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The Role of Integration between Artificial Intelligence and Management Accounting Methods in Supporting Corporate Governance

Mosleh Mazin Salim*
Al Iraqia University, Iraq.
ORCID iD: https://orcid.org/0009-0009-6943-5778
Email: mosleh.m.salim@aliraqia.edu.iq

Durgham Ahmed Abdul Ridha
Ministry of Education-Iraq, Iraq.
ORCID iD: https://orcid.org/0000-0001-8274-4545
Email: durgham.ahmed1106@coadec.uobaghdad.edu.iq

Taiseer Mohammed Jumaah
University Of Fallujah, Iraq.
ORCID iD: https://orcid.org/0009-0003-5282-786X
Email: taseer.mohammed@uofallujah.edu.iq

The primary aim of this study is to explore the integration of artificial intelligence (AI) technologies with management accounting practices and its impact on corporate governance. Specifically, it investigates how this integration enhances transparency, supports strategic decision-making, and improves operational efficiency, thus promoting adherence to ethical and professional standards. To test the hypotheses and assess the influence of AI and management accounting techniques on corporate governance, a survey was conducted using a questionnaire distributed to 500 accountants working in Iraqi companies listed on the Iraq Stock Exchange. The results suggest that, due to the unique nature of AI implementation, management accountants can utilise AI to analyse data more efficiently, establish robust control systems, and improve the quality of accounting processes. However, the adoption of AI in corporate governance presents complex challenges and wide-reaching implications. Corporate governance should be regarded as a dynamic process rather than a static outcome. Only organisations that prioritise ethical principles and have a solid foundation in traditional transparency and legal frameworks are likely to fully realise the potential of AI in corporate governance.

Keywords: Artificial Intelligence, Management Accounting, Corporate Governance, Stock Exchange.

Introduction

With the advancement of digitalisation, organisations aim to improve both internal management efficiency and compliance with ethical and legal obligations. Management accounting techniques, which play a pivotal role in performance evaluation and corporate strategy formulation, form the basis for the integration of AI (Chowdhury, 2023; Secinaro et al., 2024). AI-driven enterprise solutions can further enhance decision-making processes within organisations. Corporate governance is essential in promoting transparency, regulatory compliance, and operational efficiency (Chambers, 2005; Mustafa & Al-Nimer, 2018; Sanusi, 2015). Similarly, the growing significance of AI spans various industries, including accounting (Chowdhury, 2023; Secinaro et al., 2024). By enabling quicker and more accurate data processing, AI improves the effectiveness of management accounting techniques in supporting strategic decision-making. However, traditional management accounting methods, such as cost analysis, budgeting, and financial forecasting, continue to be crucial for monitoring internal performance and ensuring financial compliance.

One of the primary challenges in corporate governance among companies listed on the Iraq Stock Exchange (ISX) is insufficient transparency and accountability in financial reporting (Nahla & Obaid, 2024; Salehi, Ammar Ajel, & Zimon, 2023). In most companies, internal control is poor and conflicts of interest between board members and shareholders exist (Mahmoodi, Zalaghi, & Aflatooni, 2023). Issues such as insider trading and nepotism remain and undermine investor confidence and market integrity. Additionally, regulatory authorities fail to rigorously enforce governance regulations. Limited disclosure of operational and financial data also prevents investors from objectively assessing corporate performance (Hirshleifer & Teoh, 2003). Minority shareholders often have trouble securing protection due to the dominance of family-owned or government-affiliated companies. Additionally, the legal framework and inconstant regulatory oversight hinder good corporate governance. Consequently, foreign investors remain wary of investing in ISX listed companies and limit industry expansion. Enhanced corporate governance with stricter regulations and more efficient enforcement is thus required to help economic stability and investor confidence.

The question is how AI and management accounting may be combined to increase transparency and governance through better decision-making, risk mitigation, transparency, and internal controls. This study investigates how firms may use AI to analyse and analyse huge datasets and more flexible and accurate accounting tools to improve corporate decision-making and governance by reducing human error. This study examines how integrating AI technologies with management accounting methodologies improves transparency, strategic decision-making, and operational efficiency, strengthening corporate governance and ethical and professional standards. The study aims to achieve the following objectives:

1. A critical assessment of AI implementation issues in management accounting.
2. Examining how AI improves management accounting efficiency and effectiveness.
3. AI's impact on financial reporting transparency analysis.
4. Study on AI's impact on strategic decision-making.
5. AI integration and management accounting methodologies' impact on corporate governance.

