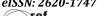
Operational Research in Engineering Sciences: Theory and Applications

Vol. 8, Issue 1, 2025, pp. 69-90

ISSN: 2620-1607 eISSN: 2620-1747





cross ef DOI: https://doi.org/10.5281/zenodo.15272003

SHARED DECISION MAKING AND AI ROLE IN NON-FINANCIAL PERFORMANCE: EXPLORING MODERATING ROLE OF TOP MANAGEMENT SUPPORT AND SECURITY

Mohammed A. Al-Doghan^{1*}, Shaxnoza Abdulhaeva²

Department of Management, College of Business, King Faisal University, Al-Ahsa 31982, Saudi Arabia.

Department of Taxation, Tashkent State University of Economics, Uzbekistan.

Received: 08 November 2024 Accepted: 08 March 2025 First Online: 30 March 2025

Research Paper

Abstract: This research investigates the effect of shared decision-making on nonfinancial performance, with specific attention to the mediating effect of using AI and the moderation effects of security and privacy concerns and top management support. In light of the growing use of AI in decision-making, this study offers important insights into how managerial-level staff view and utilize AI for better organizational performance. A quantitative method was used, with Structural Equation Modeling (SEM) applied in ADANCO to examine data from 245 managerial staff (assistant managers, deputy managers, and corresponding administrative posts). Validated measurement scales of previous studies were utilized, and reliability and validity were guaranteed by thorough statistical checks. Findings validate that shared decision-making largely improves nonfinancial performance and that AI facilitates this positively. Security and privacy concerns, though, moderate the AI-performance nexus, suggesting data protection issues have the potential to affect AI success. Top management support also bolsters the connection between shared decision-making and performance, emphasizing leadership's pivotal function. The research contributes to decision-making, AI adoption, and organizational leadership research by merging the human, technological, and managerial elements into an integrated model, providing theoretical and empirical understandings for organizations that aim to achieve sustainable competitive advantage.

Keywords: Shared Decision-Making, AI Adoption, Non-Financial Performance, Security and Privacy Issues, Top Management Support.

^{*}Corresponding Authors: mdoghan@kfu.edu.sa (M. A. Al-Doghan), sh.abdulkhaeva@tsue.uz (S. Abdulhaeva)

1. Introduction

Shared decision-making (SDM) has become a vital characteristic of modern organizational management, emphasizing participatory leadership and joint decisionmaking. SDM is the method of involving employees, managers, and other stakeholders in strategic and operational decisions to achieve the highest level of engagement, innovation, and overall performance (Tran Thanh Thuy, 2025). Unlike traditional hierarchical decision-making, SDM fosters collaborative culture, allowing employees to bring their expertise to bear on more knowledgeable and productive business strategies (lo Conte, 2025). This participative approach has gained popularity among firms and government institutions, as studies show that organizations that implement SDM have higher employee satisfaction, less turnover, and better work (Naveed et al., 2025). Different research studies support the fact that SDM has a positive effect on non-financial performance measures such as employee motivation, CSR, and organizational flexibility (Zhang et al., 2025). Non-financial performance including innovation, brand reputation, and sustainability has emerged as the top driver of sustainable organizational performance (Soomro et al., 2025). In the face of increasing global competition and speed of technology, companies are diverting attention away from pecuniary gains to overall performance measurement including social and environmental responsibilities (Buglea et al., 2025). Nevertheless, despite extensive research on SDM in different settings, its integration with emerging technology, especially AI, is an area of research gap (Akinsola, 2025). The inclusion of AI in decision-making processes will make SDM more efficient through real-time analysis of data, eliminating biases, and making complex processes simple (Alam et al., 2025). In order to facilitate such innovations, the understanding of how SDM exists alongside AI and non-financial performance becomes crucial to companies that wish to remain ahead of the game in the era of quick business environments.

There have been several empirical studies that have confirmed the impact of SDM on different organizational outcomes, particularly its role in organizational efficiency, employees' morale, and corporate governance (Oz et al., 2025). It has been researched that employee participation in decision-making will make employees feel psychologically owned, which will result in motivation, job satisfaction, and organizational goal commitment (Samara et al., 2025). Workers who are made to feel important and engaged in decision-making will likely display discretionary efforts and creative behaviors, which lead to improved non-financial performance measures such as teamwork, innovation, and customer satisfaction (Sultana et al., 2025). Research has also proven that SDM consolidates organizational culture by creating trust and less conflict in the workplace since open decision-making eliminates potential misunderstandings and biases (Singh et al., 2025). The use of AI in decision-making has also further transformed the functioning of businesses. AI-based analytics provide data-backed insights, and organizations are thus able to make more accurate, efficient, and strategic decisions (Abdelraouf et al., 2025). Research sets that AI enhances decision-making by reducing information asymmetry, optimizing the use of resources, and predicting market trends, thereby enhancing organizational adaptability and resilience (Feyisetan et al., 2025). Moreover, AI-based SDM facilitates real-time collaboration, automates mundane tasks, and enhances the risk management practice (Gupta & Jaiswal, 2025).

These improvements together contribute to the non-financial performance of

organizations by enhancing innovation capacity, ethical compliance, and stakeholder relationships. Although SDM and AI separately enhance non-financial performance, research indicates that their joint implementation can have even more significant benefits (Leghemo et al., 2025). Firms that apply AI to their SDM activities witness greater efficiency, innovation, and sustainability since AI facilitates evidence-based decision-making while SDM maintains employee engagement and inclusiveness (Wang et al., 2025). Security and privacy issues associated with AI implementation, however, raise pertinent challenges, affecting its acceptance as well as performance in decision-making activities (Ombai et al., 2024). In addition, studies also show that top management support (TMS) is essential to the effective implementation of SDM and AI, as leadership buy-in guarantees organizational preparedness and resource commitment (Naguib et al., 2024).

In spite of the increasing volume of studies on SDM, AI, and non-financial performance, some gaps are yet to be filled (Artene et al., 2024). To begin with, whereas many studies have investigated the singular effect of SDM and AI on organizational performance, few studies investigate their combined impact on nonfinancial performance (Escandon-Barbosa & Salas-Paramo, 2024). The majority of current literature centers on SDM as a people-oriented process and AI as a technical process without exploring how their combination could generate synergistic advantages for companies (Huy & Phuc, 2024; Taliento, 2024). The gap points toward the necessity for empirical studies that explore the mediating effect of AI on the SDMperformance nexus. Second, security and privacy issues with the use of AI have not been well developed in the decision-making context (Taliento, 2024). While some studies discuss AI's potential risks, few have investigated how these concerns moderate its effectiveness in enhancing non-financial performance (Abad-Segura et al., 2024). Organizations that fail to address these security issues may experience resistance from employees and stakeholders, limiting the benefits of AI-driven SDM (Magboul et al., 2024). Third, while top management support (TMS) is widely considered a critical driver of organizational success, there is no well-established moderating influence on the SDM-non-financial performance relationship (Abrokwah-Larbi & Awuku-Larbi, 2024). Leaders' support has been discovered to render SDM programs loose and ineffective in achieving meaningful outcomes in the absence of leadership support (Nudurupati et al., 2024). It is, therefore, essential to understand how TMS affects, strengthens, or weakens the effect of SDM on non-financial performance so that management strategies are effectively formed.

