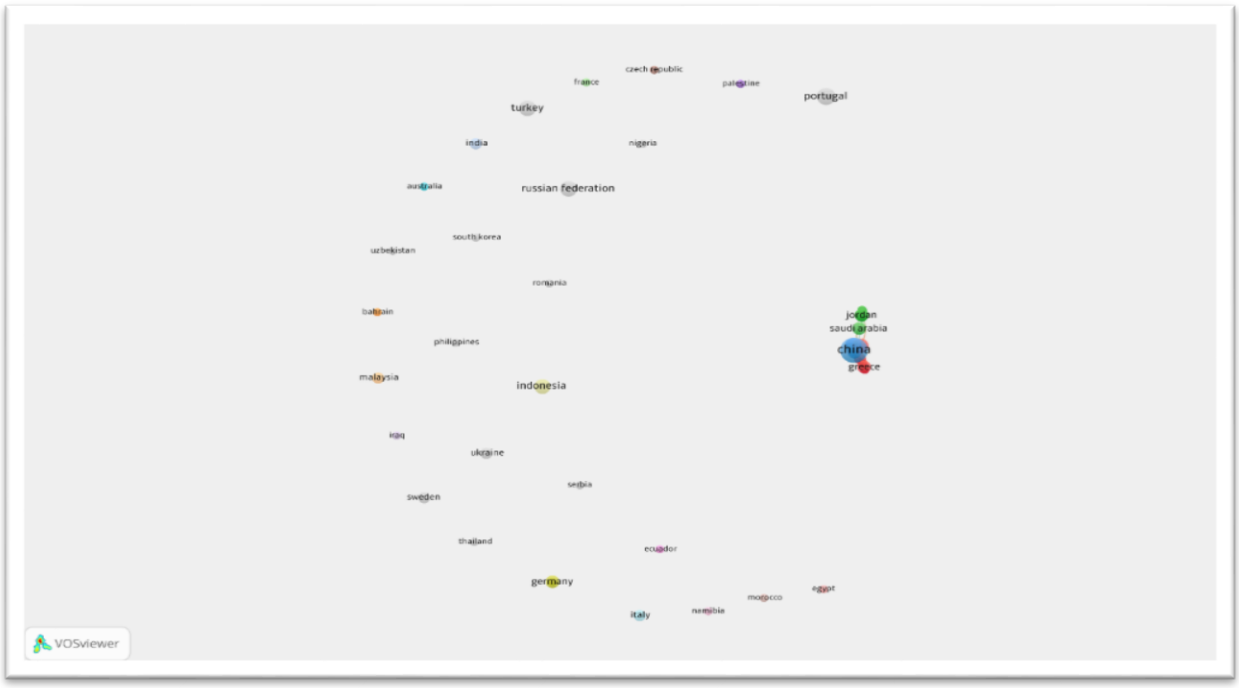

Figure 7: Map of publications by countries

Source: Author's own research based on data extracted using SCOPUS

Table 3: Citations and publications by country

No	Country	Citation number	Publication number
1	Italy	114	2
2	Turkey	106	5
3	Greece	105	3
4	China	99	16
5	Belgium	61	2
6	Saudi Arabia	56	3
7	United States	48	3
8	Sweden	47	2
9	Canada	46	5
10	United Kingdom	44	4
11	Viet Nam	36	2
12	Malaysia	19	2
40	Egypt	8	1
41	Tunisia	6	1
42	Morocco	2	1
43	Algeria	2	1
44	Libya	2	1
45	Namibia	0	1

Source: Author's own research based on data extracted using SCOPUS

As shown in Table 3, Italy tops with the highest citations, with at least 57 citations per published paper among other nations, having 2 published papers. The second best after calculating citations per article is Greece with a total of 105 citations, having 3 published articles. Based on the total published articles, China tops with 16 published articles and 99 citations. The next best countries to Italy with respect to citations are Turkey, Belgium, and Saudi arabia. The next best countries with respect to total published articles are United Kingdom and United States.

