Sudarman Sudarman

6173-121332-3-ED.pdf

Politeknik Negeri Semarang

Document Details

Submission ID

trn:oid:::8069:80289750

Submission Date

Jan 27, 2025, 9:46 PM GMT+7

Download Date

Jan 27, 2025, 9:49 PM GMT+7

File Name

6173-121332-3-ED.pdf

File Size

1.0 MB

11 Pages

6,030 Words

34,910 Characters

14% Overall Similarity

The combined total of all matches, including overlapping sources, for each database.

Filtered from the Report

- Bibliography
- Quoted Text
- Small Matches (less than 10 words)

Match Groups

18 Not Cited or Quoted 6%
Matches with neither in-text citation nor quotation marks

22 Missing Quotations 8%
Matches that are still very similar to source material

0 Missing Citation 0%
Matches that have quotation marks, but no in-text citation

0 Cited and Quoted 0%
Matches with in-text citation present, but no quotation marks

Top Sources

9%   🌐 Internet sources

3%   📖 Publications

12%   👤 Submitted works (Student Papers)

Integrity Flags

0 Integrity Flags for Review

No suspicious text manipulations found.

Our system's algorithms look deeply at a document for any inconsistencies that would set it apart from a normal submission. If we notice something strange, we flag it for you to review.

A Flag is not necessarily an indicator of a problem. However, we'd recommend you focus your attention there for further review.

Match Groups

18 Not Cited or Quoted 6%
Matches with neither in-text citation nor quotation marks

22 Missing Quotations 8%
Matches that are still very similar to source material

0 Missing Citation 0%
Matches that have quotation marks, but no in-text citation

0 Cited and Quoted 0%
Matches with in-text citation present, but no quotation marks

Top Sources

9% 🌐 Internet sources

3% 📖 Publications

12% 👤 Submitted works (Student Papers)

Top Sources

The sources with the highest number of matches within the submission. Overlapping sources will not be displayed.

1 Submitted works
Sriwijaya University on 2023-03-30   **2%**

2 Internet
www.researchgate.net   **1%**

3 Submitted works
Northcentral on 2024-11-25   **<1%**

4 Internet
www.mdpi.com   **<1%**

5 Internet
www.atlantis-press.com   **<1%**

6 Internet
www2.mdpi.com   **<1%**

7 Submitted works
The University of the West of Scotland on 2024-07-26   **<1%**

8 Internet
pdfs.semanticscholar.org   **<1%**

9 Submitted works
Canterbury Christ Church University on 2025-01-02   **<1%**

10 Submitted works
Australian National University on 2023-08-15   **<1%**

11   Submitted works

One Tree Hill College on 2024-06-16   <1%

12   Submitted works

University of Gloucestershire on 2021-04-27   <1%

13   Submitted works

University of Derby on 2021-09-20   <1%

14   Submitted works

University of Hull on 2023-09-06   <1%

15   Submitted works

University of Glasgow on 2024-07-07   <1%

16   Submitted works

Griffith College Dublin on 2020-08-28   <1%

17   Internet

link.springer.com   <1%

18   Internet

pure.eur.nl   <1%

19   Internet

www.coursehero.com   <1%

20   Submitted works

Buckinghamshire Chilterns University College on 2024-12-07   <1%

21   Submitted works

University of Greenwich on 2022-03-18   <1%

22   Internet

repository.unika.ac.id   <1%

23   Internet

www.growingscience.com   <1%

24   Submitted works

Caleb University on 2021-07-18   <1%

25   Submitted works

Chulalongkorn University on 2023-09-20   **<1%**

26   Publication

Ali Vafaei-Zadeh, Davoud Nikbin, Shin Ling Wong, Haniruzila Hanifah. "Investigati...   **<1%**

27   Submitted works

Kaplan Professional on 2019-01-21   **<1%**

28   Submitted works

University of Lincoln on 2024-01-29   **<1%**

29   Submitted works

University of Teesside on 2024-01-11   **<1%**

URGENCY OF FIELD OF ACCOUNTING
IN THE ERA OF ARTIFICIAL INTELLIGENCE

SUDARMAN

Universitas Maritim AMNI
Jl. Soekarno Hatta No. 180 Semarang, Indonesia

Abstract: *Objective: to study the impact of artificial intelligence in accounting, how to respond, and the need for future research development. Method: The main data source is 321 scientific articles, to study conceptually, using the PRISMA method, 33 selected articles were obtained, and the analysis was carried out using a systematic literature review. Results: RQ1, conceptually, the implementation of artificial intelligence has an impact on anticipating fraud, accounting information systems, financial and management accounting, and the accounting profession. The quantitative approach proves that artificial intelligence has a significant impact on the performance of accounting functions, accountability and transparency of financial reports and data privacy. RQ2, accountants must have new readiness and skills. RQ3, future research must consider primary data, samples, quantitative designs, variables, and objects. Renewability: that information technology readiness has an impact on the adoption of artificial intelligence both directly and through mediators of perception and ease of use. Future Research Agenda: to test hypotheses based on this novelty.*
Keywords : accounting field, artificial intelligence, accountants

INTRODUCTION

Artificial intelligence is an experimental part of computer science aimed at eliminating the various uses of machines. This technology is also closely related to the field of accounting (Gusai, 2019), which has been implemented for a long time but has recently become the center of attention, although each country has a different response (Chukwudi et al., 2018). For example, in Portugal, artificial intelligence is at the top of the list of widely adopted information technologies (Goncalves et al. 2022). This cutting-edge technology has also been widely adopted by companies in China to maintain their competitive and comparative advantages (Mohammad et al., 2020). In contrast, in Malaysia, the adoption rate in the field of accounting is still low (Lee & Tajudeen, 2020).