AI enhances management accounting by enabling companies to make data-driven strategic decisions, thereby improving governance efficiency. The implementation of AI technologies reduces errors and the potential for

financial statement manipulation, contributing to greater transparency in reporting and strengthening stakeholder confidence. AI also facilitates advanced analysis and forecasting of financial and administrative risks, offering proactive recommendations that promote corporate stability and reinforce governance frameworks. Integrating management accounting techniques with AI can significantly reduce the time and costs associated with financial reporting and analysis, allowing organisations to allocate more resources to strategic initiatives. Additionally, AI introduces innovative analytical methods, ensuring that management accounting processes remain aligned with contemporary challenges. This integration enhances the financial and operational performance of companies, leading to sustainable returns and increased shareholder value.

Literature Review

Management accounting and corporate governance are examined in the academic literature by emphasising the need to use specific strategies to improve governance (Bhimani, 2009). Management accounting provides critical financial information for logical planning and decision-making. To analyse how AI and Fourth Industrial Revolution technologies are affecting management accountants, research has examined their changing role. AI adoption criteria and Fourth Industrial Revolution accounting technologies are statistically and morally related. Management accounting and governance effectiveness assessments can improve institutional governance (Benbaira & Alloune, 2024). Management accounting enhancements boost governance frameworks, according to research. Management accounting improves industrial organisation planning, control, performance evaluation, and decision-making, strengthening corporate governance (Johri et al., 2024).

The incorporation of AI technologies into management accounting systems significantly improves the efficiency of accounting functions and enhances corporate competitiveness within the digital business landscape. Investigating how AI can optimise administrative performance and strengthen a firm's competitive edge through its integration with management accounting systems continues to be a focal point of research. Studies have highlighted a strong positive relationship between strategic management accounting practices and value creation (Shaqqour, 2025). Senior managers and management accountants are increasingly urged to acknowledge the growing significance of strategic management accounting in evaluating corporate value, drawing on practical insights from research. Strategic management accounting techniques are pivotal in assessing the sustainability of corporate governance across different sectors. Managers are encouraged to adopt these approaches to identify, evaluate, and manage the social and environmental costs associated with governance activities. With the support of AI-powered expert systems, management accountants can utilise both stored knowledge and human expertise to offer informed recommendations for organisational decision-making. The structure of the board of directors and its governance processes align with recognised corporate governance standards (Eldaia, Hanefah, & Marzuki, 2023; Yermack, 1996), ensuring robust oversight and clear strategic direction.

The utilisation of management accounting information systems improves the quality of financial data and fosters enhanced governance practices (Al-Rabei et al., 2015; Chen & Rezaee, 2012; Fakhimuddin, 2018). The reliability of management accounting information further bolsters the strength of corporate governance. The literature also highlights the role of management accounting in addressing agency conflicts by identifying key decision-making priorities for managers. By reducing information asymmetry, management accounting contributes to the creation and maintenance of value for stakeholders. However, the structure of supervisory boards, particularly those predominantly composed of family members, does not significantly affect the application of management accounting practices. In contrast, the involvement of non-family members in senior management has a partial impact on these practices. The composition of the board of directors is a key factor in determining the extent of strategic management accounting disclosure within manufacturing firms (Gantyowati & Fitria, 2020; Mangena & Tauringana, 2007). Although a higher proportion of independent board members does not necessarily influence disclosure levels, management ownership has a negative effect. The board of directors plays a pivotal role in determining the scope of strategic management accounting disclosures in corporate reports. Moreover, characteristics of the board of commissioners, such as tenure and educational background, significantly influence the level of information disclosure to capital markets authorities. Board tenure affects the timeliness of corporate disclosures.

Companies with a higher proportion of independent directors and a clear separation of the roles of chairman and chief executive officer are more likely to adopt advanced management accounting technologies and implement knowledge management strategies. Managers who observe best practices in management accounting are more inclined to integrate enhanced knowledge management frameworks within their organisations (Doktoralina & Apollo, 2019; Haldma & Lääts, 2002). In the agricultural sector, management accounting has specific needs, necessitating AI-driven data processing and analysis. Agricultural enterprises generate large amounts of operational and financial data that must be effectively managed through AI-enhanced management accounting systems. Within an AI-driven environment, management accounting should be used in conjunction with other digital tools to optimise financial oversight (Hasan, 2021). As an innovative tool, management accounting enables managers to allocate organisational resources effectively (Doktoralina & Apollo, 2019; Oyelere, Laswad, & Fisher, 2003), offering vital financial insights for managerial decision-making. AI has the potential to unlock substantial economic opportunities for both countries and firms willing to embrace its capabilities.

