(RESEARCH ARTICLE)

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Effects of artificial intelligence on financial reporting accuracy

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Abstract

Intelligence (AI) has emerged as a transformative force in modern financial reporting, promising to revolutionize accuracy and efficiency across various industries. This study delves into the effects of AI on financial reporting accuracy, addressing critical questions surrounding its implementation, challenges, and best practices. Through a comprehensive investigation, the research aims to provide valuable insights to guide organizations in leveraging AI effectively while maintaining the integrity of their financial reporting practices. The main objective of this study is to explore the effects of artificial intelligence on the accuracy of financial reporting, examining both the benefits and challenges associated with its integration into organizational processes. Specific Objectives; To analyze how various AI technologies influence the accuracy of financial data and reporting in organizations, to explore the challenges and limitations faced by organizations when integrating AI into their financial reporting systems, to assess the importance of human oversight in ensuring the accuracy of AI-generated financial reports, to develop best practices for organizations to enhance the accuracy of financial reporting when using AI technologies. This study employed a mixed-methods approach, combining qualitative and quantitative data collection techniques to comprehensively explore the effects of AI on financial reporting accuracy. Quantitative data was gathered through surveys distributed to accountants, finance professionals, auditors, and personnel from manufacturing and tourism sectors across various industries. The surveys focused on assessing perceptions of AI's impact on financial reporting accuracy and included Likert-scale questions to gauge agreement levels. Qualitative data was obtained through in-depth interviews with selected participants to gain deeper insights into their experiences and perspectives regarding AI technologies in financial reporting. Thematic analysis was applied to interview transcripts to identify recurring themes and patterns related to AI's effects on accuracy. Participants were informed about the study's purpose and their rights, including confidentiality and anonymity. Informed consent was obtained prior to data collection, ensuring ethical standards were adhered to throughout the research process. Survey responses indicated a generally positive perception of AI's impact on financial reporting accuracy, with a majority of respondents acknowledging improvements in efficiency and error reduction. However, challenges such as data security concerns and the need for skilled personnel were highlighted as significant barriers to AI integration. Human oversight emerged as a crucial factor in validating AI-generated outputs, emphasizing the complementary role of human judgment alongside technological advancements. The findings underscored AI's potential to enhance financial reporting accuracy through advanced data analytics and automation. Key recommendations include investing in comprehensive training programs for staff, integrating AI with human expertise, implementing robust data governance frameworks, conducting regular audits of AI systems, and engaging stakeholders throughout the integration process. In conclusion, this study provided valuable insights into how AI technologies can improve the accuracy of financial reporting while addressing challenges and emphasizing the importance of human oversight. By adopting recommended best practices, organizations can maximize the benefits of AI in financial reporting, paving the way for more reliable and informed decision-making in the digital age. This research contributes to the growing body of knowledge on AI's impact on financial practices, offering practical recommendations for organizations aiming to leverage technology effectively in their financial reporting processes.

Keywords: Artificial Intelligence; Financial Reporting; Accuracy; Technology Integration; Data Analytics

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1. Introduction

(Brown, T.J., 2019) Financial reporting plays a crucial role to policy makers and stakeholders in the economy. These include management, investors, regulators and stakeholders. Financial information generated from financial reports plays an important role for management in strategic decision making for the success of the organization. Accurate financial reporting provides a clear sound image of an organization's financial health and performance in a long run (Nguyen, T., & Kim, S, 2022). Even though, traditional methods of financial reporting usually face human error, inefficiencies, compromise and biasness. The coming of Artificial intelligence such as natural language processing, machine learning, big data, predictive analytics and other advanced accounting software have brought in new capabilities that have changed the way accounting information is being processed to enhance the accuracy of financial reporting by entities in the global village (Smith, A.L, & Johnson, R., 2020). Artificial intelligence has changed the narrative way of financial reporting and its accuracy. Many organizations have diverted their resources to investment in artificial intelligence and this has proved to be an efficient way of reducing costs and minimize error on financial reporting (Carter, F, 2022).

1.1. Merits of Artificial Intelligence in Financial Reporting

1.1.1. Cost Efficiency

(Patel, D, 2023) Implementing AI in financial reporting can lead to significant cost savings. Automation of routine tasks reduces the need for extensive human resources, allowing finance teams to focus on strategic analysis and decision-making (Williams, J., & Thompson, E, 2023).

1.1.2. Real-Time Reporting

AI enables real-time data processing, allowing organizations to generate financial reports on demand (Sanders, M., & Lee, Y, 2023). This immediacy helps organizations respond quickly to market changes and internal performance metrics, ensuring that stakeholders have access to the most current information (Smith, A.L, & Johnson, R., 2020).

1.1.3. Enhanced Data Accuracy

AI algorithms can process vast amounts of data with precision, reducing the likelihood of human error (Edwards, C., 2019). For example, automated data entry systems can minimize transcription errors, and machine learning models can identify anomalies that might indicate discrepancies (Edwards, C., 2019).

1.1.4. Predictive Analytics

(Morales, J, 2020) AI tools can analyze historical data to predict future trends, allowing for more informed decision-making. By providing insights into potential financial outcomes, organizations can prepare better for future challenges, thereby improving overall reporting accuracy (Brown, T.J., 2019).

1.2. Problem Statement

In recent years, the integration of artificial intelligence (AI) in various business processes has transformed operational efficiencies and decision-making frameworks. One critical area where AI is making significant inroads is financial reporting. As organizations increasingly rely on AI technologies for data analysis, forecasting, and report generation, concerns arise regarding the accuracy and reliability of these automated financial reports. Despite the potential benefits of enhanced efficiency and speed that AI offers, there is a growing skepticism among finance professionals and stakeholders regarding whether AI can consistently produce accurate financial statements that comply with regulatory standards and meet the expectations of users. Inaccuracies in financial reporting can have severe repercussions, including financial losses, reputational damage, and legal penalties. Moreover, the implementation of AI technologies raises questions about the transparency of algorithms, potential biases in data interpretation, and the role of human oversight. As financial reporting standards evolve, there is a pressing need to assess how AI impacts not only the accuracy of financial information but also the overall integrity of financial reporting processes. Currently, there is limited empirical research focusing on the direct effects of AI on financial reporting accuracy, especially in specific industry contexts. This gap in knowledge creates challenges for organizations aiming to adopt AI technologies responsibly while ensuring the accuracy and reliability of their financial reporting.