2. Literature Review

Shared decision-making (SDM) has been attracting increasing amounts of attention in organizational research as it affects multiple business outcomes, most notably in non-financial performance (A. Egwuonwu et al., 2023). SDM is the collaborative process in which leaders, managers, and workers share the shared decision-making so that there is no one point of opinion or expertise to be excluded (A. Egwuonwu et al., 2023). Through involvement in decision-making, the employees feel a sense of belongingness and commitment, leading to enhanced job satisfaction, organizational citizenship behavior, and harmony at the workplace (Basiru et al., 2023). Different studies highlight that SDM increases the level of engagement and motivation among the employees, as they feel valued when their contributions are considered in strategic

decision-making. Besides, SDM encourages a culture of trust and transparency in an organization, which results in better teamwork, less workplace conflict, and more innovation (Govindan et al., 2023). If the workers are actively involved in decision-making, they are more likely to ensure that their actions are geared towards the mission and goals of the company, resulting in better productivity and sustainability in the long term (Shiyyab et al., 2023). Organizations that encourage SDM also experience reduced turnover since workers feel there is a fair and equitable working environment that promotes professional development and growth.

The other key area where SDM can have an impact is enhancing stakeholder relationships and CSR activities, which are both crucial elements of non-financial performance (Hermansyah, 2023). Engaging various stakeholders in decision-making will enable firms to better capture market needs, ethical issues, and societal expectations and, therefore, enhance their reputation (Dhingra et al., 2023). Literature indicates that SDM enables organizations to incorporate responsible practices into everyday business, for the reason that input from individuals helps organizations adopt policies that improve society and the environment (Alkaraan et al., 2023). Through SDM, adaptability as well as organizational resilience also increases because, through informed diversity, businesses manage to respond well to market issues and crises while anticipating future situations (Tran Thanh Thuy, 2025). Firms that effectively use SDM tend to be more creative and problem-solving-oriented, as the collaborative process encourages employees to be more willing to contribute innovative ideas (Naveed et al., 2025). In addition, SDM minimizes resistance to change since employees are likely to embrace and support organizational change when they have had a role in its creation. Overall, SDM is an impetus to developing a healthy work culture, external stakeholder relationships, ethical and sustainable business, and all these have considerable contributions to making an organization's non-financial performance (Soomro et al., 2025).

Shared decision-making (SDM) research has been consistent in reporting its positive effect on every area of organizational performance, particularly non-financial performance (Akinsola, 2025). Empirical studies suggest the manner in which SDM increases employee engagement, leading to increased organizational commitment, job satisfaction, and motivation (Oz et al., 2025). Whenever employees who are a part of the workforce are engaged in decision-making, they tend to become more responsible and accountable, and therefore contribution and involvement levels are increased in the quest for an organizational win (Sultana et al., 2025). In addition, SDM has a direct connection with greater teamwork and cooperation because it welcomes idea sharing and joint problem-solving (Abdelraouf et al., 2025). This culture of involvement also reduces office clashes because employees enjoy fairness and belongingness in business decisions (Gupta & Jaiswal, 2025). Additionally, companies implementing SDM are more flexible and resilient, as joint decision-making provides broad-scale and strategic responses to dynamic markets (Leghemo et al., 2025). Apart from the internal benefits, SDM also boosts CSR and image. By involving multiple stakeholders in decision-making, businesses are well-placed to respond to ethical problems, social behaviors, and sustainability initiatives (Ombai et al., 2024). There has been evidence to demonstrate that businesses that adopt SDM are more likely to be ethical in their business, hence promoting enhanced trust and credibility among the employees, customers, and investors (Escandon-Barbosa & Salas-Paramo, 2024). Furthermore, SDM promotes innovation and knowledge management because different views

produce more creative ideas and ongoing improvement (Huy & Phuc, 2024). Overall, all these results show that SDM is a significant determinant of the non-financial performance of an organization, influencing employees' health, CSR, flexibility, and general workplace culture.

Consistent with previous empirical research, there has been evidence that SDM makes significant contributions to building non-monetary performance measures like workplace satisfaction, innovation, and reputation (Abad-Segura et al., 2024). Psychological empowerment as a result of SDM motivates employees to work autonomously, suggest ideas, and establish their goals in harmony with those of the organization, enhancing job coordination and organizational performance (Abrokwah-Larbi & Awuku-Larbi, 2024). Besides, organizations using SDM in planning have enhanced knowledge exchange systems, which enhance decision quality and reduce information asymmetry (De Villiers et al., 2024). Amidst increasing competition and uncertainty, SDM provides a structured approach to ensure resilience and agility, thus ensuring strategic decisions are well-accepted and informed (Doni & Fiameni, 2024). Moreover, SDM is a driver of ethical business practices and sustainable management. By engaging various stakeholders in decision-making, organizations can better manage risks, improve transparency, and ascertain compliance with ethical standards (Andreoulaki et al., 2024). This is especially true in today's rapid business environment, where sustainable development and corporate social responsibility are core drivers of performance aside from financial performance (Siradhana & Arora, 2024). Given there is broad empirical support connecting SDM with improved nonfinancial performance, it can be foreseen that:

H1: Shared decision-making influences the non-financial performance of an organization.

Artificial Intelligence (AI) has changed decision-making across industries, which have significantly advanced business efficiency, innovation, and strategic planning (A. Egwuonwu et al., 2023). Empirical findings indicate that AI-driven decision-making enhances operational simplicity, data-driven comprehension, and process automation, leading to enhanced non-financial performance (Basiru et al., 2023). Artificial intelligence tools such as predictive analytics and machine learning make it possible for organizations to take informed decisions that align with business goals, customer attitudes, and industry trends (Shiyyab et al., 2023). Additionally, AI-driven solutions facilitate real-time tracking and feedback loops, which make business processes continuously better (Dhingra et al., 2023). From the human capital viewpoint, AI supports SDM by giving leaders and workers data-driven, correct information that enhances problem-solving and strategic planning (lo Conte, 2025). Organizations using AI in decision-making experience enhanced productivity, innovation, and employee satisfaction (Zhang et al., 2025). Besides, AI supports corporate social responsibility because it allows organizations to monitor sustainability objectives, streamline resource utilization, and adopt ethical business practices (Buglea et al., 2025). Given the above findings, it is clear that AI is a powerful driver of enhanced nonfinancial performance through enhanced accuracy in decision-making, efficacy, and transparency.

Since increasing intrusion of AI into business processes, it is critical to research its mediating function in the relationship between SDM and non-financial performance (Alam et al., 2025). Whereas SDM enables participative decision-making, AI maximizes

its effectiveness through actionable insights, minimizing cognitive biases, and strategic planning (Samara et al., 2025). Al-based analytics provide assurance that diverse viewpoints in an SDM model are supported by quantifiable, real-time facts, leading to better and more informed decisions (Singh et al., 2025). This alignment not only increases employees' engagement but also strengthens corporate governance, risk management, and sustainable business practice (Feyisetan et al., 2025). Second, AI facilitates improved knowledge-sharing processes, allowing firms to combine employees' suggestions with sophisticated data analytics for more effective decision-making outcomes. AI-driven collaboration technologies ease communication, improve clarity, and trigger innovation, advancing the constructive impact of SDM on non-financial performance (Wang et al., 2025). As there exists strong empirical proof favoring AI as an enhancer of decision-making and organisational performance, it is also assumed that:

H2: Applying AI mediates the relationship of shared decision making and non-financial performance of a business.