For example, in Portugal, artificial intelligence is at the top of the list of widely adopted information technologies (Goncalves et al. 2022). Likewise, China's economic development has reached its peak to achieve further growth and maintain competitive and comparative advantages, because many companies have adopted the latest technology based on artificial intelligence (Mohammad et al., 2020). In contrast, in Malaysia, the adoption of AI-based software in accounting remains low (Lee & Tajudeen, 2020). Other researchers argue that no matter how secure an information technology-based system is, there is always deep fear in the market. That is, if there is a disruption in this system at any time, it could have an impact on the entire economic system. Ultimately, to overcome this fear, experts advise not to rely solely on the system for all decision-making (Mohammad et al., 2020). Another opinion states that decision-making remains the task of accounting professionals. The argument is that, by using artificial intelligence, company executives will have relevant data in decision-making, so that they have a better level of efficiency and lower risk (Stancu & Duyescu, 2021). Many previous studies anticipate a decrease in accountant remuneration due to the application of artificial intelligence; this application will create opportunities for

Sudarman

those working in accounting to work in a more interesting and challenging environment. Professionals with the right mindset, based on continuous learning and new skills, will have greater opportunities for career development (Stancu & Duyescu, 2021). The emergence of artificial intelligence is an opportunity, not a challenge, for the accounting industry and profession (Li & Zheng, 2018). It is also stated that although artificial intelligence presents challenges, its potential to revolutionize accounting practices is undeniable and offers new avenues for growth and innovation in the digital age (Odonkor et al., 2024).

At a time when accountants face challenges but are still able to take advantage of opportunities and develop their roles, artificial intelligence in the future in accounting practice is a very promising, dynamic, resilient, and strategically impactful profession. The journey towards technology integration will undoubtedly shape the future accounting landscape, offering a symbiotic relationship between human expertise and artificial intelligence (Adeyelu et al., 2024). Accountants who work extensively with technology can have a significant impact on society/clients in the business industry (Harnoor & Kumari, 2019). This is because accountants play a very important role in the business environment (Imene & Imhanzenobe, 2020). In the next few decades, artificial intelligence systems will take over more tasks as a basis for decision-making (Chukwudi et al., 2018). The problem is that most new accountants have basic knowledge of artificial intelligence, and a low level of understanding (Fulop et al., 2023). Another obstacle regarding the resistance to change factor is a major obstacle to the adoption of artificial intelligence in accounting (Odonkor et al., 2024). This has led to an increase in demand for new skills in the accounting profession's labor market (Popa et al., 2024).

This study takes a broader perspective on the urgency of accounting in the era of artificial intelligence, more specifically: (1). Examine the impacts of artificial intelligence in accounting as a whole; (2) Attitudes that must be taken by accountants; (3) Need for future research development. The purpose of this study is to provide answers to the following 3 (three) research questions (RQ):

RQ1: What are the impacts of artificial intelligence on accounting? This research question is considered very important because the scope of accounting is very broad, not limited to recording, data entry, and presentation of financial reports. The field of accounting is further related to fraud, accounting information systems, financial accounting, management accounting, and crucial factors that also affect the profession of accountants themselves. This formulation will provide insight to readers on how artificial intelligence impacts various sub-fields of accounting. It can be used as a reference for conducting further research to build a conceptual framework. Public Accounting Firms can start thinking about investing in technology, especially adopting artificial intelligence to improve performance and ultimately win the trust of clients.

RQ2: What are the needs of accountants in the era of artificial intelligence like today? Furthermore, this research question is also very important to study further, so that accountants in maintaining their profession know the steps that must be taken in the midst of the era of artificial intelligence. Will they continue to remain accountants with a traditional, modern model, or will they switch to a more strategic profession by continuing to adopt artificial intelligence? The contribution to this formulation is that, for accountants, it is important that they are not crushed by artificial intelligence. For the government, it will also be input to provide support, for example, by providing seminar programs for accountants regarding knowledge of artificial intelligence, and through regular training on how to use artificial intelligence in the field of accounting. It is also beneficial for companies/clients, because they will get a guarantee of faster, more accurate, and accountable reporting.

RQ3: What are the future research needs of accountants in the AI era? This research question is interesting to study on this occasion because it has rarely received the attention of researchers. Finally, the conclusions given in this formulation will provide discourse for future research in carrying out development, so that research with similar themes becomes more varied, thus enriching science in all fields of accounting.

RESEARCH METHODS
Research Design

The research was conducted using conceptual design, which is an approach from the above observation, followed by an analysis of various existing information on a particular phenomenon that is worth studying. The steps start from observing the emergence of artificial intelligence in the field of accounting. Continued by searching for relevant scientific articles, reviewing according to the formulation of the problem, conducting analysis to provide conclusions, and the period 2010-2024.

Types and Sources of Data

The primary data uses secondary data obtained through tracking from Google Scholar and Open Knowledge Maps. Data collection was adapted from Ahmada et al. (2023), Kureljusic & Karger (2023), namely using the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) approach, with the following stages:

Table 1. PRISMA Protocol

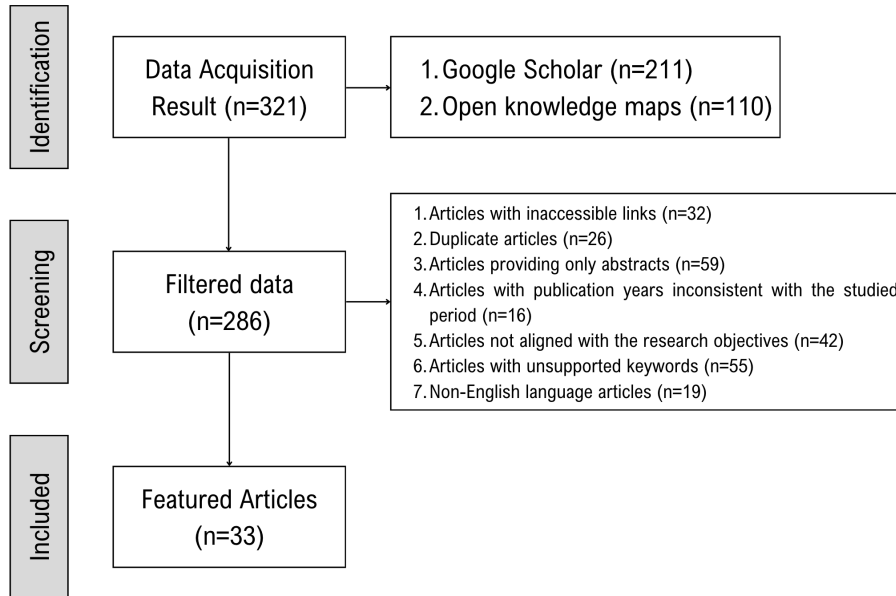| Stage	Description
Conducting article eligibility criteria identification	1. Articles are in line with the research objectives. 2. Published in international journals in 2010-2024. 3. Use English throughout. 4. Present keywords and abstracts in their entirety. 5. Articles present complete material up to the reference section.
Defining data sources	1. Primary data in the form of previous research articles that are relevant to the research objectives. 2. Primary data source from Google Scolar.
Determining articles that are relevant to the research objectives	1. Identify with keywords, namely information technology, artificial intelligence in accounting, opportunities, obstacles, challenges. 2. Observe the objectives and research questions in the article. 3. The main object regarding information technology and artificial intelligence must be related to the accounting profession and the accounting field.
Data collection technique	It is done online through the main web side, namely Google Scholar and Open Knowledge Maps.

Define data items	1. This step will narrow down to a number of selected articles that will be used to draw conclusions.
	2. This data item is certainly in accordance with the first stage.
	3. The filtered or selected data follows the following criteria:
	  a. Links must be open access.
	  b. Articles are not duplicated.
	  c. It is not enough to just provide an abstract.
	  d. The year of publication must be in accordance with the period studied.
	  e. Must be the same as the research objective.
	  f. Keywords must be relevant and supportive.
	  g. Must use English throughout the article.
	  h. Publication must be international.

Analysis Techniques

The analysis was conducted using the Systematic Literature Review (SLR) technique, where the analysis starts from the stage of identifying, assessing, and interpreting the entirety of various previous research articles. The goal was to answer the research questions. At this stage, all research designs can be studied (conceptual and empirical), but empirical designs are used as a basis for strengthening the results conceptually. The results of this conceptual research can be used as a basis for providing a framework for influencing the impact of artificial intelligence in the field of accounting as well as on the accounting profession. The interesting thing is that it will provide discourse for future researchers and opportunities for development in order to further enrich research findings, so that they can be used as material for accountants to prepare themselves in facing artificial intelligence.

RESULTS AND DISCUSSION

Core Data Computing

This section provides an overview from the beginning of the data collection of scientific research articles to the screening process until the selected data. The data were collected from to 2010-2024, from various web side Google Scholar and open knowledge maps, and 321 articles were collected. The selection used the PRISMA basis,

90

Sudarman

with several criteria as presented in Table 1, and 33 articles were obtained, which were used as a reference for the conclusion analysis. Furthermore, each stage in the PRISMA screening process is shown in Figure 1.
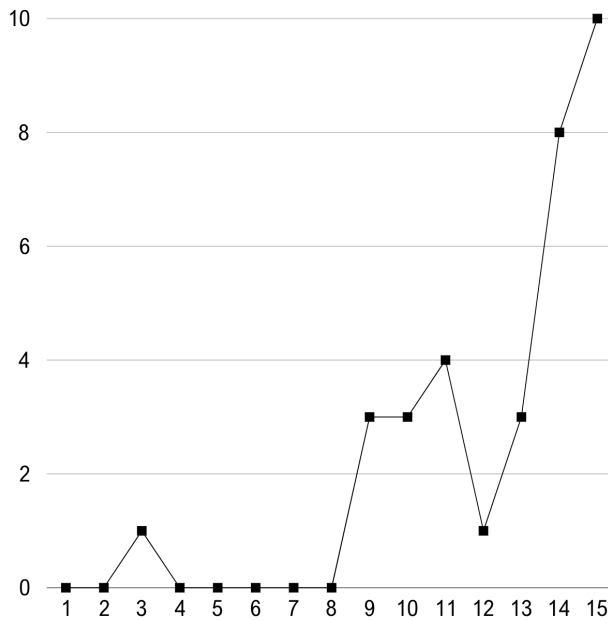

Source: processed secondary data (2024)