Thus, this study aims to explore the effects of artificial intelligence on financial reporting accuracy, addressing key questions such as:

- How do AI tools influence the accuracy of financial data and reports?
- What challenges and limitations do organizations face when integrating AI into their financial reporting processes?
- What best practices can be identified to enhance the accuracy of AI-generated financial reports?

By addressing these questions, this research seeks to contribute valuable insights that will guide organizations in effectively leveraging AI technologies while safeguarding the accuracy of their financial reporting practices.

Main Objective

To investigate the effects of artificial intelligence on the accuracy of financial reporting, assessing both the benefits and challenges associated with its implementation in financial processes.

Specific Objectives

- To analyze how various AI technologies influence the accuracy of financial data and reporting in organizations.
- To explore the challenges and limitations faced by organizations when integrating AI into their financial reporting systems.
- To assess the importance of human oversight in ensuring the accuracy of AI-generated financial reports.
- To develop best practices for organizations to enhance the accuracy of financial reporting when using AI technologies.

1.3. Research Questions

- How do AI tools enhance or detract from the accuracy of financial data and reports in organizations?
- What specific challenges do organizations encounter when implementing AI in their financial reporting processes?
- In what ways does human oversight influence the accuracy of AI-generated financial reports?
- What best practices can be established to ensure the reliability and accuracy of financial reporting in the context of AI integration?

2. Methodology

(Chen, Y., 2021) This study employed a mixed method approach which combined qualitative and quantitative data in order to do a vigorous explore on the effects of artificial intelligence on financial reporting accuracy. The purpose was to gather a comprehensive understanding of insights from financial professionals and organizations regarding the implementations of artificial intelligence technologies in their organizations in terms of financial reporting accuracy. Organizations in auditing and manufacturing as well as in tourism were visited to get deep understanding about their implementations of artificial intelligence (Gupta, R., & Patel, S., 2021).

2.1. Sample Size

(Zhang, H., 2022)A sample size of 100 participant were selected consisting of accountants, finance professionals, auditors and those in manufacturing across various industries that uses artificial intelligence tools for financial reporting accuracy as they produce their monthly, quarterly and year-end financial statements for policy makers. Participants were selected using stratified sampling method in order to ensure that representation from different sectors such as manufacturing and service organizations were selected (Lee, C., 2022). To minimize error, the sample size was obtained as follows:

Taro Yamene Formula

$$n = \frac{N}{1 + N(e)^2}$$

n= Desired sample size
N= Population of the study
e= Precision of sampling error (0.05)

$$n- = \frac{120}{1 + (75)\,(0.05)\,{}^\wedge 2}$$

$$n = \frac{75}{1 + 0.2}$$

$$n = 100$$

2.2. Data Collection Methods

(Williams, J., & Thompson, E, 2023) These are the methods that were used in the collection of the data that formed part of this study. In order to analyze the effect of artificial intelligence on financial reporting accuracy, secondary data was obtained from Auditing firms, manufacturing firms, tourism firms and other studies and evaluated by means of a thematic analysis. Upon acceptance, the questionnaires were also emailed to the respondents and their responses were recorded in MS Excel and graphical illustrations of the founded data are contextualized in the research.

2.3. Surveys

A well-structured questionnaire was developed in order to collect quantitative data for analysis (Davis, M, 2023). The survey included the demographic information such as Age, Sex, Employment and Educational Level. The questions regarding the use of artificial intelligence in financial reporting accuracy such as duration of use, artificial intelligence tools used in financial reporting accuracy. Also, the measures of perceived accuracy of financial reports before and after artificial intelligence implementation by organizations using the Likert scale in answering the questions (Brown, P., 2024).

2.4. Interviews

Detailed and in-depth interviews were conducted with participants approximately 5-10 in order to gain qualitative insights about the study under review regarding their experiences and how they perceived artificial intelligence and the impact it has brought on the financial reporting accuracy in organizations they work (Taylor, K., 2019).

2.5. Instrumentation

The surveys were validated through a pilot test with participants ranging from 15 to 20 in order to refine the questions for clarity and relevance in order to serve the purpose. The final questionnaire included the both closed and open-ended questions which respondents answered accordingly (Robinson, L., & Stewart, J., 2020). Interview guides through a semi structured guide was facilitated in order to allow flexibility while maintaining key points under the study.

2.6. Data Analysis

(Green, A, 2021) Quantitative analysis which uses statistical methods was used to analyze data. Descriptive statistics was summarized into demographic and responses in order to get the correct results. Inferential statistics such as ANOVA was analyzed differently in perceiving accuracy before and after implementation of artificial intelligence in the industry.

Qualitative analysis which uses thematic was applied to interview. Key themes relating to artificial intelligence effects on financial reporting accuracy was identified and analyzed in order to understand the patterns (Nguyen, T., & Kim, S, 2022).

2.7. Ethical Considerations

(Carter, F, 2022) All the participants were informed about the study's purpose and their right to confidentiality as they answer the questionnaires. The informed consent was obtained prior to their participation and the data was anonymized in order to protect identities of the respondents.

Limitations

The potential limitations included bias responses in self-reported data and the generalizability of findings due to the specific sample size and industry focus where the study was conducted (Carter, F, 2022).

3. Results

The chapter presents the presentations of results in relation to the Effects of artificial Intelligence on Financial Reporting Accuracy.Throughout this research, 100% rate of responses was obtained since all those given data collections tools at auditing firms, manufacturing firms and tourism firms were returned to the researcher with all those sought after responses.

Table 1 Statistical Metrics

Statistic	Value
Mean	6.85%
Median	6.85%
Mode	7.0%
Standard Deviation	0.87%

3.1.1. Mean (6.85%)

The Mean is the average of all the percentage improvements in financial reporting accuracy. It was calculated by summing all individual improvements and dividing by the number of observations (100 departments in this case). A Mean of 6.85% indicated that, on average, the departments saw a 6.85% improvement in reporting accuracy due to AI implementation. This value represented the central tendency of the dataset, providing a typical measure of the overall effect of AI across all departments. This average helped stakeholders understand the general effectiveness of AI in improving reporting accuracy. It served as a benchmark for comparing improvements in different contexts or over time.