Management accounting is still adopting AI, but many accountants need training to use it properly and do higher-value activities. Board members should actively request thorough management accounting reports from senior executives to inform strategic decisions. Management accountants must use financial data responsibly and be transparent about data analysis and decision-making. Security must be emphasised to protect financial data and AI systems from cyberattacks. Management accountants with data analysis and interpretation skills can benefit from AI. AI-powered analytics can increase performance measurement, management control system development, and management accounting quality. AI will increasingly support hybrid management accounting functions, influencing decision-making with insights.

AI Adoption Requirements in Accounting

Understand the company's strategic plans and business models to complement accounting skills. Accountants must understand business analytics to collect, interpret, and present data. Additionally, big data tool competency and structured and unstructured data expertise are required (Hasan, 2021). Programming skills are also becoming more important in accounting. Training accountants to assess previous payment data helps improve transaction monitoring, fraud detection, and financial risk mitigation. Supplier data that considers regional and geopolitical variables can also help control supply chain risk. Increasing accountants cyberattack detection and prevention skills can reduce technical support needs and expenditures (McMullen & Sanchez, 2010).

AI Adoption Challenges in the Accounting Industry

Management accounting involves handling complex data, including financial statements, budgets, and forecasts, which presents significant challenges (Prayoga & Afrizal, 2021). As these data sets are often unstructured, human interpretation may still be required to extract meaningful insights. Additionally, data scarcity poses another major issue, as management accounting information may at times be incomplete or difficult to obtain (Zhong & Fan, 2021). This limitation can make it challenging for AI systems to learn effectively and generate accurate forecasts. Furthermore, much of management accounting is dependent on subjective judgements and estimates, like the price allocation for management expenses or the inventory valuation. AI might have trouble taking such subjective factors into account when it analyses. Another challenge is many accounting professionals don't have database functionalities and SQL abilities which are fundamental for AI-driven management accounting systems. The requirement of customized financial models, indicators and reporting constructions adds to the complexities of AI integration.

AI combined with management accounting has enormous potential benefits but only if employees can utilize it efficiently can it work. Psychological readiness is vital, as employees must see AI as an asset not a challenge (Chowdhury, 2023; Secinaro et al., 2024). AI systems mostly run on rule-based algorithms based on expert knowledge and judgment. But sometimes these rules are faulty or biased by limited expertise, misinformation, emotional influences, or political or economic contexts. Consequently, management accountants should use professional judgment when using AI to limit the influence of specialist bias on decision making (Kamyabi & Devi, 2012). Additionally, the implementation of AI is costly, with expenses influenced by factors such as technical feasibility, automation costs, labour market dynamics, economic benefits, and organisational adaptability. To effectively integrate AI, professionals must undergo retraining for evolving roles, necessitating adjustments in accounting education and skills development.

AI Trends in Management Accounting

Accounting professionals, including management accountants, are embracing AI to automate repetitive tasks like raw information processing in spreadsheets (Guo, 2019). This automation frees up human resources and time to do these tasks, enabling accountants to process overwhelming quantities of financial information better and to report living on these trends to senior management. Businesses are using AI algorithms to detect patterns and evaluate risks in large datasets, leaving management accountants 'role from merely creating financial reports to assessing AI-generated insights. Interpretation of AI-driven reports helps accountants make wise choices and spot possible mistakes to enhance the quality of financial decision-making. AI technology is related with data analytics, and both involve predictive modelling and forecasting. Whereas data analytics processes information to make predictions, AI extends those insights with advanced predictive techniques. AI tools work better when integrated with existing accounting software to minimize workflow disruptions and feed AI with contextual data. This integration reduces the burden on management accountants, reduces information loss risk and allows sharing of AI-generated reports and insights (Ahmed, Albaz, & Metwaly, 2022; Guo, 2019). AI in familiar apps can help accountants remain transparent and in contact with clients, boosting workflow efficiency.