Figure 1. Determination of Selected Articles

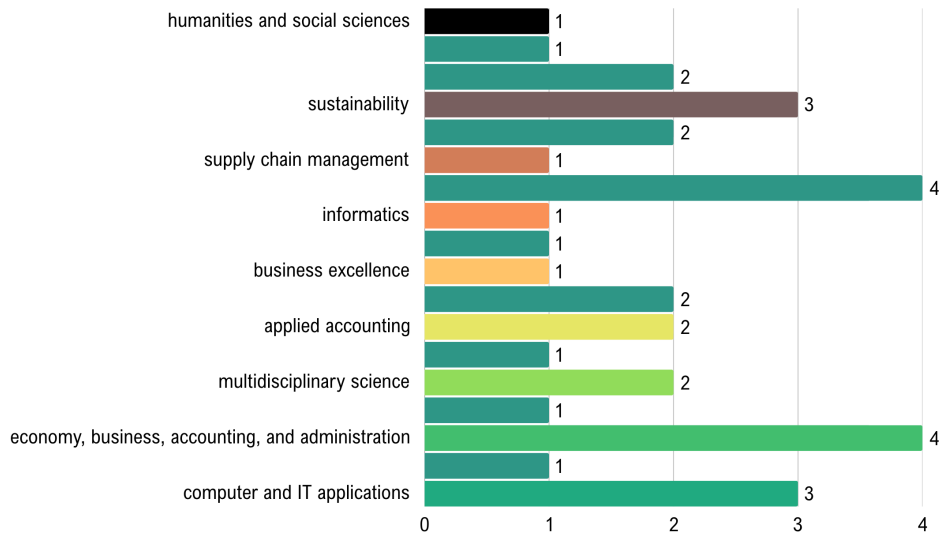**Identification of Selected Articles**

Based on the PRISMA method determined above, the following is a description of the characteristics of the 33 articles used in the research references, as shown in Figure 2.

Source: processed secondary data (2024)

Figure 2. Characteristics of Articles Based on Year of Publication Design

Based on Figure 2, it appears that the articles that met the criteria started in 2018. The data show that the most are in 2024 (10 articles), followed by 2023 (8 articles). Furthermore, of the 33 articles, most used conceptual research designs (28 articles); thus, previous researchers have highlighted less hypothesis testing. Most or 24 articles did not convey limitations to the research results and did not provide recommendations (21 articles). It also appears that all the selected articles were published in several disciplinary groups. Namely, starting from economics, business, accounting, and administration; economics, business, management, and entrepreneurship; computer applications; and information technology (figure 3).

91

Source: processed secondary data (2024)

Impact of Artificial Intelligence in Accounting (RQ1)

Based on the results of the review of selected articles and to answer the first research question (RQ1), it appears that the concept of the research results conceptually has an impact on 4 (four) main areas, namely those related to financial accounting fraud, accounting information systems, financial and management accounting, and the accounting profession. Furthermore, in detail, each area is as in Table 2 below:
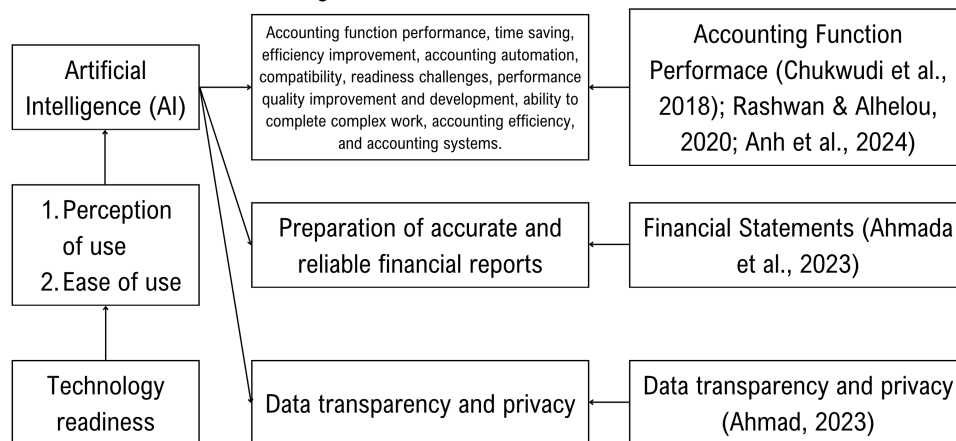
Table 2. Impact of Artificial Intelligence in Accounting Based on the Results of the Conceptual Approach Article Review

Concept	Field Review Resoult	Source
Financial accounting fraudulent acts.	Artificial intelligence is used as a means for data mining, as a basis for creating decision trees to provide a primary solution to the problems inherent in the detection and classification of fraudulent accounting data related to finance.	Sharma & Panigrahi (2012), Gusai & Ackerman (2019), Kureljusic & Karger (2023), Jejeniwa et al. (2024), Odonkor et al. (2024)
Accounting information system.	1. Higher quality accounting information. 2. Reduce internal control risk. 3. Reduce detection risk. 4. Improve audit quality by reducing accounting information risk. 5. Accounting functions are more accurate, fast, and efficient. 6. Provide opportunities for investors to make timely decisions. 7. Accelerate productivity. 8. Automate routine tasks. 9. More professional roles. 10. Improve customer service. 11. Support flexible work styles. 12. Improve process governance. 13. Save labor. 14. Better data analysis. 15. Develop predictive capabilities. 16. Understand complex financial data. 17. Store various authentic evidence (documents, invoice information) otomatis). 18. Monitor invoice approvals. 19. Track user activity.	Askary et al. (2018), Ashoka et al (2019), Gusai & Ackerman (2019), Lee & Tajudeen (2020), Stancu & Duyescu (2021), Peng et al. (2023), Rane (2023), Hussin et al. (2024), Nifise et al. (2024)

92

Sudarman

Concept	Field Review Resoult	Source
Financial and management accounting.	1. Increase knowledge about future business developments. 2. Help avoid bad investments. 3. Enable predictive analysis for strategic decision making. 4. Add strategic value to the organization.	Kureljusic & Karger (2023), Odonkor et al. (2024), Adeyelu et al. (2024)
Accounting profession.	1. Accountants will lose jobs to some extent, but in the long term and will not replace the accounting profession. 2. Accountants will focus on more strategic work that requires skills, eventually there will be career advancement. 3. Accountants will experience a revival in the coming decades, with the greatest prospects for spurring innovation and progress. 4. The accounting industry is projected to play a very strong interface role in every area of the accounting industry.	Li & Zheng (2018), Harnoor & Kumari (2019), Ashoka et al. (2019), Mohammad et al. (2020), Stancu & Duyescu (2021), Coman et al. (2022), Goncalves et al. (2022), Hasan (2022), Khan et al. (2023), Cho (2024), Groenewald & Kilag (2024), Jejeniwa et al. (2024), Vandapuye & Jabraoui (2024)

Source: processed secondary data (2024)

Furthermore, from the results of the article review using an empirical approach (hypothesis testing), it was found that the use of artificial intelligence has an impact on 3 (three) main areas, namely the performance of accounting functions, financial reports, transparency, and data privacy. The results of the review can then be summarized into a model, as shown in Figure 4.