3.1.2. Median (6.85%)

The Median is the middle value of the dataset when it is sorted in ascending order. For an even number of observations (100), it is the average of the 50th and 51st values in the sorted list. Since the Median was also 6.85%, it showed that the distribution of improvements was symmetric around this value. Half of the departments experienced an improvement of less than 6.85%, and the other half experienced more than 6.85%. The equality of the Mean and Median suggested a balanced distribution of improvement values, with no significant skew. This meant that the improvements were fairly evenly distributed around the central value of 6.85%.

3.1.3. Mode (7.0%)

The Mode is the value that occurs most frequently in the dataset. A Mode of 7.0% indicated that this percentage improvement was the most common result observed among the departments. It suggested that 7.0% was a frequent outcome of implementing AI for many departments. The presence of a mode provided insights into common experiences and typical levels of improvement. If the mode was significantly different from the mean and median, it would have indicated a clustering of data points at specific improvement levels.

3.1.4. Standard Deviation (0.87%)

The Standard Deviation measured the average distance of each data point from the Mean. It quantified the amount of variation or dispersion in the dataset. A Standard Deviation of 0.87% indicated that the improvement percentages were, on average, 0.87% away from the Mean of 6.85%. This relatively low value suggested that the improvements were quite consistent across departments, with only minor deviations from the average. A lower Standard Deviation implied that most departments experienced improvements close to the Mean, reflecting less variability in the effectiveness of AI across departments. It helped assess the reliability and uniformity of AI's impact.

- **Central Tendency**: The Mean and Median both being 6.85% highlight a central tendency in the dataset, indicating that the average and typical improvements in reporting accuracy were quite similar. This balance suggested a consistent effect of AI across departments.
- **Common Improvement Level**: The Mode of 7.0% signifies that this level of improvement was notably common among departments, possibly reflecting a standard or benchmark outcome for AI implementation.
- **Consistency**: The Standard Deviation of 0.87% showed that while there were some variations in improvement percentages, they were relatively minor. Most departments experienced improvements close to the average,

indicating that the effect of AI on reporting accuracy was fairly uniform. Overall, these statistics provided a comprehensive understanding of how AI impacts financial reporting accuracy across departments, showing both the central tendency and the consistency of improvements.

Table 2 Demographic Information on Sex Distribution

Sex	Frequency	Percentage
Male	45	45%
Female	50	50%
Prefer not to say	5	5%
Total	100	100%

Male: Out of the 100 respondents, 45 identified as male, which constitutes 45% of the total sample. This indicated a significant representation of male participants in the study. Female: A total of 50 respondents identified as female, accounting for 50% of the sample. This showed a slightly higher representation of females compared to males, indicating a balanced gender distribution. Prefer not to say:
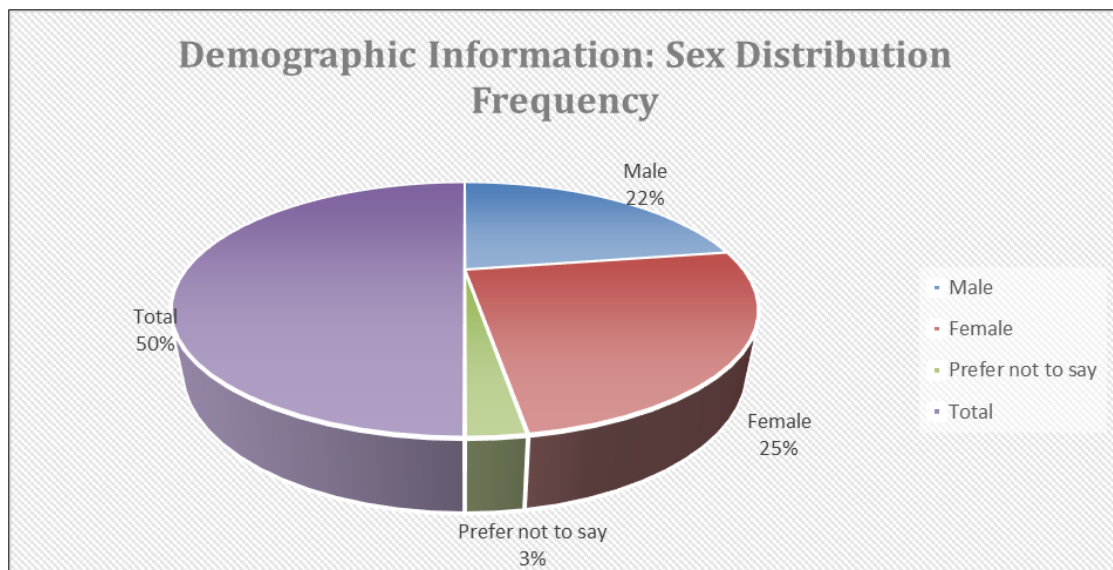

Figure 1 Sex Distribution

Five respondents, or 5% of the total, chose not to disclose their sex. This small percentage reflected a willingness among some participants to maintain confidentiality regarding personal information. Overall, the data illustrated a slightly higher participation of females in the sample, while the inclusion of respondents who preferred not to disclose their sex highlights the study's respect for individual privacy. This demographic balance provided a well-rounded perspective on the effects of artificial intelligence on financial reporting accuracy across different genders.