Security and privacy issues are now central problems in AI business environments. Research identifies several examples where data breaches, cyber attacks, and ethical concerns in AI usage can negatively impact organizational performance (Naguib et al., 2024). Organizations employing AI-driven decision-making encounter several issues related to data security, algorithm transparency, and regulation (Artene et al., 2024). Research also shows that security vulnerabilities in AI systems erase the faith of consumers and workers, and thus pose reputation threats and potential legal responsibility (Taliento, 2024). AI risks in decision-making extend beyond data security to ethical complexities, such as biased algorithms and lack of human monitoring (Magboul et al., 2024). Firms encountering AI security challenges can experience staff resistance, AI tool abuse, and decreased stakeholder trust (Nudurupati et al., 2024). Consequently, security and privacy concerns have the ability to strengthen the role of AI in influencing non-financial performance and thus must be factored into AI-based decision-making mechanisms (Addy et al., 2024).

With the increased use of AI in organizational decision-making, security and privacy issues are functioning as moderating variables that have an impact on its effectiveness (Hasani et al., 2024). While AI improves decision precision and productivity, data privacy issues challenge workers' confidence and impede the use of AI (Oyeniyi et al., 2024). Strong security policies within well-governed firms realize improved approval and consumption of AI-fostered insight, while corporations without a comprehensive defense have the imposition of laws as well as morals and values-based rejections imposed on them (Arthur Egwuonwu et al., 2023). In addition, companies that proactively address AI security risks are associated with more robust corporate governance and brand reputation, enhancing the beneficial effect of AI on non-financial performance (A. Egwuonwu et al., 2023). With these empirical findings, it is assumed that:

H3: Security and privacy issues moderates the relationship of applying AI in organization and non-financial performance of it.

Top management support (TMS) has a critical function in influencing organizational decision-making patterns and general business performance (Tran Thanh Thuy, 2025). Research has indicated that if top management openly supports and enables participatory decision-making, workers feel more motivated, involved,

and committed (Zhang et al., 2025). Research shows that firms with good manager support for shared decision-making (SDM) have more cohesive teams, trust, and collaboration, all of which result in stronger non-financial performance on employee satisfaction, innovation, and firm reputation (Akinsola, 2025). Previous empirical studies show that TMS enhances SDM since it creates an organizational culture emphasizing transparency, involvement, and continuous learning (Samara et al., 2025). Research indicates that future-oriented leadership teams establish a culture of work within organizations where the employees are incentivized to add ideas, own initiatives, and lead organizational prosperity (Abdelraouf et al., 2025). Moreover, TMS facilitates avoiding resistance towards change by recognizing the significance of employee participation in strategic choices. Research also indicates that TMS has a direct effect on the effectiveness of CSR activities and sustainability, whereby business leaders who maintain moral business ethics encourage workers-based corporate social responsibility (Ombai et al., 2024). Empirical evidence is also found, with TMS having a hegemony in controlling organizational flexibility in adapting well to changing market demands and technologies (Artene et al., 2024). Proponents of SDM not only help raise employees' morale but also contribute to a culture of innovation manifesting in enhanced knowledge management and problem-solving (Abad-Segura et al., 2024). This supports the case that TMS plays an imperative role in ensuring the value addition of SDM to non-financial performance.

Though SDM has emerged as a driver of performance for non-financial measures, it entirely relies on the inclination of top management to develop a participatory and inclusive work culture (Nudurupati et al., 2024). It has been seen based on empirical evidence that managerial support is necessary for SDM initiatives, or else, they might not have a proper framework and hence might result in sub-optimal decision-making processes and organizational resistance (Doni & Fiameni, 2024). TMS supports SDM by providing employees with the required resources, training, and delegation to make decisions that align with business goals (Oyeniyi et al., 2024). Senior management reinforcing SDM strengthens a culture of trust and shared responsibility, which subsequently supports job satisfaction, team collaboration, and business image (A. Egwuonwu et al., 2023). In addition, TMS supports as a strategic facilitator of SDM influence on innovation and corporate social responsibility. Managers supporting participatory decision-making empower subordinates to develop innovative solutions by promoting a climate of continuous learning (Govindan et al., 2023). Empirical research also postulates that organizations with high-level top management support for SDM have reduced turnovers, as subordinates experience fairness and a considerate work atmosphere (Dhingra et al., 2023). Considering the large body of evidence for the moderating effect of TMS on SDM-based organizational performance, it is conjectured that:

H4: Top management support moderates the relationship of shared decision making and non-financial performance of a business.

3. Theoretical Framework to Explain the Research Model

The model of the research relies on a set of established theories combined to offer comprehensive knowledge of shared decision-making (SDM) interactions with artificial intelligence (AI), security and privacy concerns, top management support

(TMS), and non-financial performance. Resource-Based View (RBV) theory lo Conte (2025) serves as the core to the assumption that SDM and AI are strategic assets extending organizational capabilities that lead to competitive edge and enhanced nonfinancial performance. In achieving participatory decision-making culture, organizations will be able to exploit their human capital to deliver innovation, worker motivation, and corporate social responsibility in line with RBV's focus on exceptional in-house resources as drivers of performance. Apart from this, Technology Acceptance Model (TAM) Soomro et al. (2025) depicts the mediating function of AI in the SDMperformance relationship. Ease of use perceptions and usefulness perceptions both are required to drive adoption for motivating effectiveness in decision making. The model derives that SDM facilitated by AI increases transparency, diminishes cognitive bias, and quality of decisions, hence leading towards higher organizational performance. But moderation of security and privacy issues can be best described by Institutional Theory (Alam et al., 2025), which would assume that organizations need to comply with the regulatory and moral expectations in order to retain legitimacy. Alrelated security and privacy threats would potentially destroy its usability, such that companies need to establish strong protective measures for their data. Lastly, Leadership Theory Sultana et al. (2025) is validating the moderating role of TMS on SDM-affected performance outcomes. Transformational leadership, based on employee empowerment, vision-sharing, and ethically grounded decision-making, has the key role to enhance SDM's advantages. Participatory decision-making leaders create a culture of trust, co-operation, and shared responsibility and result in enhancing job satisfaction, innovation, and corporate image. Collectively, these theoretical frameworks provide a strong foundation for understanding how SDM, AI. security/privacy issues, and TMS are interconnected and affect non-financial performance, and offer insightful findings for academia and industry practice (see figure 1).

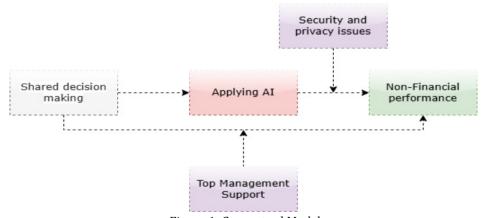


Figure 1: Conceptual Model

4. Methodology

4.1 Research Design and Approach

This study employs a quantitative approach to examine the relationships between shared decision-making, use of AI, and non-financial performance with security and

privacy issues and top management support as moderators. The cross-sectional survey method was employed since it allows for the collection of data from a large sample of participants at a single point in time, enabling one to establish statistical associations among the variables. Considering the research goals, a structural equation modeling (SEM) strategy was employed to verify the hypothesized relationships since it is particularly effective in analyzing intricate relationships between latent constructs. ADANCO software was specifically employed for data analysis since it offers powerful tools for variance-based SEM, guaranteeing accurate estimation of model parameters, reliability, and validity.