Source: processed secondary data (2024)

Figure 3. Impact of Artificial Intelligence in Accounting Based on the Results of the Conceptual Approach Article Review

Regarding What Accountants Need in the Era of Artificial Intelligence (RQ2)

The results of the review of selected articles to answer Q2 can be identified into 2 (two) main factors, namely regarding the readiness and expertise that accountants must have in facing the era of artificial intelligence, as shown in the following table:

Table 3. Review Results Regarding What Accountants Need in the Artificial Intelligence Era

Factor	Indicator	Source
Readiness	1. Change from traditional accounting personnel to management type. 2. Actively adapt to the development of society. 3. Invest in skills and tools related to information technology.	Li & Zheng (2018), Imene & Imhanzenobe (2020), Groenewald & Kilag (2024).

93

January 2025

Factor	Indicator	Source
Skill	1. Meningkatkan pengetahuan. 2. Berinovasi secara berkesinambungan. 3. Beralih sebagai konsultan. 4. Beralih sebagai analisis. 5. Keterampilan komunikasi.	Chukwudi et al. (2018), Li & Zheng (2018), Harnoor & Kumari (2019), Mohammad et al. (2020), Stancu & Duyescu (2021), Adeyelu et al. (2024)

Source: processed secondary data (2024)

Future Research Needs in the Era of Artificial Intelligence for Accountants (RQ3)

Furthermore, from the selected articles, there are several things that are recommended to be developed further. Recommendations ranging from data source elements, samples, research design, and variables to the scope of the research objects are shown in the following table:

Table 4. Results of Review Regarding Future Research Needs

Factor	Recomendation	Source
Data sources, samples and designs.	1. Primary data is needed. 2. Expanding the sample size. 3. Considering quantitative methods.	Ashoka et al (2019), Gusai & Ackerman (2019), Lee & Tajudeen (2020)
Variable	1. Developments in other areas of accounting (receivables, inventory and bookkeeping functions as a whole). 2. Highlighting cultural differences, behaviors and/or mentalities, and laws regarding the evolution of accounting digitization and the advancement of professional accounting. 3. Exploring how other factors, such as gender or socio-economic status.	Lee & Tajudeen (2020), Coman et al. (2022), Anh et al. (2024).
Object	1. The role of AI in small and large business accounting needs to be further explored. 2. Research should be conducted on the success of AI implementation in accounting firms.	Peng et al. (2023).

Source: processed secondary data (2024)

Impact of Artificial Intelligence in Accounting (RQ1)

Artificial intelligence has now penetrated the field of accounting, as research results have obtained the concept that is predicted to be closely related to fraudulent acts in financial accounting. Artificial intelligence is a Bayesian belief network that can be used as a reference for creating decision trees and has been widely implemented. This is used to provide the main solution to problems that are closely related to the detection and classification of false data (Sharma & Panigrahi, 2012; Jejeniwa et al., 2024). Gusai & Ackerman (2019) in their conceptual research concluded that artificial intelligence can increase the accuracy and precision of the final results. This can complement the efforts of accountants to analyze data and help solve problems and make plans. Kureljusic & Karger (2023) also provide the concept that artificial intelligence (AI)-based applications in financial accounting are predicted to be closely related to bankruptcy, financial analysis to fraud and error detection. Furthermore, it is used as a reference in decision-making to benefit investors (Odonkor et al., 2024). Artificial intelligence is also related to the field of accounting information systems, where in the literature review from Askary et al. (2018), the issue of using artificial intelligence in eliminating weaknesses in internal control systems to produce quality accounting information, so that cooperation is needed between accounting professions related to artificial intelligence expertise to develop software. Accounting functions also become more accurate, faster, and more efficient (Gusai & Ackerman, 2019), and allow investors to obtain the information they need for timely decision-making (Ashoka et al., 2019). Artificial intelligence also helps store authentic evidence (documents and invoice information automatically), accelerates work productivity, improves process governance, saves labor, and improves customer service (Lee & Tajudeen, 2020). Artificial intelligence is related to accounting information systems that will make better data analysis, develop predictive capabilities (Peng et al., 2023, Nifise et al., 2024), and improve the ability to understand complex financial data (Stancu & Duyescu, 2021; Rane, 2023). The conceptual use of artificial intelligence conceptually will automate routine tasks and make the role of accountants more professional

94

Sudarman

(Hussin et al., 2024). The review results also show that artificial intelligence is related to the field of financial and management accounting. For example, artificial intelligence can be used to improve knowledge about future business developments; however, there is little evidence in this predictive model (Kureljusic & Karger, 2023). The argument is that artificial intelligence is also predicted to significantly improve the accuracy and efficiency of financial reporting, automate routine tasks, and enable predictive analysis for strategic decision-making. However, there are several challenges, such as the need for proficient skilled personnel, data privacy issues, and the high cost of integrating artificial intelligence (Odonkor et al., 2024). The connection of artificial intelligence in the field of financial and management accounting can also be used to add strategic value to organizations (Adeyelu et al., 2024). The impact of artificial intelligence is also closely related to the profession of accountants. The emergence of artificial intelligence has changed the way traditional accounting works, but this will not end artificial accounting. The emergence of artificial intelligence has caused some accountants to lose their jobs to some extent, but in the long term, it will not even replace the role of accountants (Li & Zheng, 2018), but instead make work easier (Ashoka et al., 2019). The accounting industry needs to understand that artificial intelligence technology offers tools to develop activities that are not stealing jobs, but only reducing data entry work (Stancu & Duyescu, 2021) and leaving paper (Goncalves et al., 2022). For accountants who have a positive outlook (Hasan, 2022), improve their comprehensive abilities, and focus on more strategic work, career advancement will eventually occur (Harnoor & Kumari, 2019; Mohammad et al., 2020). Accountants are expected to experience a revival in the coming decades, with the greatest prospects for spurring innovation and progress owing to artificial intelligence (Groenewald & Kilag, 2024; Jejeniwa et al., 2024; Vandapuye & Jabraoui, 2024).