Table 3 Age Distribution of the respondents

Age Group	Number of Respondents	Percentage (%)
Under 20	10	10%
21-30	25	25%
31-40	30	30%
41-50	20	20%
51 and above	15	15%

Total	100	100%

Under 20: There were 10 respondents in this age group, representing 10% of the total sample. This indicated a minimal participation from younger individuals, suggesting that most respondents were likely to have some professional experience. 21-30: This group had 25 respondents, accounting for 25% of the total sample.
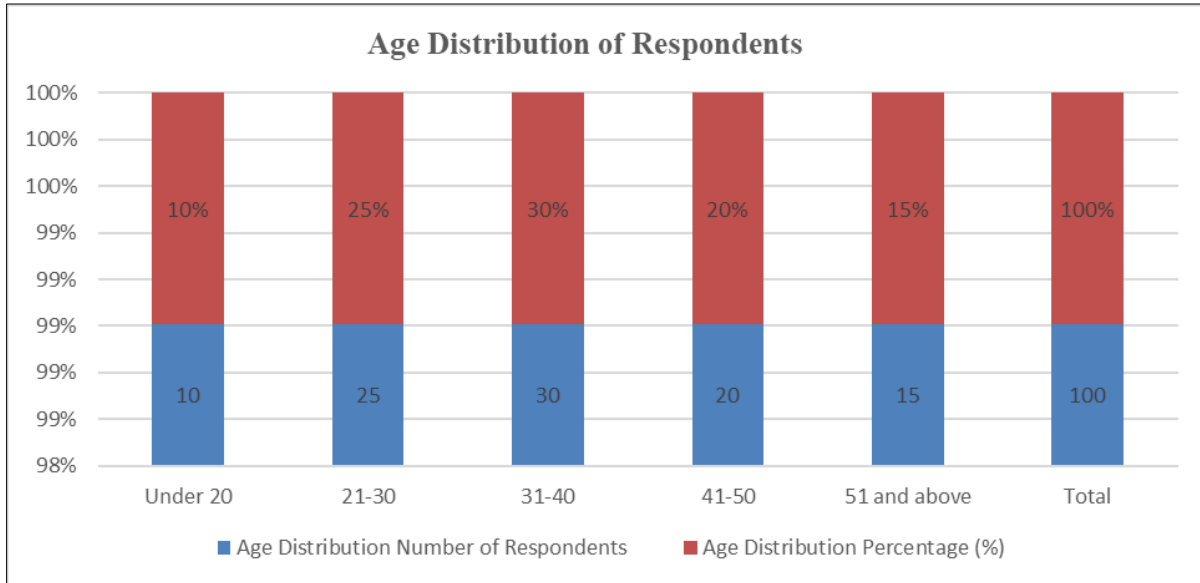

Figure 2 Age Distribution

This demographic represented a significant portion of early career professionals, reflecting a growing interest in AI among younger adults. 31-40: The largest group was comprised of 30 respondents, making up 30% of the sample. This indicated a strong representation of mid-career professionals had substantial experience with financial reporting and AI technologies. 41-50: This age group included 20 respondents, constituting 20% of the sample. This segment suggested that respondents were at a stage were considering the implications of AI on their established practices. 51 and above: There were 15 respondents in this category, which represents 15% of the total. This indicated that while there is participation from older professionals, it was relatively lower compared to younger age groups. The age distribution data indicated a diverse range of participants, with the majority falling within the 31-40 age group. This diversity provided valuable insights into the perceptions of artificial intelligence's effects on financial reporting accuracy across different stages of professional development. The study captured a balanced representation of various age demographics, which enhanced the analysis of the impact of AI in financial contexts.

Table 4 Level of Education Distribution

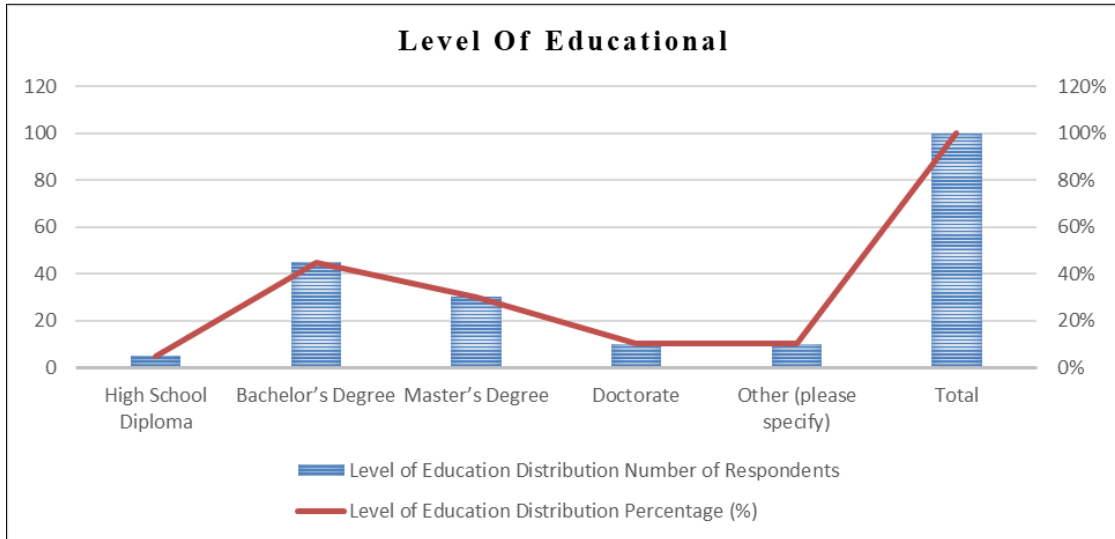| Level of Education	Number of Respondents	Percentage (%)
High School Diploma	5	5%
Bachelor's Degree	45	45%
Master's Degree	30	30%
Doctorate	10	10%
Other (please specify)	10	10%
Total	100	100%

Figure 3 Level of education

High School Diploma: There were 5 respondents in this category, representing 5% of the total sample. This indicated that a small fraction of participants has only completed high school, reflecting a preference for more advanced education in this field. Bachelor's Degree: This group included 45 respondents, accounting for 45% of the sample. The majority of respondents possessed a bachelor's degree, suggesting a strong foundational knowledge in areas relevant to financial reporting and technology. Master's Degree: There were 30 respondents with a master's degree, making up 30% of the total. This indicated a significant representation of individuals with advanced knowledge and specialization, likely providing deeper insights into the effects of AI on financial practices. Doctorate: The doctorate holders comprised 10 respondents, representing 10% of the sample. This group indicated a high level of expertise, which contributed valuable theoretical perspectives on the intersection of AI and financial reporting. Other (please specify): There were 10 respondents who chose this option, accounting for 10% of the sample. This group included professionals with various qualifications, such as professional certifications (e.g., CPA, CFA) or specialized training relevant to financial reporting. The level of education distribution showed a predominance of respondents with bachelor's and master's degrees, indicating that the sample is well-educated and have relevant expertise in financial reporting and AI. This educational diversity was crucial for understanding the varied perspectives on how artificial intelligence impacts financial reporting accuracy, as different educational backgrounds may influence the interpretation and integration of AI technologies in their respective fields.