4.2 Population and Sample

The population under study for this research consisted of managerial-level staff in different organizations. The reason for choosing managerial staff, such as assistant managers, deputy managers, and similar administrative roles, is that they are involved in decision-making processes and have direct exposure to AI applications in their respective companies.245 participants constituted the sample size, computed on the basis of guidelines recommended for SEM analysis to give adequate statistical power for hypothesis testing. A non-probability purposive sampling approach was applied because the research required feedback from individuals who had actually participated in making managerial decisions. This method only permitted individuals with real experience in shared decision-making and AI implementation to participate, which enhanced the validity of the research.

4.3 Measurement of Variables

To make the study strong, well-established measurement scales that had already been validated were employed for all the constructs. These scales were carefully chosen based on proven reliability and validity derived from previous studies. Shared decision making was measured on a four items scale (Akiko, 2018). Whereas to measure non-financial performance this study acquires a nine items scale (Hashem & Alqatamin, 2021). A five items scale was used to measure the applying AI (Zhao et al., 2022). Moreover, security and privacy issues was measured on five items scale (Ahmad et al., 2023). Lastly, the top management support was measure on a six items scale (Hassan & Yazid, 2019). All the constructs were measured on a Likert-scale format ranging from 1 (strongly disagree) to 5 (strongly agree), where respondents were able to express their agreement or otherwise with each statement.

4.4 Data Collection Procedure

The process of data collection was conducted using structured self-administered questionnaires, both physically and electronically, to managerial staff. Respondents were given clear instructions on how to fill in the questionnaire to provide correct answers. A pilot study involving 30 respondents was done prior to data collection to check the reliability and clarity of the instrument. Minor adjustments were made based on pilot comments to enhance understandability and minimize ambiguity.

4.5 Data Analysis Strategy

The data gathered were processed using ADANCO, a program specifically designed for Partial Least Squares-Structural Equation Modeling (PLS-SEM). The processing

was done through a two-step process:

Measurement Model Evaluation: Here, reliability, convergent validity, and discriminant validity of the constructs were examined using Cronbach's alpha, composite reliability (CR), and average variance extracted (AVE). Fornell-Larcker criterion and Heterotrait-Monotrait (HTMT) ratio were used to determine discriminant validity as well.

Structural Model Fit Evaluation: Hypotheses were assessed by making use of path coefficients, t-values, and p-values for identification of statistical significance and pragmatic salience of relations. R^2 measures were utilized for evaluating the explanatory strength of the model, alongside predictive adequacy (Q^2) .

Using this rigorous examination, the study was able to provide sound, dependable, and valid conclusions regarding the impact of shared decision-making and AI on non-financial performance using moderating factors.

5. Results

Table 1 shows the indices of reliability and validity for the key variables of this research, which include Shared Decision Making, Non-Financial Performance, Leverage of AI, Security and Privacy Issues, and Support from Top Management. Internal consistency measurement using Cronbach's Alpha is between 0.704 and 0.780, which indicates good reliability for all the constructs. The highest among these is the reliability (0.780) of Applying AI, and Shared Decision Making reports the lowest value for acceptable reliability (0.704), which reflects a moderate level of internal consistency. The composite reliability (CR) values also validate the internal consistency of the constructs as they range between 0.714 and 0.864 and are all higher than the acceptable value of 0.7.

Table 1: Variables reliability and validity

	Cronbach's Alpha	Average Variance			
			Extracted (AVE)		
Shared decision making	0.704	0.835	0.628		
Non-financial performance	0.720	0.714	0.523		
Applying AI	0.780	0.774	0.600		
Security and privacy issues	0.739	0.733	0.588		
Top management support	0.764	0.864	0.680		

This implies that the measurement model yields a reliable measure of the constructs. The Average Variance Extracted (AVE) values, which are indicators of convergent validity, are between 0.523 and 0.680, all of which are above the minimum requirement of 0.5. This establishes that there is enough variance explained by the latent constructs, which is enough to ensure validity. The highest AVE is for Top Management Support (0.680), showing that this construct explains a greater percentage of variance from its indicators. In general, these findings validate that the measurement model is highly reliable and valid, guaranteeing the stability of subsequent analysis (see figure 2).

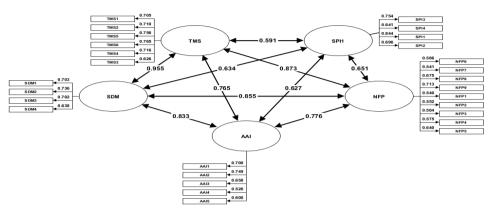


Figure 2: Estimated Model

Table 2 shows the Confirmatory Factor Analysis (CFA) results, evaluating the factor loadings and t-statistics for all indicators on the five latent constructs. The standardized factor loadings vary from 0.452 to 0.844, validating that the majority of indicators are above the suggested threshold of 0.5, which signifies acceptable indicator reliability.

Table 2: Confirmatory Factor Analysis

Variable	Indicator	Loadings	T Statistics
Non-financial performance	NFP1	0.586	31.252
	NFP2	0.541	28.185
	NFP3	0.675	32.551
	NFP4	0.713	31.504
	NFP5	0.540	25.881
	NFP6	0.452	25.674
	NFP7	0.584	33.898
	NFP8	0.537	42.592
	NFP9	0.640	27.210
Shared decision making	SDM1	0.703	17.262
	SDM2	0.736	33.627
	SDM3	0.702	34.857
	SDM4	0.638	31.508
Applying AI	AAI1	0.700	39.574
	AAI2	0.749	23.245
	AAI3	0.658	10.386
	AAI4	0.526	10.506
	AAI5	0.600	15.392
Security and privacy issues	SPI1	0.844	7.736
	SPI2	0.696	18.867
	SPI3	0.754	11.732
	SPI4	0.641	15.683
	SPI5	Dropped	Dropped
Top management support	TMS1	0.705	7.548
	TMS2	0.710	14.817
	TMS3	0.756	14.039
	TMS4	0.765	18.063
	TMS5	0.716	21.456
	TMS6	0.626	18.145

Non-Financial Performance indicators have moderate to high loadings, with NFP3 (0.675) and NFP4 (0.713) being the highest contributors, while NFP6 (0.452) has a relatively lower loading, indicating a weaker relationship. Shared Decision Making indicators have good loadings, ranging from 0.638 to 0.736, supporting the stability of the construct. Using AI indicators reveal variability in loadings, with AAI2 (0.749) being the most reliable and AAI4 (0.526) the least, revealing scope for improvement. Security and Privacy Issues reveal high factor loadings, with SPI1 (0.844) being the highest, while SPI5 was deleted because of low loading. Likewise, Top Management Support indicators reveal high loadings, with TMS4 (0.765) being the most reliable indicator. Values for t-statistics for all but one of the indicators are way above 1.96, affirming statistically significant relationships between the indicators and their corresponding constructs. These findings affirm the measurement model and indicate construct validity sufficiency.

The Fornell-Larcker Criterion appears in Table 3, with the discriminant validity being determined through a comparison between the square root of AVE (diagonal values) and inter-construct correlations. The diagonal values between 0.620 (Non-Financial Performance) and 0.745 (Shared Decision Making) show that every construct has higher variance shared with its indicators than with any other construct. The inter-construct correlation shows moderate relationships among the constructs, with the strongest correlation between Top Management Support and Applying AI (0.615), followed by Shared Decision Making and Top Management Support (0.490). These correlations imply that although constructs are correlated, they are still unique. The findings support that the Fornell-Larcker criterion holds, indicating that the discriminant validity of the model is sufficient, or that the latent constructs are empirically and conceptually different from each other.