The concept obtained above is supported by empirical research related to artificial intelligence in the field of accounting. In companies in Vietnam, the adoption of artificial intelligence is first influenced by the readiness of technology, and the perception of usefulness and ease of use mediate this influence (Anh et al., 2024). Furthermore, the results of empirical testing prove that the application of artificial intelligence has a positive and significant effect on the performance of the accounting function (Chukwudi et al., 2018). Artificial intelligence also has a positive and significant impact on improving and developing the quality of performance, the ability to complete complex work, accounting efficiency, auditing cadres, and accounting systems (Rashwan & Alhelou, 2020). However, the basis of artificial intelligence does not affect the accuracy and reliability of financial reports (Ahmada et al., 2023). The most positive and significant influence on the use of artificial intelligence in accounting practices in multinational companies concerns transparency and data privacy (Ahmad, 2023).

What Accountants Need in the Era of Artificial Intelligence (RQ2)

Based on several results of selected article reviews, it can be concluded that in this era of artificial intelligence, accountants need 2 (two) main things, namely readiness and expertise. Accountants must be ready to make changes from traditional accounting personnel to management types, actively adapt to the development of society, continue to innovate, change themselves, and become irreplaceable quality accountants (Li & Zheng, 2018). Accountants in the future will need more than just basic financial or accounting literacy to meet the demands of their profession, so they must start thinking about information technology and artificial intelligence (Imene & Imhanzenobe, 2020). Accountants must also be ready to adapt among accounting professionals to effectively utilize artificial intelligence technology (Groenewald & Kilag, 2024). Furthermore, related to the expertise factor, accountants and public accounting firms must continue to improve their knowledge of artificial intelligence, because this will improve the performance of the accounting function, ultimately eliminating certain accounting costs (Chukwudi et al., 2018; Li & Zheng, 2018). Accountants must move to a more dynamic consulting and advisory space to ensure that they build better business models for companies by leveraging automation and artificial intelligence (Harnoor & Kumari, 2019). In the future, accountants must also focus on moving to analysis rather than just entering financial data. In fact, although computers are more capable of doing analysis, this is useless without interpretation, creativity, and imagination from human resources, so this role cannot be replaced by artificial intelligence programs (Mohammad et al., 2020). Accountants must also develop high communication skills, understand and present data effectively to management teams and clients (Stancu & Duyescu, 2021), and continuously innovate (Adeyelu et al., 2024).

Future Research Needs in the Era of Artificial Intelligence for Accountants (RQ3)

The review results revealed that most previous researchers focused on using secondary data; therefore, it was considered less relevant without considering more comprehensive primary data (Ashoka et al., 2019). It is assumed that secondary data may be considered less accurate or may not be completely up-to-date, so it is less reliable (Gusai & Ackerman, 2019). Previous researchers also provide recommendations for future research to develop other accounting fields, for example related to the functions of receivables, inventory, and the overall

95

bookkeeping model. Quantitative (empirical) methods can also be applied to study the relationship between the use of artificial intelligence and its impact on organizations (Lee & Tajudeen, 2020). Expanding research to European countries may highlight differences in culture, behavior, and/or mentality as well as laws regarding the evolution of accounting digitalization and the improvement of professional accounting (Coman et al., 2022). Exploration of other factors, such as gender or socioeconomic status, that may influence the relationship between technology readiness and AI adoption is needed to add depth to various research industries (Anh et al., 2024). The role of AI in small and large business accounting and accounting firms needs to be further explored, given the limited findings (Peng et al., 2023).

CONCLUSION

The conclusion to answer RQ1 is that the results of the study conceptually show that the implementation of artificial intelligence has an impact on 4 (four) main areas: financial accounting fraud, accounting information systems, financial and management accounting, and the accounting profession. Furthermore, empirically, artificial intelligence has a significant impact on 3 (three) main areas: the performance of accounting functions, financial reports, and data transparency and privacy. The results of the review of selected articles to answer RQ2 appear to be identified into 2 (two) main factors that accountants must have in this era of artificial intelligence, namely regarding readiness and new skills. Answering RQ3, it can be concluded that for future research, it can pay attention to elements of data sources, samples, research design, variables, and a broader scope of research objects. These results provide a theoretical framework for new research to develop artificial intelligence testing of accounting function performance, financial reporting, transparency, and data privacy. Practical contributions for public accountants to develop literacy and adopt this technology to increase client trust. It is time for the government to take a role through various programs, such as training, development, seminars, and so on, which are carried out technically to public accountants. The limitations of the results of this study are that they do not examine the weaknesses of artificial intelligence in the field of accounting, so it cannot be used as anticipation material from an information technology perspective. On the other hand, there appears to be a novelty in that the findings of previous researchers have empirically proven that the readiness of information technology has a direct impact on the adoption of artificial intelligence or through perception mediators and ease of use (Figure 4). Recommendations for future research include empirically testing the novelty of these findings.