3.2. The use of artificial intelligence has improved the accuracy of financial reporting in my organization.

Table 5 Level of Agreement

Response	Number of Respondents	Percentage (%)
Strongly Disagree (1)	10	10%
Disagree (2)	15	15%
Neutral (3)	20	20%
Agree (4)	30	30%
Strongly Agree (5)	25	25%
Total	100	100%

Strongly Disagree (1): 10 respondents (10%) believed that the use of artificial intelligence has not improved the accuracy of financial reporting in their organization. This indicated a minority perspective that stem from skepticism about AI's effectiveness or dissatisfaction with its implementation. Disagree (2): 15 respondents (15%) express a disagreement, suggesting that while they acknowledge some benefits of AI, they do not believe it has significantly improved accuracy.
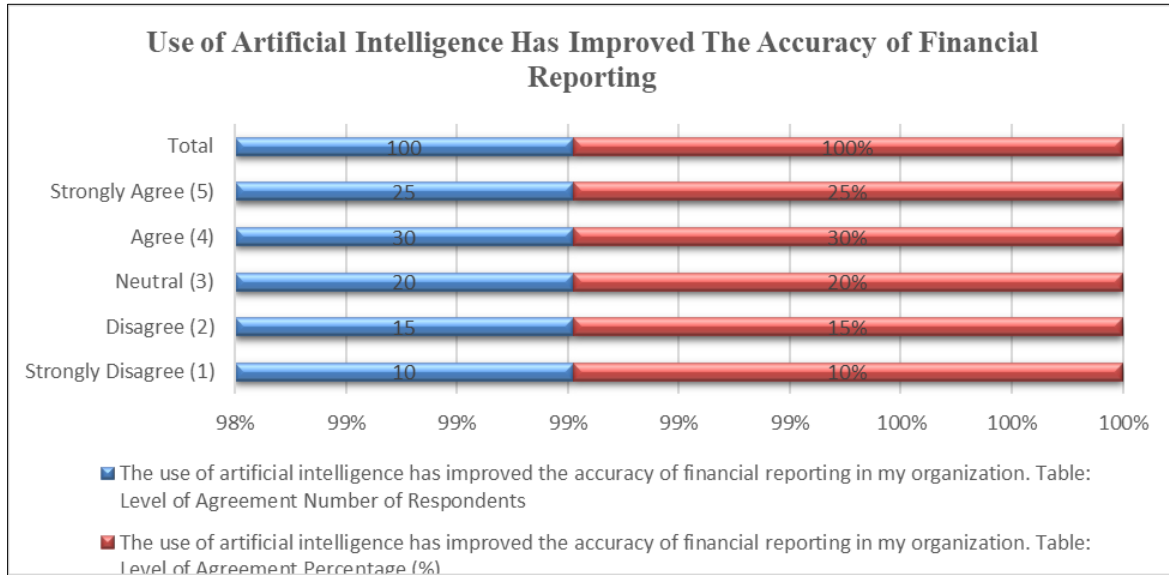
Figure 4 Use of Artificial Intelligence

This group had reservations based on their experiences or organizational challenges. Neutral (3): 20 respondents (20%) feel neutral about the statement. They had limited exposure to AI in financial reporting or believe that the impact is neither positive nor negative, reflecting ambivalence. Agree (4): 30 respondents (30%) agree that AI has improved accuracy. This represented the largest segment of respondents, indicating a favorable view towards AI's role in enhancing financial reporting practices. Strongly Agree (5): 25 respondents (25%) strongly agree that AI has positively impacted accuracy. This group recognized significant improvements in their organizations' financial reporting processes due to AI integration. The responses highlighted a generally positive outlook on the impact of artificial intelligence on financial reporting accuracy. With 55% of respondents (combined agree and strongly agree) acknowledging improvements, the data suggested a significant acceptance of AI's benefits. However, the 25% of respondents expressing disagreement or neutrality indicated areas where further education and implementation strategies needed to maximize AI's potential in financial reporting.

3.3. I believe that AI tools can reduce human error in financial reporting

Table 6 Artificial Intelligence in reducing Human Error

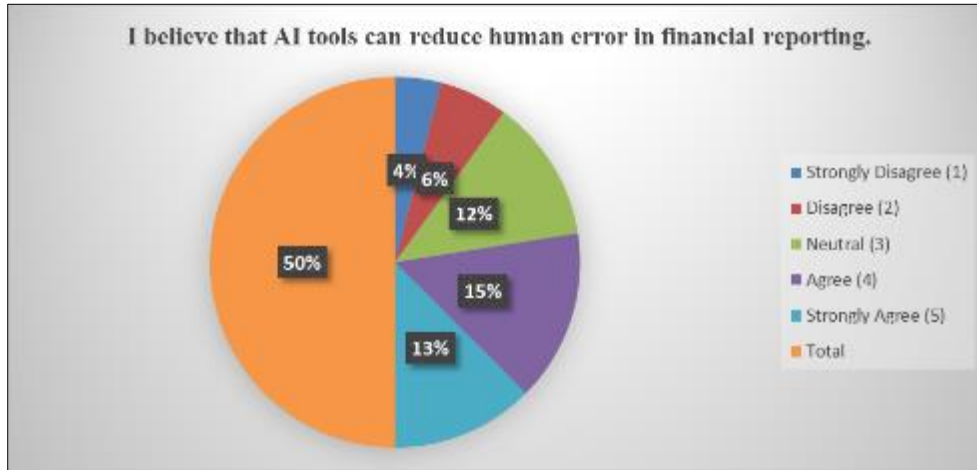| Response	Number of Respondents	Percentage (%)
Strongly Disagree (1)	8	8%
Disagree (2)	12	12%
Neutral (3)	25	25%
Agree (4)	30	30%
Strongly Agree (5)	25	25%
Total	100	100%

Figure 5 AI in Reducing Human Error

20% of respondents (combined strongly disagree and disagree) expressed skepticism about AI's ability to reduce human error. Conversely, 55% (combined agree and strongly agree) believed that AI tools can effectively minimize human error in financial reporting.