Cost, time, quality, and risk make performance measurement in complex projects and organisations difficult. A multi-criteria strategy using AI can improve performance evaluation by aggregating project tasks, performance measurement categories, and the performance triptych (effectiveness, efficiency, and relevance). Additionally, artificial neural networks and fuzzy logic systems can evaluate performance and forecast consequences. These predictive capabilities help companies spot irregularities and boost efficiency. AI-powered automation boosts management accounting efficiency. RPA automates data entry, transaction processing, and reconciliation, freeing management accountants to focus on strategic analysis and decision support. This lowers operational costs and increases accounting accuracy and reliability. Real-time financial monitoring and reporting are also possible with AI. NLP can automate reports and evaluate textual data, boosting transparency and proactive management. AI also improves cost management by removing unnecessary processes and generating accurate

cost estimations at various operational stages. Decision-makers receive fast, data-driven insights, enhancing organisational performance and guiding strategic decisions.

Reflections of AI on Management Accounting

The Influence of Expert Systems on Enhancing the Ability of Management Accountants

Expert systems help management accountants in planning, performance assessment, control, resource accountability, and financial reporting (Guo, 2019; Secinaro et al., 2024). These systems store and interpret human expertise and offer guidance and decision-making support like experts do. In management accounting, expert systems could be applied in areas including transfer pricing which help in deciding the right rate for intra-company transactions. They also support performance evaluation through data-driven evaluations of operational and financial results. In budget planning, expert systems form realistic financial plans based on predictive and historical data. Also, they contribute to product pricing by analysing market trends and price structures to make sure competitive pricing methods. They also participate in variance analysis (identifying deviations from expected performance and suggesting corrective actions). Another important application is in reward plans where expert systems design incentive structures according to company objectives. Using expert systems, management accountants can improve their decision making, decrease the usage of subjective judgement and improve data driven financial methods. These systems reproduce professional advisory methods and provide organizations more reliable and evidenced-based information for strategic decision making.

The Influence of Data Analytics on Enhancing Management Accountant Ability

Data analytics provides management accountants an invaluable contribution in discovering new relational patterns in large datasets that may be of great assistance to organizational decision makers. The data analytics & business intelligence relationship is essential as both are turning into hot topics in a lot of businesses' agendas. Improved data analysis and decision support are considered fundamental to support highly effective business strategies. The growing volume of big data will in addition affect management accounting controls (Zhong & Fan, 2021), information & decision-making procedures. This change will affect both decision making skills and processes for making decisions and will also transform traditional management approaches to information usage. Big data analysis systems combined with smart algorithms have enormous potential for companies. Such technologies might save time, bring down expenses and ease decision making. They let managers resolve issues inside the business structure, and that results in improved production efficiency and competitiveness. This approach might transform organizational structures and processes to be flexible to market demands.

The Influence of Neural Networks on Improvement of Management Accountant Ability

Neural networks are increasingly being utilized by businesses to locate and classify most profitable consumers, improve customer support services and boost business operations. Utilizing neural networks, management accountants can identify the most lucrative customers or vendors - the ones that deliver goods promptly and without delay (Ahmed et al., 2022). This analysis is especially helpful in businesses with thousands or hundreds of counterparties. Consequently, neural networks can affect the development and productivity of accountants and therefore enhance the overall operation efficiency of the business. Neural network training has notably enriched the abilities of management accountants in taking financial, forecasting, and decisions analysis. Such artificial intelligence models can process overwhelming quantities of financial information accurately and quickly, enabling accountants to locate patterns, locate anomalies and forecast trends for the future. Because neural networks automate complicated calculations, human mistakes are lowered, and efficiency increases in areas like cost analysis, budgeting and risk assessment. They also manage real time financial monitoring to enable management accountants to make judicious, strategic choices.

The Integration of AI and Corporate Governance

AI drives operational efficiency, decision making and profitability improvements for companies across industries (Ahn et al., 2019; Almusawi, Albdairi, & Qadri, 2024; Basri, 2020; Hasan, 2021). Nevertheless, investing in specialised skills & capabilities and ethical and transparent AI use require AI integration into corporate governance. This paper investigates how to effectively and responsibly incorporate AI into corporate governance structures. Pros and cons of AI must be balanced in corporate governance. Companies must invest in experience and skill to apply and maximize AI's promise. Then AI risks including bias and control loss must be identified and managed by organisations. Companies must define their goals and find out the best methods to attain them. Finding AI usefulness and planning its cost-effective implementation are key. Businesses also must develop the technology infrastructure for AI deployment. Corporations should establish rules and processes for ethically utilizing AI. An effective AI code of conduct and procedures to minimize bias and loss of control is needed (Ahmed et al., 2022).