REFERENCES

Adeyelu, O.O.; Ugochukwu, C.E; & Shonibare, M.A. (2024). The Impact Of Artificial Intelligence On Accounting Practices: Advancements, Challenges, And Opportunities. International Journal of Management & Entrepreneurship Research. Volume 6, Issue 4, Pp. 1200-1210. DOI:10.51594/ijmer.v6i4.1031.

Ahmada, A.Y.A.B. (2023). Ethical Implications Of Artificial Intelligence In Accounting: A Framework For Responsible AI Adoption In Multinational Corporations In Jordan. International Journal of Data and Network Science. Vol. 8, No. Pp. 401–414. doi: 10.5267/j.ijdns.2023.9.014. https://www.growingscience.com/ijds/Vol8/ijdns_2023_162.pdf.

Ahmada, A.Y.A.B.; Abusaimeh, H.; Rababahc, B.; Alqsassd, M.; Al-Olimae, N.H. & Hamdan, M.N. (2023). Assessment Of Effects In Advances Of Accounting Technologies On Quality Financial Reports In Jordanian Public Sector. Uncertain Supply Chain Management. Vol. 12, No. 1, Pp. 133–142. DOI:10.5267/j.uscm.2023.10.011.

Anh, N.T.M.; Hoa, L.T.K.; Thao, L.P.; Nhi, D.A.; Long, N.T.; Truc, N.T.; & Xuan, V.N. (2023). The Effect of Technology Readiness on Adopting Artificial Intelligence in Accounting and Auditing in Vietnam. Journal of Risk and Financial Management. Vol. 17, No. 27, Pp. 1-15. DOI:10.3390/jrfm17010027.

Askary, S.; Ghazaleh, N.A. & Tahat, Y.A. (2018). Artificial Intelligence and Reliability of Accounting Information. International Federation for Information Processing. Pp. 315–324. https://doi.org/10.1007/978-3-030-02131-3_28.

Ashoka, M.L.; Abhishek, N. & Divyashree, M.S. (2019). Emerging Trends in Accounting: An Analysis of Impact of Robotics in Accounting, Reporting and Auditing of Business and Financial Information. International Journal of Business Analytics and Intelligence. Vol. 7, No. 2, Pp. 28-34. DOI:10.2139/ssrn.3524486.

Chukwudi, O.L.; Silas C.E.; Ugwuanyi, U.B.; & Chukwuani, N.V. (2018). Effect of Artificial Intelligence on the Performance of Accounting Operations among Accounting Firms in South East Nigeria. Asian Journal of Economics, Business and Accounting. Vol. 7, No. 2, Pp. 1-11. DOI:10.9734/AJEBA/2018/41641.

Sudarman

Cho, O.H. (2024). Analysis of the Impact of Artificial Intelligence Applications on the Development of Accounting Industry. Nanotechnology Perceptions. Vol. 20, No. 51, Pp. 74-83. DOI : https://doi.org/10.62441/nano-ntp.v20iS1.7.

Coman, D.M.; Lonescu, C.A.; Duic, A.; Coman, M.D.; Uzlau, M.C.; Stanescu, S.G.; State, V. (2022). Digitization of Accounting: The Premise of the Paradigm Shift of Role of the Professional Accountant. Appl. Sciences. Vol. 12, No. 7, Pp. 1-25. https://doi.org/10.3390/app12073359.

Fulop, M.P.; Topor. D.L.; Ionescu, C.A.; Cifuentes-Faura, J.; & Magdaș, N. (2023). Ethical Concerns Associated With Artificial Intelligence In The Accounting Profession: A Curse Or A Blessing ?. Journal of Business Economics and Management. Vol. 24, Issue 2, Pp. 387–404 https://doi.org/10.3846/jbem.2023.19251.

Goncalves, M.J.A.; Silva, A.C.F.; & Ferreira, C.G. (2022). The Future of Accounting: How Will Digital Transformation Impact the Sector ?. Informatics. Vol. 9, No. 19, Pp : 2-17. https://doi.org/10.3390/informatics9010019.

Groenewald, E.S. & Kilag, O.K.T. (2024). Automating Finances: Balancing Efficiency and Job Dynamics in Accounting and Auditing. International Multidisciplinary Journal of Research for Innovation, Sustainability, and Excellence. Volume 1, Issue 2. Pp. 14-20. https://risejournals.org/index.php/imjrise/article/view/37.

Gusai, O.P. (2019). Robot Human Interaction: Role Of Artificial Intelligence In Accounting And Auditing. Indian Journal of Accounting (IJA). Vol. 51 (1), Pp. 59-62. https://indianaccounting.org/downloads/07%20Dr.%20Om%20Prakash%20Gusai.pdf.

Harnoor, H.; & Dhivya Kumari, G. (2019). Artificial Intelligence in Accounting and Its Impact on Accounting Profession. Think India Journal. Vol-22-Issue-10, Pp. 8856-9963. https://thinkindiaquarterly.org/index.php/think-india/article/view/15164.

Hasan, A.R. (2022). Artificial Intelligence (AI) in Accounting & Auditing: A Literature Review. Open Journal of Business and Management. Vol. 10, Pp. 440-465. https://doi.org/10.4236/ojbm.2022.101026.

Hussin, N.A.K.M.; Bukhari, N.A.N.M.; Hashim, N.H.A.N.; Bahari, A.N.A.S.; & Ali, M.M. (2024). The Impact of Artificial Intelligence on Accounting Profession: A Concept Paper. Business Management and Strategy. Vol. 15, No. 1, Pp. 34-50. DOI:10.5296/bms.v15i1.21620.