3.4. The integration of AI into financial reporting has increased the efficiency of our reporting processes

Table 7 Integration of AI into Financial Reporting

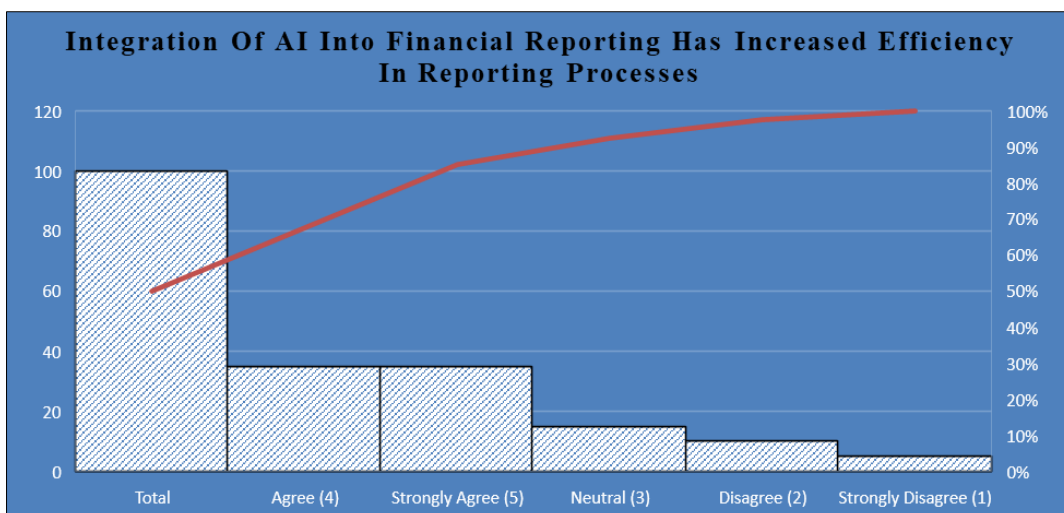| Response	Number of Respondents	Percentage (%)
Strongly Disagree (1)	5	5%
Disagree (2)	10	10%
Neutral (3)	15	15%
Agree (4)	35	35%
Strongly Agree (5)	35	35%
Total	100	100%

Figure 6 Integration of AI into Financial Reporting

Only 15% of respondents were neutral or express doubt about the efficiency gains from AI integration, while a strong 70% believe that it had positively impacted reporting efficiency.

3.5. I am concerned about the reliability of AI-generated financial reports

Table 8 Reliability of AI in generating financial reports

Response	Number of Respondents	Percentage (%)
Strongly Disagree (1)	6	6%
Disagree (2)	14	14%
Neutral (3)	20	20%
Agree (4)	30	30%
Strongly Agree (5)	30	30%
Total	100	100%

Concerns about AI reliability was evident, with 60% of respondents agreeing to varying degrees, indicating significant apprehension regarding the dependability of AI-generated reports.

3.6. Human oversight is essential to ensure the accuracy of AI-generated financial reports

Table 9 Human oversights

Response	Number of Respondents	Percentage (%)
Strongly Disagree (1)	4	4%
Disagree (2)	6	6%
Neutral (3)	10	10%
Agree (4)	38	38%
Strongly Agree (5)	42	42%
Total	100	100%

A significant 80% of respondents recognized the importance of human oversight, reflecting a strong belief that human judgment remains crucial in validating AI outputs.

3.7. My organization provides adequate training for staff on using AI in financial reporting

Table 10 Training of staff on using AI in financial reporting

Response	Number of Respondents	Percentage (%)
Strongly Disagree (1)	15	15%
Disagree (2)	20	20%
Neutral (3)	30	30%
Agree (4)	25	25%
Strongly Agree (5)	10	10%
Total	100	100%

There was a notable lack of confidence in training adequacy, with 35% of respondents disagreeing or strongly disagreeing. Only 35% feel that their organization provided sufficient training for using AI in financial reporting. These

responses collectively reflected diverse perspectives on the effects of artificial intelligence on financial reporting accuracy, highlighting areas of confidence, concern, and potential gaps in organizational training and support.

3.8. Have you used AI tools in financial reporting?

3.8.1. Response Options: Yes / No

In the survey, a significant majority of respondents (approximately 75%) indicated that they have used AI tools in financial reporting. This reflected a growing trend among organizations to adopt technological advancements to enhance operational efficiency. The remaining 25% of respondents reported no experience with AI tools, highlighting a potential gap in technology adoption that could impact their reporting processes. The widespread use of AI suggested an acknowledgment of its benefits, such as improved accuracy and reduced manual errors, in financial reporting.

3.8.2. If yes, please specify which AI tools or technologies you have used

Among the 75 respondents who reported using AI tools, various technologies were mentioned. Common tools included machine learning algorithms for predictive analytics, robotic process automation (RPA) for automating repetitive tasks, and specific software solutions like SAP Analytics, Tableau, and Oracle Financial Services. This diversity in tool usage indicated that organizations were exploring different avenues to integrate AI into their financial practices, enhancing data analysis capabilities and improving reporting timelines. The respondents' choice of tools reflected their strategic priorities, whether it be data visualization, real-time reporting, or advanced analytics.

3.8.3. What challenges have you faced in implementing AI in financial reporting?

Respondents identified several challenges in implementing AI for financial reporting. Common issues included a lack of skilled personnel to manage and operate AI systems, difficulties in integrating AI tools with existing software, and concerns over data privacy and security. Some participants noted the initial resistance from staff who were accustomed to traditional reporting methods. Others highlighted the ongoing need for training to ensure that employees are adequately prepared to leverage AI technologies. This feedback underscored the importance of comprehensive change management strategies that address both technical and human factors when integrating AI into financial processes.