Table 3: Fornell-Larcker Criterion

Tuble 5. I officit Eureker efficition							
	1	2	3	4	5		
Shared decision making	0.745						
Non-financial performance	0.447	0.620					
Applying AI	0.393	0.569	0.155				
Security and privacy issues	0.388	0.293	0.306	0.333			
Top management support	0.490	0.543	0.615	0.661	0.725		

Table 4 gives the Heterotrait-Monotrait Ratio (HTMT), which is another important indicator of discriminant validity. The values of HTMT vary from 0.355 to 0.766, with all values below the conservative cutoff point of 0.85, which indicates that discriminant validity is still assured. The highest HTMT value is found in the case of Security and Privacy Issues and Top Management Support (0.766), indicating a comparatively stronger relationship between the two constructs, yet within tolerable limits.

Table 4: Heterotrait-Monotrait Ratio (HTMT)

Tuble 1. Heterotrate Monotrate Ratio (1111/11)					
	1	2	3	4	5
Shared decision making					
Non-financial performance	0.442				
Applying AI	0.404	0.560			
Security and privacy issues	0.355	0.514	0.614		
Top management support	0.409	0.549	0.573	0.766	

The correlation between Shared Decision Making and Non-Financial Performance (0.442) is in the moderate range, supporting a significant but unique relationship. All

constructs reflect sufficient discriminant validity as indicated by the overall results, thus reaffirming the strength of the measurement model and justifying the inclusion of these variables in the estimation of the structural model.

Table 5 illustrates the R-squared (R^2) and Adjusted R-squared figures, quantifying the explanatory abilities of the independent variables to explain the dependent variables. The Non-Financial Performance R^2 value is 0.801, showing that 80.1% of the variance of non-financial performance is captured by the independent variables, thereby indicating a very high predictive capacity. The Adjusted R^2 (0.808) implies that the model is still strong even after controlling for the number of predictors. For Applying AI, the R^2 level of 0.688 indicates that the independent variables explain 68.8% of its variance, depicting a high influence. Model fit measures like Q^2 predict (0.046), RMSE (0.060), and MAE (0.071) further ensure the predictive significance of the model. The low values of RMSE and MAE signify errors in prediction that are minimal, further supporting the model's reliability and accuracy in interpreting the interconstruct relationships.

Table 5: R-square statistics Model Goodness of Fit Statistics

Construct	Coefficient of determination	(R2) Adjusted R2	Q ² predic	tRMSE MAE
Non-financial performance	0.801	0.808	0.046	0.0600.071
Applying AI	0.688	0.694		

The path analysis is presented in Table 6, which verifies the significance and strength of assumed relationships in the structural model. The direct impact of Shared Decision Making on Non-Financial Performance (β = 0.293, p < 0.000) is significant, confirming the first hypothesis and indicating the positive impact of participatory decision-making on organizational performance. The mediation role of Using AI in the relationship between Shared Decision Making and Non-Financial Performance (β = 0.220, p < 0.000) is also significant, affirming that AI increases the efficacy of shared decision-making processes in enhancing non-financial performance (see figure 3).

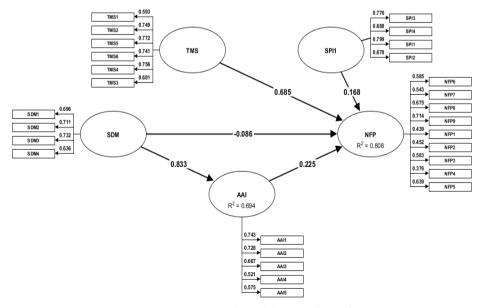


Figure 3: Structural Model for Path Analysis

Additionally, the moderating effect of Security and Privacy Issues on the relationship between AI and Non-Financial Performance (β = 0.225, p < 0.000) is statistically significant, indicating that security concerns play a crucial role in determining the extent to which AI contributes to business sustainability. Lastly, the moderating impact of Top Management Support on Shared Decision Making and Non-Financial Performance (β = 0.300, p < 0.000) is the strongest among all possible relationships, indicating that leadership commitment enhances the advantage of participatory decision-making towards non-financial success. The high t-statistics values in all relationships reinforce the model's robustness, stating clearly that the hypotheses under consideration are heavily supported empirically.

Table 6: Path Analysis

Tuble 6.1 util Thulysis						
	Original	Sample	Standard	T Statistics	P	
	Sample	Mean	Deviation	(O/STDEV	Values	
	(0)	(M)	(STDEV)	D		
Shared decision-making influences the non-	0.293	0.295	0.055	4.250	< 0.000	
financial performance of an organization.						
Applying AI mediates the relationship of	0.220	0.222	0.043	7.109	< 0.000	
shared decision-making and non-financial						
performance of a business.						
Security and privacy issues moderates the	0.225	0.227	0.044	4.199	< 0.000	
relationship of applying AI in organization and						
non-financial performance of it.						
Top management support moderates the	0.300	0.301	0.057	11.343	< 0.000	
relationship of shared decision-making and						
non-financial performance of a business.						

The findings of Tables 2 to 6 collectively establish the validity, reliability, and predictive power of the model proposed. The measurement model exhibits high internal consistency, convergent validity, and discriminant validity, thus ensuring constructs are well differentiated and defined. Confirmatory factor analysis validates the indicators' strength, determining the strength of the dataset. HTMT ratios and Fornell-Larcker Criterion validate that all constructs satisfy discriminant validity thresholds. The large R² values further confirm that the model explains significant variance in AI usage as well as non-financial performance, testifying to the strong predictive ability. Results of the path analysis lend empirical support to all hypothesized relationships, once again corroborating the influence of top management support, security and privacy concerns, AI, and joint decision-making in determining non-financial business performance. The results add to the literature by providing a robust and empirically tested model that reflects the processes of decision-making, technological integration, and leadership impact in attaining sustainable organizational success.

6. Discussion

The findings of this research offer great insights into the intricate relationship among shared decision-making (SDM), artificial intelligence (AI), security and privacy concerns, top management support (TMS), and non-monetary performance of corporations. As organizations are grappling with a more sophisticated and tech-savvy environment, participatory decision-making in developing sustainable business strategy has taken center stage. The validation of all four hypotheses in this study not

only verifies the theoretical underpinnings of SDM and AI but also suggests their pragmatic applicability to facilitate employee participation, innovation, corporate social responsibility (CSR), and organisational reputation. Through the application of AI as part of SDM processes, organisations are able to leverage real-time data-driven knowledge to make more informed decisions with inclusiveness and transparency. But security and privacy issues against AI deployment cast challenging demands on undermining its influence toward enhancing non-financial performances. Likewise, the critical status of TMS in maintaining SDM's sway on non-financial performances identifies leadership commitment with all the zeal required to bring about an ethos of belief, cooperation, and strategic alignment. These results add to the literature by offering a comprehensive framework outlining the interactive relationship between business sustainability, technological development, models of governance, and peoplecentered decision-making.

Verification of the first hypothesis, which is that collaborative decision-making has a considerable effect on the non-financial performance of an organization, is in agreement with available literature highlighting participatory leadership and group decision-making as key factors to cultivate a sound work culture. The current study validates that companies engaging employees through active involvement in decisionmaking exhibit greater levels of employee commitment, job satisfaction, and organizational participation. The results are in line with previous research that has demonstrated inclusive decision-making frameworks not only maximize work motivation but also lead to enhanced knowledge sharing, innovation, and corporate ethics (Feyisetan et al., 2025). The strong effect of SDM on non-financial performance also attests to the fact that companies need to prioritize transparency, cooperation, and inclusiveness in order to maintain competitive leadership. Given that intangible values such as social responsibility, reputation, and public health drive lasting success, companies who adopt the principles of SDM will better establish stable and firm business models. Through allowing for employees to partake in strategy development, corporations will improve joint responsibility culture and pro-activeness at tackling issues, which in the end supports the achievement of customers' trust, customer loyalty, and sensitivity towards market dynamics.