AI-Based Corporate Governance

Integrating corporate governance with AI requires ethical and transparent issues (Cihon, Schuett, & Baum, 2021). AI analyses massive amounts of decision-related data to improve Board oversight and decision-making. It simplifies Board tasks like compliance, improving accuracy and efficiency. AI also improves shareholder involvement by evaluating voting patterns and reactions to reveal shareholder preferences. AI also improves business transparency by generating an electronic audit trail that tracks decision-making processes and outcomes. AI helps create effective business reports and detects and prevents unethical activity, improving corporate disclosure procedures. AI is useful in pay-for-performance programme design and management (Milana & Ashta, 2021). It predicts

how pay structures will affect executive behaviour and corporate performance, enabling better decision-making.

Challenges of Integrating AI with Corporate Governance

AI affects corporate governance, decision-making, operational efficiency, and innovation (Cihon et al., 2021). However, ethical, accountability, and algorithmic bias difficulties arise when integrating it into corporate governance. Responsible and effective decision-making requires balancing human judgement and AI-generated insights. To promote continual learning, board members must be abreast of AI developments and their effects. Effective communication channels and open explanations for AI-driven choices help stakeholders interact with AI. AI governance relies on ethics, emphasising the need to match AI applications with social norms. Businesses are challenged by the rapid growth of AI and the lack of adequate legal and regulatory frameworks. AI-based decision-making may require new governance approaches (Pietronudo, Croidieu, & Schiavone, 2022). There are concerns that technology could be blamed for mistakes. Governance mechanisms must adapt to promote accountability, transparency, and ethical oversight of AI use, acknowledging the interplay between human judgement and machine-generated insights.

Methodology

The study primarily seeks to explore the role of integrating AI technologies with management accounting methods in enhancing corporate governance, with a focus on improving transparency, supporting strategic decision-making, and increasing operational efficiency. To investigate this relationship, a quantitative research method was adopted, employing a cross-sectional research design. The relationship in question is examined by proposing the following hypotheses:

Hypothesis 1: There is a significant effect of AI on managerial accounting.
Hypothesis 2: The AI significantly affects corporate governance (CG).
Hypothesis 3: The managerial accounting (MA) significantly affects corporate governance (CG).
Hypothesis 4: The AI has a significant impact on corporate governance (CG) through managerial accounting (MA).

To test the hypotheses and examine the degree to which the integration of artificial intelligence and management accounting techniques influences corporate governance, a study was conducted using a questionnaire distributed to 500 accountants from Iraqi companies listed on the Iraq Stock Exchange. The questionnaire survey was carried out to collect relevant data from these companies. After data collection, the data were analysed to correct any errors, such as missing values, outliers, and to ensure the normality of the data. Table 1 presents the details of the personal characteristics of the 500 individuals in the research sample, which are classified according to the following variables: gender, age, educational attainment, and job position. The table includes detailed statistics that show the distribution of the sample based on each characteristic, providing insights into the demographics of the respondents. This helps to contextualize the sample and ensure the representativeness of the data. The data analysis ensures that the information collected is valid and reliable, preparing it for further statistical testing to examine the relationships between AI integration, management accounting techniques, and corporate governance.

Table 1: Characteristics of the Individuals Examined within the Study Sample Firm.

Variable	Categories and Designations	Number	Ratio %
Gender	Male	401	80%
	Female	99	20%
	Total	500	100%
Age	Less than 30 Years	123	25%
	31- 40	179	36%
	41- 50	146	29%
	51 Years and Over	52	10%
	Total	500	100%
Qualification	Bachelor	484	97%
	Master	11	2%
	PhD	5	1%
	Total	500	100%
Years of Service	Less than 15 Years	216	43%
	16- 20	158	32%
	21- 25	83	17%
	25 Years and Over	43	9%
	Total	500	100%

Table 1 shows major research sample demographics. The sample is 80% male, with 401 people. The sample is 20% female, with 99 people. The highest represented age group is 31–40, with 179 people, or 36% of the sample. Next is the 41–50 age group, with 146 people (29% of the total). The least represented age group is 51+, with 52 (10%). 123 people under 30 make up 25%. The bulk of participants, 484 (97%), had bachelor's degrees. Only 11 people (2%) have master's degrees and 5 (1%) have doctorates. Most respondents (43%) (216) have less than 15 years of professional experience. The next largest category is 16–20-year veterans (32%, or 158 people). The least represented category is those with over 25 years of experience (9%, 43 people), whereas 17% (83 people) have 21 to 25 years. When studying AI integration, management accounting, and corporate governance, these demographics assist contextualise the findings and explain the sample composition.