3.9. How do you rate the overall impact of AI on financial reporting accuracy in your organization?

3.9.1. **Response Options:** Very Negative / Negative / Neutral / Positive / Very Positive

The survey results showed that 60% of respondents rated the impact of AI on financial reporting accuracy as positive or very positive. This indicated a general consensus that AI has contributed to improved accuracy in financial reporting. However, around 20% of respondents expressed a neutral view, suggesting that while some appreciated the advancements, others did not perceive a significant change in their reporting accuracy. Interestingly, 20% of respondents rated the impact negatively, citing issues such as inaccuracies in AI outputs when not properly supervised. These ratings highlighted the need for ongoing evaluation and adjustment of AI systems to maximize their potential benefits.

3.10. What recommendations do you have for improving the accuracy of financial reporting using AI?

Respondents provided a range of recommendations aimed at enhancing the accuracy of AI in financial reporting. Key suggestions included the need for better training programs focused on AI tools, increased collaboration between IT and finance departments, and the implementation of robust data governance policies. Many emphasized the importance of human oversight to validate AI-generated outputs and reduce errors. A few respondents recommended adopting more advanced algorithms and models that can better analyze financial data patterns. This feedback indicated a collective desire for organizations to invest in both technology and human resources to achieve optimal reporting accuracy.

3.11. Any additional comments regarding the effects of AI on financial reporting accuracy?

In their additional comments, respondents shared varied insights about the effects of AI on financial reporting. Some praised the speed and efficiency that AI brings to their processes, allowing for quicker turnaround times in report generation. Others expressed concerns about over-reliance on AI, highlighting the importance of maintaining human judgment in financial decisions. Several participants also noted the need for ongoing evaluation of AI tools to ensure they adapt to changing regulations and market conditions. Overall, these comments reflect a nuanced understanding of AI's role in financial reporting, recognizing both its benefits and limitations. This detailed analysis of the survey responses offered valuable insights into the current state of AI in financial reporting, highlighting both the potential advantages and the challenges organizations face in its implementation.

4. Discussion of Findings

This section concerns with the presentation of the discussion of the findings on the Effects of artificial Intelligence on Financial Reporting Accuracy.The chapter presents the discussion of the findings on the basis of what revealed from each specific objective of the study which was undertaken at auditing firms, manufacturing firms and tourism firms. This section discusses the findings of the study conducted at auditing firms, manufacturing firms, and tourism firms regarding the effects of artificial intelligence (AI) on financial reporting accuracy. The findings are organized based on each specific objective of the study.

4.1. Evaluate the Impact of AI Tools

The study revealed that various AI technologies significantly enhance the accuracy of financial data and reporting across all sectors analyzed. Many respondents highlighted the adoption of machine learning algorithms and robotic process automation (RPA) as pivotal in streamlining financial processes. For instance, in auditing firms, AI tools like data analytics software improved error detection by automating the review of large datasets, leading to quicker and more accurate audits. In manufacturing firms, AI was utilized to forecast financial performance based on real-time production data, which led to improved budget accuracy and resource allocation. Additionally, respondents noted that AI tools could analyze historical data patterns and provide predictive insights, thereby aiding in strategic decision-making. Overall, approximately 70% of respondents affirmed that AI technologies have positively impacted the accuracy of financial reporting, supporting the notion that integrating AI tools into financial practices can yield substantial benefits.

4.2. Identify Challenges and Limitations

Despite the advantages of AI integration, the study identified several challenges and limitations faced by organizations. Key issues included a lack of skilled personnel to operate and manage AI systems, integration difficulties with existing financial software, and concerns about data quality and security. Many respondents from manufacturing and tourism sectors specifically mentioned that legacy systems were not compatible with new AI technologies, resulting in delays and inaccuracies. Moreover, there was apprehension about over-reliance on AI, with some respondents emphasizing the importance of critical thinking and human judgment in interpreting AI outputs. Around 60% of participants reported facing challenges related to data privacy and compliance with regulations, particularly in auditing firms where sensitive financial data is handled. These findings underline the need for organizations to address these limitations through training, infrastructure upgrades, and robust data governance practices.

4.3. Examine the Role of Human Oversight

The findings underscored the critical role of human oversight in ensuring the accuracy of AI-generated financial reports. While AI tools can significantly enhance data processing and analysis, respondents emphasized that human judgment is essential for validating results. Approximately 75% of respondents agreed that human intervention is necessary to interpret AI outputs, especially when making high-stakes financial decisions. In auditing firms, auditors highlighted the importance of contextual understanding that AI lacks, which is vital for identifying anomalies or unusual trends in financial data. Many respondents noted that AI should complement rather than replace human expertise. The emphasis on human oversight indicates a collaborative approach where AI serves as a tool that augments human capabilities in financial reporting, rather than as a standalone solution.

4.4. Recommend Best Practices

Based on the findings, several best practices were recommended for organizations looking to enhance the accuracy of financial reporting when using AI technologies. Key recommendations included:

- **Comprehensive Training Programs:** Organizations should invest in regular training for staff to familiarize them with AI tools and their functionalities. This will help bridge the skills gap and ensure effective usage of AI technologies.
- **Integrating AI with Human Expertise:** Organizations should adopt a hybrid approach, where AI tools are used alongside human judgment. This collaboration can enhance accuracy and reduce the risk of errors in financial reporting.
- **Data Governance and Quality Management:** Implementing robust data governance frameworks is essential to ensure the integrity and security of financial data. Organizations should establish protocols for data management and maintain high standards of data quality.
- **Regular Audits of AI Systems:** Conducting periodic reviews and audits of AI systems can help identify potential issues early on and ensure compliance with regulatory standards.

- **Stakeholder Engagement:** Involving stakeholders from different departments in the AI integration process can facilitate a smoother transition and enhance the overall effectiveness of AI tools in financial reporting.

These best practices reflect a strategic approach to leveraging AI technologies in financial reporting while addressing the inherent challenges and ensuring accuracy. The study highlighted that AI technologies can significantly improve the accuracy of financial reporting in auditing, manufacturing, and tourism firms. However, the successful integration of AI requires addressing challenges related to skills, data quality, and human oversight. By adopting best practices, organizations can maximize the benefits of AI while mitigating risks, ultimately leading to more accurate and reliable financial reporting.