Analyzing the citations on publications for Italy and China, it can be observed that, although there is a higher publication of articles by China, the publication by Italy is much more frequently cited, possibly to enhance the quality of publications produced.

The analysis on the data gathered among African nations shows that there is only one document issued by each country within a time frame of 10 years (from 2016 to 2025). The presence of Morocco, Algeria, Libya, Namibia, and Tunisia with one publication with an average of two citations per article gives us a fair understanding about the gap of scientific production on issues that relate to digital transformation and internal audit.

CONCLUSION

this study shows the outcomes of a bibliometric study on how digital transformation influences internal audit. With the quantitative methodological approach and VOSviewer software, a total of 128 articles were analyzed on Scopus, published between 2016 and 2025, after a series of filter processes employing internal audit terms and digital transformation as search words.

The literature shows that there is an increasing use of digital transformation in internal auditing, which is significantly influencing internal audit processes and decision-making in organizations. There is a general consensus that digitalization, including ERP and Big Data technology, has the capability to change completely the internal audit function by automating redundant work processes and accordingly increasing effectiveness of data processing, and boosting productivity.

From the research questions RQ.1, RQ.2, RQ.3 and RQ4 which relate to digital transformation within the context of internal auditing, during this research, to assess the performance of the articles, a statistical analysis on these articles has been performed to detect the trends on research within 2016 to 2025. Therefore, there is an evident rise in research on this aspect. With 740 citations on these articles, on an average there are 6.80 citations per article. As regards productivity, there is also an evident rise on research concerning digital transformation and internal audit studies annually at an average frequency of 12.8 published literature articles each year. The majority relate to digital transformation and internal audit, Bigdata, and Management. As regards regions on publishing these pieces, they can be identified to relate to geographically to cover China, United States, and United Kingdom. As regards citations on these literature pieces, though they publish less literature pieces, they occupy the top places respectively to Italy & Turkey.

On the other hand, in response to research questions, there was the development of bibliometric analysis, which included analysis of citations, keywords co-occurrence, analysis of countries with most published works and highest citations. On top of that, there was analysis of content to establish research themes, objectives, methodology, and major findings.

ERP systems and new technologies have the capacity to radically change the profession of internal audit but also constitute a risk for auditors concerning their professional judgement and reasoning. Accordingly, this research offers a science-based, yet critical analysis on the ethical problems presented by information technology to the practice of internal audit. We aim to enable researchers to better understand the complexity of decision-making driven by information technology.

Though there exist some natural limitations to database choice, other studies may employ differences in database choices, for instance considering additional databases like WOS (Web of Science).

Additionally, regard should also be quantified to cover ethics and their impact on auditors' critical thinking capabilities. It is also crucial to highlight the point that, owing to their growing role in the internal audit field, somehow a smoothening between the utilization of new techniques and innovations, coupled with human components, should also exist for maintaining their basic level of importance to any kind of decision-making. Looking into the future for growth and development at all levels, it is also required to carry out new research pertaining to acquiring additional information on threats linked to, as well as leverage offered by, such smoothening for generating new innovations for not only streamlining efficiency for internal auditing but also linked to its level of integrity.

Ultimately, the role of technology in auditing could usher in not just paradigm shifts within technical environments but even changes to auditors themselves to have all-round support between humans and technology on their side. It could result in changes in the skill set for internal auditors, with

utmost importance given to critical analysis and strategic interpretation of data, in addition to their capability to understand and manage technology. On these grounds, it could be said that the studies in the future will have to delve into research regarding changes in the training/education needed by internal auditors due to opportunities in technology.

Related to the African context, it is found that there is an ample gap in scholarly contributions on articles addressing the effect of digital transformation in internal auditing, specifically in Morocco. Future studies could use our investigation to fill such gaps with the aim of understanding the effect offered by digital tools in internal audit.

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