Findings and Discussion

Reliability Test

Cronbach's Alpha is a popular metric of survey or questionnaire item internal consistency or reliability. It shows if the measurement tool items measure the same construct consistently. A Cronbach's Alpha coefficient closer to 1 suggests more internal consistency, implying the items better measure the target trait or concept. For measurement tool quality and reliability, a Cronbach's Alpha score above 0.7 is generally acceptable. Table 2 may show the reliability test findings for your questionnaire,

which examine AI integration, management accounting, and corporate governance structures. Data collecting tool reliability is indicated by values above 0.7.

Table 2: Test of Stability of Variables and Scale.

Variable / Scale	Items	Reliability Value
Artificial Intelligence	7	0.781
Managerial Accounting	7	0.794
Corporate Governance	7	0.866
Scale	21	0.920

The reliability results presented in Table 2 show that the measurement tool is highly reliable overall, with values exceeding the acceptable threshold of 0.7. Specifically, the artificial intelligence axis, with a reliability value of 0.781, indicates a good level of consistency among the items that measure AI-related constructs. The management accounting axis, with a value of 0.794, demonstrates a satisfactory level of reliability, indicating that the items are consistently measuring the related management accounting aspects. The corporate governance axis has the highest reliability value at 0.866, which is considered very high, showing that the items related to corporate governance are highly consistent in measuring the intended concepts. Additionally, the overall reliability of the general scale, at 0.920, confirms that the entire measurement tool is very robust and can be considered reliable for the purposes of the study. This high overall reliability value suggests that the questionnaire is well-constructed, and that the data gathered using it should be dependable for analysis.

Descriptive Analysis of Variables Descriptive Statistics

Table 3: Mean, SD & Criteria.

Variable	Mean	SD	Criteria
X1	3.679	0.215	Good
X2	3.699	0.334	Good
X3	3.417	0.326	Moderate
X4	3.395	0.409	Moderate
X5	3.421	0.126	Moderate
X6	4.066	0.396	Good
X7	4.024	0.173	Good
Artificial Intelligence (AI)	3.672	0.283	Good
M1	3.331	0.168	Moderate
M2	3.278	0.388	Moderate
M3	2.276	0.174	Week
M4	2.525	0.332	Moderate
M5	4.082	0.326	Good
M6	4.075	0.286	Good
M7	4.008	0.267	Good
Managerial Accounting (MA)	3.368	0.277	Moderate
Y1	3.415	0.182	Moderate
Y2	3.401	0.260	Moderate
Y3	2.736	0.330	Moderate
Y4	3.561	0.422	Good
Y5	2.264	0.140	Week
Y6	3.930	0.113	Good
Y7	2.069	0.150	Week
Corporate Governance (CG)	3.054	0.228	Moderate

The arithmetic mean and standard deviation were used to analyse the dimensions of the study and its variables, namely artificial intelligence, managerial accounting, and corporate governance. The aim was to understand the distribution of data and measure the variance between these variables. Table 3 provides a detailed overview of the central tendencies and the degree of dispersion for each of these variables. By examining the mean and standard deviation, we can interpret the values, assess the differences between the elements, and draw meaningful conclusions about how each variable behaves within the dataset. The central tendency (mean) helps identify the typical value for each variable, while the standard deviation indicates the degree of variability or spread of the data around the mean, providing insight into the consistency or variation of responses within the sample. The arithmetic mean, and standard deviation were used to analyse the study's dimensions and variables (artificial intelligence, managerial accounting, and corporate governance) to understand data distribution and measure variance. Table 3 presents the key statistical features of these variables, analysing central tendencies and dispersion to interpret their values and differences.