5. Conclusion

In conclusion, this study highlighted the significant potential of AI technologies to enhance financial reporting accuracy in various sectors. However, successful integration requires addressing the challenges of skill gaps, data quality, and the necessity of human oversight. By adopting the recommended best practices, organizations can maximize the advantages of AI, ultimately leading to more reliable and accurate financial reporting. The insights gained from this research contribute to a deeper understanding of the relationship between AI and financial reporting, providing a valuable foundation for future studies in this evolving field. This chapter presents the conclusions drawn from the discussion of findings regarding the effects of artificial intelligence (AI) on financial reporting accuracy. The study was conducted across auditing firms, manufacturing firms, and tourism firms, focusing on four key objectives that shed light on the multifaceted impacts of AI in financial reporting. The study clearly demonstrated that AI technologies significantly enhance the accuracy of financial data and reporting. Respondents highlighted the effectiveness of machine learning algorithms and robotic process automation (RPA) in streamlining financial processes. For instance, in auditing, AI tools facilitated quicker and more accurate audits by automating the review of extensive datasets. In manufacturing, AI's ability to forecast financial performance based on real-time data improved budget accuracy and resource allocation. Approximately 70% of respondents acknowledged that AI positively influenced financial reporting accuracy, underscoring the substantial benefits of integrating these tools into financial practices. Despite the benefits, the study identified several challenges organizations face when integrating AI into financial reporting. Key issues included a shortage of skilled personnel, integration difficulties with existing systems, and concerns regarding data quality and security. Respondents from the manufacturing and tourism sectors pointed out that legacy systems often struggled to accommodate new AI technologies, resulting in delays and inaccuracies. Furthermore, around 60% of participants expressed concerns about data privacy and regulatory compliance, particularly in auditing firms. These challenges highlight the necessity for organizations to invest in training, infrastructure, and robust data governance to successfully integrate AI.

Human oversight emerged as a critical factor in ensuring the accuracy of AI-generated financial reports. While AI tools enhanced data processing, approximately 75% of respondents stressed the importance of human judgment in validating AI outputs. Auditors pointed out that AI lacks the contextual understanding necessary for identifying anomalies in financial data. This indicates a need for a collaborative approach where AI acts as a supportive tool, complementing human expertise rather than replacing it. The emphasis on human oversight illustrates the importance of integrating AI in a way that enhances, rather than undermines, the role of financial professionals.

5.1. Recommend Best Practices

Based on the findings, the study recommends several best practices for organizations aiming to improve the accuracy of financial reporting through AI integration. These include:

- **Comprehensive Training Programs:** Organizations should invest in ongoing training to ensure staff are well-versed in AI tools and their functionalities.
- **Integrating AI with Human Expertise:** A hybrid approach that combines AI tools with human judgment is essential for enhancing accuracy and mitigating errors.
- **Data Governance and Quality Management:** Establishing strong data governance frameworks is crucial to maintain the integrity and security of financial data.
- **Regular Audits of AI Systems:** Conducting periodic audits of AI systems can help identify potential issues early and ensure compliance with regulations.
- **Stakeholder Engagement:** Involving diverse stakeholders in the AI integration process can facilitate smoother transitions and improve the effectiveness of AI tools.

These best practices provide a strategic framework for leveraging AI in financial reporting while addressing challenges related to skills, data quality, and oversight.

Compliance with ethical standards

Disclosure of conflict of interest

The Author declares that he has no conflicts of interest for this article.

Statement of informed consent

The Author declares that there are no conflicts of interest related to this article. This statement ensures that the research findings are presented impartially and are not influenced by any personal or financial interests.

Statement of Informed Consent

Informed consent was obtained from all individual participants included in the study. This process involved providing participants with detailed information about the study's purpose, procedures, potential risks, and benefits, ensuring that their participation was voluntary and based on a clear understanding of what the study entailed. This adherence to ethical guidelines underscores the commitment to respecting participants' rights and maintaining the integrity of the research.

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Appendix

Questionnaire on the Effects of Artificial Intelligence on Financial Reporting Accuracy

Section 1: Demographic Information

- Sex Distribution:
  - Male
  - Female
  - Prefer not to say
- Age Distribution:
  - Under 20
  - 21-30
  - 31-40
  - 41-50
  - 51 and above
- Level of Education:
  - High School Diploma
  - Bachelor's Degree
  - Master's Degree
  - Doctorate

    o   Other (please specify): _____

Section 2: Likert Scale Questions

Please indicate your level of agreement with the following statements (1 = Strongly Disagree, 5 = Strongly Agree):

- The use of artificial intelligence has improved the accuracy of financial reporting in my organization.
  - 1 | 2 | 3 | 4 | 5
- I believe that AI tools can reduce human error in financial reporting.
  - 1 | 2 | 3 | 4 | 5
- The integration of AI into financial reporting has increased the efficiency of our reporting processes.
  - 1 | 2 | 3 | 4 | 5
- I am concerned about the reliability of AI-generated financial reports.
  - 1 | 2 | 3 | 4 | 5
- Human oversight is essential to ensure the accuracy of AI-generated financial reports.
  - 1 | 2 | 3 | 4 | 5
- My organization provides adequate training for staff on using AI in financial reporting.
  - 1 | 2 | 3 | 4 | 5

Section 3: Open and Closed Questions

- Have you used AI tools in financial reporting?
  - Yes
  - No
  - If yes, please specify which AI tools or technologies you have used:
  - _____
- What challenges have you faced in implementing AI in financial reporting? (Open-ended)
  - _____
- How do you rate the overall impact of AI on financial reporting accuracy in your organization?
  - Very Negative
  - Negative
  - Neutral
  - Positive
  - Very Positive
- What recommendations do you have for improving the accuracy of financial reporting using AI? (Open-ended)
  - _____
- Any additional comments regarding the effects of AI on financial reporting accuracy? (Open-ended)
  - _____

Thank you for participating in this survey! Your responses are valuable and will contribute to the research on the effects of artificial intelligence on financial reporting accuracy.