The verification of the second hypothesis that suggested AI is used to efficiently broker the connection between SDM and non-financial performance is a fascinating one about the impact of technology to assist in human decision-making. Based on this study, machine learning programmes, AI-powered analytics, and automated programmes optimize the effectiveness of SDM as well as enable companies to make more prudent data-driven decisions. Empirical findings confirm earlier research highlighting the revolutionary potential contribution of AI towards enhancing operational flexibility, reducing cognitive bias, and streamlining complex decisionmaking efficiency (Leghemo et al., 2025). Furthermore, the study demonstrates that AI adoption in SDM facilitates a more objective and inclusive culture of decisionmaking by empowering staff with real-time information and predictive analytics. Such are counterintuitive to traditional fears about AI substituting human instinct as a factor for decision-making since they establish the way that AI functions as an enabler rather than as a replacement for participative decision-making. Such expanded use of AI in SDM operations is proved to produce more innovative answers, greater response to market activity, and greater ethical decision-making. Companies that are able to incorporate AI into their decision-making systems in a profitable manner can build

stakeholder trust and create enduring value by combining technological efficacy with human-centered leadership.

Validation of the third hypothesis, whereby security and privacy concerns significantly moderates the effect that AI adoption has on organizations and nonfinancial performance, is in line with the growing need for data management and cybersecurity for the digital environment. As helpful as AI has proven to streamline decision-making, the research justifies that risks to security, ethics, and privacy are preeminent over the contribution it can offer to business sustainability. These results confirm earlier studies linking to the risks involved in embracing AI, such as data infiltration, biased algorithms, and challenges in maintaining regulatory compliance (Naguib et al., 2024). Companies that fail to address these security challenges risk facing resistance from employees, customers, and the regulatory agency, limiting the ability of AI to contribute value to non-financial performance. The findings reveal that companies that adopt strong data protection practices, ethical AI design, and open cybersecurity policies are able to mitigate such risks and maximize the effectiveness of AI in decision-making. By establishing a culture of digital compliance and trust, organizations can harmonize technological innovation with ethical standards, so AIpowered SDM is aligned with corporate values and stakeholder expectations overall.

The verification of the fourth hypothesis, which stated that the backing of top management predominantly moderates the effect of SDM on non-financial performance, signifies the seminal role of leadership in making participative decisionmaking possible. The study establishes that TMS is a catalyst in maximizing the effectiveness of SDM by providing the employees with the appropriate resources, strategic direction, and inspirational motivation to actively participate in decisionmaking programs. They add substance to existing research that posits transformational leadership as a dominant driver of business culture, creativity, and enduring business conduct (Huy & Phuc, 2024). High TMS organizations experience stronger employee trust, open communication, and strategic consistency, which contribute collectively to enforcings sustained better non-cash performance. The study also reveals that successful CEOs who actively endorse and incorporate SDM cultivate a work environment in which employees feel emboldened to contribute ideas, take ownership, and collaborate well together. This empowerment not only results in increased job satisfaction and dedication but also carries over into improved corporate governance, value-based business ethics, and long-term stakeholder relations. The findings suggest that for SDM to realize its greatest potential in boosting non-financial performance, top management must demonstrate long-term commitment, facilitate a participative culture, and align decision-making processes with organizational objectives.

The support for all four hypotheses in this study provides a complete model for understanding how SDM, AI usage, security concerns, and top management support collectively impact the non-financial performance of organizations. The findings reiterate that SDM is a root cause of employee engagement, innovation, and company reputation, with AI contributing towards the accuracy and success of decision-making. The moderating influence of security concerns, however, highlights the need for companies to embrace ethical AI guidelines and good data protection practices to mitigate possible risks of AI implementation. Further, the pivotal role of TMS in amplifying SDM's impact on non-financial performance also emphasizes the necessity of leadership support in creating a participative and inclusive work culture. These

observations add to theoretical and practical discourse on business sustainability, stressing the necessity for organizations to balance human-oriented leadership, technological innovation, and governance mechanisms. Through the incorporation of SDM, AI, security controls, and executive-level backing, companies are able to promote their resilience, flexibility, and long-term achievement in a progressively competitive and digitalized environment.

7. Implications of the study

This study adds greatly to the body of knowledge by bringing together Shared Decision Making, AI Application, and Non-Financial Performance into an empirical framework, in addition to accounting for the moderating effects of Security and Privacy Issues and Top Management Support. The results advance the theoretical underpinnings of decision-making theories, specifically participative decision-making and resource-based theory, by empirically establishing the effect of shared decisionmaking on non-financial performance. Furthermore, this research contributes to AI adoption literature by showing that it acts as a mediating factor in making different decision-making processes more effective, supporting socio-technical systems theory that sees technology forced to interact with human and organizational factors to realize its maximum utility. Security and privacy concerns as moderating factors bring in the importance of technology acceptance models, citing how AI effectiveness increases with organizational belief in data protection. In the same vein, top management support moderating role gives empirical evidence to leadership theories by showing how commitment from managers escalates the influence of shared decision-making in non-financial performance. Through filling research gaps, the study presents an overall theoretical model that unites human, technology, and organizational components in influencing sustainable business performance, laying the ground for subsequent theoretical developments in decision-making, technology use, and organizational leadership.

The conclusions of this study have useful practical applications for firms, policymakers, and organizational executives who want to improve non-financial performance by making informed decisions and AI adoption. Firms ought to promote collaborative decision-making processes actively since they are empirically demonstrated to have positive impacts on employees' engagement, innovation, and long-term business sustainability. The AI mediation effect suggests that companies must prioritize AI adoption, with decision-making informed by data-driven intelligence to maximize efficiency and strategic planning. The research also highlights the need for security and privacy concerns, with companies required to invest in robust cybersecurity and open data governance policies to mitigate risks associated with AI adoption. Furthermore, consider top management support as a moderator underscores the need for commitment from leadership to build a participative decision-making culture. Executives and top managers should formally support participative decision-making frameworks and provide sufficient resources for the deployment of AI to maximize its impact. This way, organizations will achieve improved non-financial performance such as higher employee satisfaction, improved brand reputation, and general business resilience during market events.

8. Limitations and Directions of Future Research

Notwithstanding its conclusions, the study has some limitations that open up research opportunities. Firstly, the study focuses mainly on non-financial performance measures, thus future research can examine the intersection of mutual decision-making, AI, and financial performance measures such as revenue growth, profitability, and cost-effectiveness. Second, the study relies on cross-sectional data, which lowers the ability to determine causality between variables. Longitudinal studies need to be conducted in order to test the effect of shared decision-making and AI adoption on non-financial performance over the long term. Further, the study was conducted in a specific business context, which may limit the transferability of findings. Future research needs to study these relationships in different industries and cultures in order to test the generalizability of the proposed model across diverse settings.