Imene, F. & Japhet Imhanzenobe. (2020). Information Technology And The Accountant Today: What Has Really Changed ?. Journal of Accounting and Taxation. Vol. 12, No. 1, Pp. 48-60. DOI:10.5897/JAT2019.0358.

Jejeniwa, T.O.; Mhlongo, N.Z. & Jejeniwa, T.O. (2024). Comprehensive Review Of The Impact Of Artificial Intelligence On Modern Accounting Practices And Financial Reporting Computer Science & IT Research Journal. Vol. 5, Issue 4. Pp. 1031-1047. DOI: https://doi.org/10.51594/csitrj.v5i4.1086.

Khan, H.M.R.; Ahmad, S.; Javed, R. & Nasir, N. (2023). The Significance of Artificial Intelligence in Business and Accounting: A Bibliometric Analysis. Pakistan Journal of Humanities and Social Sciences. Volume 11, Number 02, Pages 1061–1082. DOI: https://doi.org/10.52131/pjhss.2023.1102.0417.

Kureljusic, M. & Karger, E. (2023). Forecasting In Financial Accounting With Artificial Intelligence – A Systematic Literature Review And Future Research Agenda. Journal of Applied Accounting Research. Vol. 25, No. 1, Pp. 81-104. https://doi.org/10.1108/JAAR-06-2022-0146.

Lee, C.S. & Farzana Parveen Tajudeen. (2022). Usage and Impact of Artificial Intelligence on Accounting: Evidence from Malaysian Organisations. Asian Journal of Business and Accounting. Vol. 13, No. 1, Pp. 213-239. https://doi.org/10.22452/ajba.vol13no1.8.

Li, Z. & Li Zheng. (2018). The Impact of Artificial Intelligence on Accounting. International Conference on Social Science and Higher Education (ICSSHE). Vol. 181, Pp. 813-816. DOI : 10.2991/icsshe-18.2018.203.

Mohammad, S.J.; Amneh Khamees Hamad; Hela Borgi; Phung Anh Thu; Muhammad Safdar Sial; & Ali Abdallah Alhadidi. (2020). How Artificial Intelligence Changes the Future of Accounting Industry. International Journal of Economics and Business Administration. Vol. VIII, Issue 3, Pp. 478-488. https://ijeba.com/journal/538.

Nifise, A.O.A.; Odeyemi, O.; Mhlongo, N.Z.; Ibeh, C.V.; Elufioye, O.A.; & Awonuga, K.F. (2023). The Future Of Accounting: Predictions on automation and AI integration. World Journal of Advanced Research and Reviews. Vol. 21, No. 02, Pp. 399–407. e DOI: https://doi.org/10.30574/wjarr.2024.21.2.0466.

Odoh, L.C.; Silas C. Echefu; Ugwuanyi Uche Boniface; & Chukwuani Nnenna Victoria. (2019). Effect of Artificial Intelligence on the Performance of Accounting Operations among Accounting Firms in South East Nigeria. Asian Journal of Economics, Business and Accounting. Vol. 7, No. 2. Pp : 1-11. DOI:10.9734/AJEBA/2018/41641.

Odonkor, B.; Simon Kaggwa; Prisca Ugomma Uwaoma; Azeez Olanipekun Hassan; & Oluwatoyin Ajoke Farayola. (2024). The Impact Of AI On Accounting Practices: A Review: Exploring How Artificial Intelligence Is

Transforming Traditional Accounting Methods And Financial Reporting. World Journal of Advanced Research and Reviews. Vol. 21, No. 01, Pp. 172–188. DOI: https://doi.org/10.30574/wjarr.2024.21.1.2721.

Peng, G.Y.; Ahmad, S.F.; Ahmad, A.Y.A.B.; Shaikh, M.S.A. Daoud, M.K.; & Alhamdi, F.M.H. (2023). Riding the Waves of Artificial Intelligence in Advancing Accounting and Its Implications for Sustainable Development. Sustainability. Vol. 15, 14165, pp. 1-12. https://doi.org/10.3390/su151914165.

Popa, I.F.A.; Vrincianu, M.; Popa, L.E.A.; Cismasu, I.D.; & Tudor, C.G. (2024). Framework for Integrating Generative AI in Developing Competencies for Accounting and Audit Professionals. Vol. 13, No. 13, Pp. 2-23. https://doi.org/10.3390/electronics13132621.

Rane, N.L. (2023). Role and Challenges Of Chatgpt And Similar Generative Artificial Intelligence In Finance And Accounting. Available at SSRN: https://ssrn.com/abstract=4603206 or http://dx.doi.org/10.2139/ssrn.4603206.

Rashwan, A.R.M.S. & Alhelou, E.M.S. (2020). The Impact of Using Artificial Intelligence on the Accounting and Auditing Profession in Light of the Corona Pandemic. Journal of Advance Research in Business Management and Accounting. Volume-6, Issue-9, Pp. 97-122. DOI: https://doi.org/10.53555/nnbma.v6i9.890.

Sharma, A. & Panigrahi, P.K. (2012). A Review of Financial Accounting Fraud Detection based on Data Mining Techniques. International Journal of Computer Applications. Vol. 39, No. 1, Pp. 37-47. https://arxiv.org/pdf/1309.3944.

Stancu, M.S. & Dutescu, A. (2021). The impact of the Artificial Intelligence On The Accounting Profession, A Literature's Assessment. Proceedings of the 15th International Conference on Business Excellence. Vol. 15, Issue 1, Pp. 749-758. DOI: https://doi.org/10.2478/picbe-2021-0070.

Vandapuye, S.; & Jabraoui, S. (2024). Revolutionizing Tomorrow: The Role of Artificial Intelligence in the Accounting Profession. Salud, Ciencia ecnología – Serie de Conferencias. 3:1015. Doi : https://doi.org/10.56294/sctconf20241015.