AI Axis

X1 had a high arithmetic mean of 3.679 and a low standard deviation of 0.215, indicating significant respondent agreement. Thus, it is "Good," indicating stability. X2's arithmetic mean of 3.699 and standard deviation of 0.334 indicated excellent evaluation and relative stability, categorising it as "Good." X3 had a moderate arithmetic mean of 3.417 and a standard deviation of 0.326, indicating slight response variance. Thus, it is "Moderate." Variable X4s arithmetic mean was 3.395 and standard deviation was 0.409, showing moderate variability and classification as "Moderate." Arithmetic mean of 3.421 and low standard deviation of 0.126 indicated moderate appraisal and solid consensus, qualifying variable X5 as "Moderate." Variable X6 received a "Good" grade for its high arithmetic mean of 4.066 and standard deviation of 0.396, indicating data stability and performance. X7's "Good" rating was supported by its high arithmetic mean of 4.024 and low standard deviation of 0.173. With a standard deviation of 0.283, the AI axis mean was 3.672, showing high evaluation and relative stability. This shows that AI improves internal control and performance in firms.

MA Axis

With an arithmetic mean of 3.331 and a low standard deviation of 0.168, variable M1 showed moderate appraisal and consensus among respondents. Thus, it is "Moderate." M2's 3.278 arithmetic mean and 0.388 standard deviation indicate moderate variability, earning a "Moderate" rating. The low arithmetic mean of 2.276 for variable M3 indicated weak evaluation, whereas the standard deviation of 0.174 indicated response stability. The classification is "Weak." M4 had an arithmetic mean of 2.525 and a standard deviation of 0.332, indicating "Moderate." Variable M5 was "Good." Its high arithmetic mean of 4.082 and standard deviation of 0.326 indicated reliable data. M6's high mean of 4.075 and standard deviation of 0.286 indicated robust and reliable performance, receiving a "Good" categorisation. The mean of variable M7 was 4.008, which was quite high, and its standard deviation was 0.267, confirming its "Good." classification. The MA axis mean was 3.368, suggesting moderate evaluation, while the

standard deviation was 0.277, showing data stability. This shows how management accounting helps firms meet financial and administrative goals.

CG Axis

Variable Y1 had a moderate arithmetic mean of 3.415 and a low standard deviation of 0.182, showing response stability. The classification is "Moderate." Variable Y2 was "Moderate." Its arithmetic mean was 3.401 and its standard deviation was 0.260. Variable Y3 was classified as "Moderate" due to its mean of 2.736 and standard deviation of 0.330. Variable Y4 was "Good." Its high arithmetic mean of 3.561 and moderate standard deviation of 0.422 indicated moderate volatility. With a mean of 2.264 and a standard deviation of 0.140, variable Y5 showed weak performance and consensus among respondents. The classification is "Weak." Variable Y6 had a high mean of 3.930 and a low standard deviation of 0.113, indicating great stability and categorising it as "Good." Y7's extremely low mean of 2.069 and standard deviation of 0.150 indicate significant convergence, categorising it as "Weak." The CG axis mean was 3.054, indicating moderate evaluation, and the standard deviation was 0.228, showing stability. Variable Y4, which had a high mean of 3.561, shows how corporate governance improves accounting information and corporate transparency.

4.3 Hypotheses Testing

Results of the First Hypothesis: AI positively affects MA with an estimated effect of 0.936, indicating a strong link. The statistical significance value of 0.010 verifies that the association is significant at a level below 0.05, while the low standard error of 0.008 indicates good estimation precision. The first hypothesis is accepted, showing that artificial intelligence has a significant and statistically significant impact on management accounting. These results are in Table 4.

Table 4: Hypotheses Results.

Hypothesis	Estimates	Standard Errors	Sig.
AI → MA	0.936	0.008	0.010
AI → CG	0.848	0.019	0.010
MA → CG	0.789	0.088	0.010
AI → MA → CG	0.739	0.083	0.010

This result aligns with the findings of Fotache & Bucsă (2024), Guo (2019) and Vărzaru (2022). By leveraging artificial intelligence, management accountants can utilize advanced analytics to enhance performance evaluation, establish efficient management control systems, and improve the quality of management accounting. It is anticipated that AI will transform numerous management accounting activities into hybrid processes, integrating human expertise with data-driven insights provided by AI solutions.

Results of the Second Hypothesis: These findings align with previous research by Hickman & Petrin (2021), Hilb (2020) and Samara et al. (2024), which highlight the role of AI applications in enhancing corporate governance. AI can efficiently process large volumes of data, facilitating more effective decision-making. Additionally, AI applications contribute to improved document management, streamlined reporting, reduced errors, enhanced risk management practices, and increased transparency. By fostering trust among stakeholders, AI ultimately strengthens corporate governance and protects the integrity of organizations.