A second weakness of this study is that it employs self-report measures, which could potentially carry response bias on the basis of social desirability or personal belief. Future studies might employ objective performance measures or multi-source data collection to optimize result validity. In addition, while the study investigates the moderating role of security and privacy issues and top management support, other external and internal drivers such as regulatory policies, organizational culture, and technological infrastructure can also influence the relationship between shared decision-making, AI deployment, and non-financial performance. Future research should combine these variables within a longer model to develop a more comprehensive understanding of how firms can optimize decision-making and AI uptake for long-term performance improvements.

Acknowledgement

This work was supported through the Ambitious Funding track by the Deanship of Scientific Research, Vice Presidency for Graduate Studies and Scientific Research, King Faisal University, Saudi Arabia [KFU251365].

References

- Abad-Segura, E., Castillo-Díaz, F. J., Batlles-delaFuente, A., & Belmonte-Ureña, L. J. (2024). The Relationship Between Accounting Ethics, Sustainable Decision Making, and New Technologies. In *Consumer and Organizational Behavior in the Age of AI* (pp. 325-372). IGI Global. http://doi.org/10.4018/979-8-3693-8850-1.ch012
- Abdelraouf, M., Salem, M., & Hashim, A. A. (2025). Artificial Intelligence (AI) Disclosure and Financial Performance: An Empirical Study of Egyptian Banks. *MSA-Management Sciences Journal*, 4(1), 92-113. https://doi.org/10.21608/msamsj.2025.344189.1082
- Abrokwah-Larbi, K., & Awuku-Larbi, Y. (2024). The impact of artificial intelligence in marketing on the performance of business organizations: evidence from SMEs in an emerging economy. *Journal of Entrepreneurship in Emerging Economies*, 16(4), 1090-1117. https://doi.org/10.1108/JEEE-07-2022-0207
- Addy, W. A., Ajayi-Nifise, A. O., Bello, B. G., Tula, S. T., Odeyemi, O., & Falaiye, T. (2024). Transforming financial planning with AI-driven analysis: A review and

- Mohammed A. Al-Doghan, Shaxnoza Abdulhaeva/ Oper. Res. Eng. Sci. Theor. Appl. 8(1)2025 69-90
 - application insights. *World Journal of Advanced Engineering Technology and Sciences*, 11(1), 240-257. https://doi.org/10.30574/wjaets.2024.11.1.0053
- Ahmad, S. F., Han, H., Alam, M. M., Rehmat, M., Irshad, M., Arraño-Muñoz, M., & Ariza-Montes, A. (2023). Impact of artificial intelligence on human loss in decision making, laziness and safety in education. *Humanities and Social Sciences Communications*, 10(1), 1-14. https://doi.org/10.1057/s41599-023-01787-8
- Akiko, M. (2018). Feasibility Study On Health Workforce Skills Assessment-Supporting health workers achieve person-c. https://coilink.org/20.500.12592/2sv5v7
- Akinsola, K. (2025). The Evolving Role of Corporate Governance in Shaping Business Practices and Legal Accountability in the 21st Century. *Available at SSRN* 5115523. https://dx.doi.org/10.2139/ssrn.5115523
- Alam, S., Dong, Z., Kularatne, I., & Rashid, M. S. (2025). Exploring approaches to overcome challenges in adopting human resource analytics through stakeholder engagement. *Management Review Quarterly*, 1-59. https://doi.org/10.1007/s11301-025-00491-y
- Alkaraan, F., Floyd, D., Rahman, M., & Nuery, N. (2023). A new era of strategic investment decision-making practices in UK companies: Towards sustainable supply chains and circular economy. *Theoretical Economics Letters*, *13*(3), 666-682. https://doi.org/10.4236/tel.2023.133040
- Andreoulaki, I., Papapostolou, A., & Marinakis, V. (2024). Evaluating the barriers to blockchain adoption in the energy sector: A multicriteria approach using the analytical hierarchy process for group decision making. *Energies*, *17*(6), 1278. https://doi.org/10.3390/en17061278
- Artene, A. E., Domil, A. E., & Ivascu, L. (2024). Unlocking Business Value: Integrating AI-Driven Decision-Making in Financial Reporting Systems. *Electronics* (2079-9292), 13(15). https://doi.org/10.3390/electronics13153069
- Basiru, J. O., Ejiofor, C. L., Ekene Cynthia, O., & Attah, R. U. (2023). Enhancing financial reporting systems: A conceptual framework for integrating data analytics in business decision-making. *IRE Journals,[online]*, 7(4), 587-606. http://dx.doi.org/10.13140/RG.2.2.23706.15048
- Buglea, A., Cişmaşu, I. D., Gligor, D. A. G., & Jurcuţ, C. N. (2025). Exploring the Impact of Digital Transformation on Non-Financial Performance in Central and Eastern European Countries. *Electronics*, 14(6), 1226. https://doi.org/10.3390/electronics14061226
- De Villiers, C., Dimes, R., & Molinari, M. (2024). How will AI text generation and processing impact sustainability reporting? Critical analysis, a conceptual framework and avenues for future research. *Sustainability Accounting, Management and Policy Journal*, 15(1), 96-118. https://doi.org/10.1108/SAMPJ-02-2023-0097
- Dhingra, S., Raut, R. D., Yadav, V. S., Cheikhrouhou, N., & Naik, B. K. R. (2023). Blockchain adoption challenges in the healthcare sector: a waste management perspective. *Operations management research*, 1-19. https://doi.org/10.1007/s12063-023-00413-9
- Doni, F., & Fiameni, M. (2024). Can innovation affect the relationship between Environmental, Social, and Governance issues and financial performance? Empirical evidence from the STOXX200 index. *Business Strategy and the Environment*, 33(2), 546-574. https://doi.org/10.1002/bse.3500
- Egwuonwu, A., Mendy, J., & Oruh, S. E. (2023). Drivers of Big Data Analysis Adoption and Implications on Management Decision-Making on Financial and Non-

- Financial Performance: Evidence from Nigeria's Manufacturing and Service Industries. *IEEE Transactions on Engineering Management*, 71, 11907-11922. https://doi.org/10.1109/TEM.2023.3321426
- Egwuonwu, A., Mendy, J., Smart-Oruh, E., & Egwuonwu, A. (2023). Drivers of Big Data analytics' adoption and implications of management decision-making on Big Data adoption and firms' financial and nonfinancial performance: Evidence from Nigeria's manufacturing and service industries. *IEEE Transactions on Engineering Management*, 71, 11907-11922. https://doi.org/10.1109/TEM.2023.3321426
- Escandon-Barbosa, D., & Salas-Paramo, J. (2024). The Effect of the Board of Directors on Perceived Risk and the Non-Financial Performance of Firms. *International Journal of Organizational Leadership*, 13(1), 117-141. https://doi.org/10.33844/ijol.2024.60402
- Feyisetan, O. O., Alkaraan, F., & Le, C. (2025). The influence of ESG on mergers and acquisitions decisions and organisational performance in UK firms: comparison between financial and non-financial sectors. *Journal of Applied Accounting Research*. https://doi.org/10.1108/JAAR-09-2024-0340
- Govindan, K., Nasr, A. K., Saeed Heidary, M., Nosrati-Abarghooee, S., & Mina, H. (2023). Prioritizing adoption barriers of platforms based on blockchain technology from balanced scorecard perspectives in healthcare industry: A structural approach. *International Journal of Production Research*, *61*(11), 3512-3526. https://doi.org/10.1080/00207543.2021.2013560
- Gupta, S., & Jaiswal, R. (2025). A deep learning-based hybrid PLS-SEM-ANN approach for predicting factors improving AI-driven decision-making proficiency for future leaders. *Journal of International Education in Business*. https://doi.org/10.1108/JIEB-05-2024-0058
- Hasani, T., Rezania, D., & Mohammadi, M. (2024). Towards a framework for successful metaverse adoption in small and medium-sized enterprises: An exploratory study. *International Journal of Engineering Business Management, 16,* 18479790241257118. https://doi.org/10.1177/18479790241257118
- Hashem, F., & Alqatamin, R. (2021). Role of artificial intelligence in enhancing efficiency of accounting information system and non-financial performance of the manufacturing companies. *International Business Research*, *14*(12), 1-65. https://doi.org/10.5539/ibr.v14n12p65
- Hassan, M. F., & Yazid, A. S. (2019). The mediating effect of top management support on the relationship between organizational culture and enterprise risk management effectiveness among Malaysian public listed companies: a conceptual framework. *Research Journal of Finance and Accounting*, 10(2), 103-111. http://doi.org/10.7176/RJFA
- Hermansyah, Y. (2023). Assessing the Impact of Communicative Artificial Intelligence
 Based Accounting Information Systems on Small and Medium Enterprises.

 Journal of Wireless Mobile Networks, Ubiquitous Computing, and Dependable
 Applications, 14(3), 230-239. https://jowua.com/wp-content/uploads/2023/10/2023.I3.017.pdf
- Huy, P. Q., & Phuc, V. K. (2024). Sustainable decision making in the time of uncertainty: does moral intelligence make it different? *Pacific Asia Journal of the Association for Information Systems*, 16(1), 8. http://doi.org/10.17705/1pais.16108
- Leghemo, I. M., Azubuike, C., Segun-Falade, O. D., & Odionu, C. S. (2025). Data

- Mohammed A. Al-Doghan, Shaxnoza Abdulhaeva/ Oper. Res. Eng. Sci. Theor. Appl. $8(1)2025\,69-90$
 - governance for emerging technologies: A conceptual framework for managing blockchain, IoT, and AI. *Journal of Engineering Research and Reports*, 27(1), 247-267. https://doi.org/10.9734/jerr/2025/v27i11385
- lo Conte, D. L. (2025). Enhancing decision-making with data-driven insights in critical situations: impact and implications of AI-powered predictive solutions. https://iris.uniroma1.it/handle/11573/1733775
- Magboul, I., Jebreel, M., Shawtri, F., Qabajeh, M., Shanti, A., Alqudah, M., & Abu Huson, Y. (2024). Factors influencing accounting information system usage by oil companies & performance outcomes. *Cogent Business & Management*, *11*(1), 2369211. https://doi.org/10.1080/23311975.2024.2369211
- Naguib, H. M., Kassem, H. M., & Naem, A. E.-H. M. A. (2024). The impact of IT governance and data governance on financial and non-financial performance. *Future Business Journal*, *10*(1), 15. https://doi.org/10.1186/s43093-024-00300-0
- Naveed, K., Farooq, M. B., Zahir-Ul-Hassan, M. K., & Rauf, F. (2025). AI adoption, ESG disclosure quality and sustainability committee heterogeneity: evidence from Chinese companies. *Meditari Accountancy Research*. 2049-372X. https://doi.org/10.1108/MEDAR-02-2024-2374
- Nudurupati, S. S., Tebboune, S., Garengo, P., Daley, R., & Hardman, J. (2024). Performance measurement in data intensive organisations: resources and capabilities for decision-making process. *Production Planning & Control*, 35(4), 373-393. https://doi.org/10.1080/09537287.2022.2084468
- Ombai, P., Kiflemariam, A., & Odollo, L. (2024). Financial and Non-Financial Information on Strategy Management Process; A Systematic Literature Review. *Journal of Strategic Management*, 8(1), 33-64. https://doi.org/10.53819/81018102t2343
- Oyeniyi, L. D., Ugochukwu, C. E., & Mhlongo, N. Z. (2024). The influence of AI on financial reporting quality: A critical review and analysis. *World Journal of Advanced Research and Reviews*, 22(1), 679-694. https://doi.org/10.30574/wjarr.2024.22.1.1157
- Oz, Y., Cakir, F. S., Ceyhan, İ. F., Zelka, A., & Akbulut, H. (2025). Barriers of Blockchain in Sustainability Reporting: An Application With Fuzzy AHP. *Business Strategy & Development*, 8(1), e70077. https://doi.org/10.1002/bsd2.70077
- Samara, H. H., Qudah, H. A., Mohsin, H. J., Abualhijad, S., Bani Hani, L. Y., Al Rahamneh, S., & AlQudah, M. Z. (2025). Artificial intelligence and machine learning in corporate governance: A bibliometric analysis. *Human Systems Management*, 44(2), 349-375. https://doi.org/10.3233/HSM-240114
- Shiyyab, F. S., Alzoubi, A. B., Obidat, Q. M., & Alshurafat, H. (2023). The impact of artificial intelligence disclosure on financial performance. *International Journal of Financial Studies*, 11(3), 115. https://doi.org/10.3390/ijfs11030115
- Singh, R., Guan, T. G., Ravesangar, K., & Joshi, A. (2025). Artificial Intelligence Adoption for Sustainable HRM in HealthCare Industry: A Conceptual Review. Transforming Healthcare Sector Through Artificial Intelligence and Environmental Sustainability, 231-251. https://doi.org/10.1007/978-981-97-9555-0-12
- Siradhana, N. K., & Arora, R. G. (2024). Examining the Influence of Artificial Intelligence Implementation in HRM Practices Using TOE Model. *Vision*, 09722629241231458. https://doi.org/10.1177/09722629241231458
- Soomro, R. B., Al-Rahmi, W. M., Dahri, N. A., Almuqren, L., Al-Mogren, A. S., & Aldaijy, A.

- (2025). A SEM-ANN analysis to examine impact of artificial intelligence technologies on sustainable performance of SMEs. *Scientific Reports*, *15*(1), 5438. https://doi.org/10.1038/s41598-025-86464-3
- Sultana, R., Alam, M. Z., & Hasan, N. (2025). Understanding the emerging success factors gap of accounting information systems in developing countries—a systematic literature review. *Journal of Accounting Literature*. https://doi.org/10.1108/JAL-05-2024-0086
- Taliento, M. (2024). Empowering the management and performance accounting system in healthcare organisations with Artificial Intelligence: Literature and industry cases. *Economia Aziendale Online-*, 15(4), 711-731. http://dx.doi.org/10.13132/2038-5498/15.4.711-731
- Tran Thanh Thuy, N. (2025). Effect of accounting information system quality on decision-making success and non-financial performance: does non-financial information quality matter? *Cogent Business & Management*, *12*(1), 2447913. https://doi.org/10.1080/23311975.2024.2447913
- Wang, T., Aw, E. C.-X., Tan, G. W.-H., Sthapit, E., & Li, X. (2025). AI colleagues: how AI influences hotel employees' service performance? *Current Issues in Tourism*, 1-18. https://doi.org/10.1080/13683500.2025.2481486
- Zhang, C., Zhu, W., Dai, J., Wu, Y., & Chen, X. (2025). Drivers and concerns of adopting Artificial Intelligence n managerial accounting. *Accounting & Finance*. https://doi.org/10.1111/acfi.13404
- Zhao, L., Wu, X., & Luo, H. (2022). Developing AI literacy for primary and middle school teachers in China: Based on a structural equation modeling analysis. *Sustainability*, *14*(21), 14549. https://doi.org/10.3390/su142114549