Results of the Third Hypothesis: These findings align with previous research by Arunruangsirilert & Chonglerttham (2017), and Kamal Hassan (2008), which emphasize the critical role of management accounting in strengthening corporate governance. Management accounting provides essential financial and non-financial information that supports planning, control, performance evaluation, and strategic decision-making within organizations. This, in turn, enhances transparency and disclosure, reducing financial and administrative corruption and enabling companies to implement governance practices more effectively.

Results of the Fourth Hypothesis: These findings highlight the crucial role of AI and MA in shaping CG. The mediating effect of MA strengthens the relationship between AI and CG, reinforcing the idea that AI-driven advancements in management accounting contribute significantly to improved governance structures (Figure 1). With a total effect estimate of 0.739 and strong statistical significance, the results provide robust evidence that integrating AI into management accounting practices leads to more transparent, efficient, and accountable corporate governance. These insights align with prior research, emphasizing the necessity for businesses to leverage AI-powered analytics, automation, and predictive modelling to enhance decision-making, financial reporting, and compliance monitoring. As a result, organizations can foster better transparency, reduce financial risks, and strengthen regulatory adherence, ultimately contributing to sustainable corporate growth and integrity.

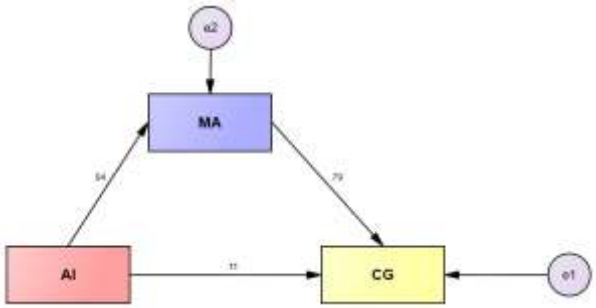

Figure 1: AMOS Program Results.

Conclusion

This conclusion highlights the transformative influence of artificial intelligence (AI) on management accounting and corporate governance. AI enhances the capabilities of management accountants through advanced data analysis and automation, while also reshaping corporate governance by improving transparency, accountability, and decision-making processes. Nevertheless, the field is still evolving, and additional research is needed to fully comprehend AI's implications and best practices for its integration. Organisations that proactively address the ethical, legal, and operational challenges associated with AI will be better positioned to harness its benefits and mitigate potential risks. As AI technology continues to

evolve, businesses must adopt a forward-thinking approach, ensuring responsible governance and ethical AI deployment to foster sustainable corporate success. The integration of AI in corporate governance marks the beginning of a new era—one that redefines decision-making, strengthens stakeholder relationships, and reshapes ethical considerations in corporate leadership.

Implications of the Study

This study emphasizes the critical role of AI and management accounting in strengthening corporate governance. MA must ensure transparency in their use of financial data, providing clear explanations to stakeholders about data analysis and decision-making processes. To fully leverage AI's benefits, companies should invest in secure and reliable AI-based systems that enhance corporate governance while minimizing risks. Given the study's findings on AI's positive impact, companies listed on the Iraq Stock Exchange should actively adopt AI-driven technologies to improve governance practices. Additionally, since AI has been shown to significantly enhance management accounting, businesses should integrate AI tools to optimize financial reporting, control systems, and strategic planning. Furthermore, promoting management accounting across Iraqi companies is essential for strengthening corporate governance. Since this study highlights the significant role of management accounting in governance, businesses should foster its adoption to improve transparency, accountability, and decision-making processes. By strategically implementing AI and reinforcing management accounting practices, companies can drive sustainable corporate governance improvements in the evolving business landscape.

Future Research Directions

AI-driven breakthroughs will transform corporate governance, thus academic research should continue integrating AI and management accounting. Organisations must adapt to new trends and governance structures as AI usage grows. While this study addressed AI as a broad variable, future research should focus on specific AI features including machine learning, natural language processing, and expert systems to better understand their effects on corporate governance. The influence of AI on corporate governance should be assessed using secondary data rather than survey-based methodologies, particularly by comparing pre- and post-AI adoption. A more objective and data-driven understanding of AI's revolutionary role in corporate governance would result.

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