“Measuring the antecedents of employees’ intention to use artificial intelligence in the manufacturing sector”

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MEASURING THE ANTECEDENTS OF EMPLOYEES' INTENTION TO USE ARTIFICIAL INTELLIGENCE IN THE MANUFACTURING SECTOR

Abstract

This study examines the key factors influencing managerial employees' intention to adopt artificial intelligence (AI) in the manufacturing sector of Saudi Arabia. The paper assesses the impact of business innovation, entrepreneurial orientation, and technology orientation on AI adoption intention while also exploring the moderating role of leadership in these relationships. The study surveyed 314 managerial employees from 18 manufacturing companies in Saudi Arabia, representing sectors such as industrial equipment, consumer goods, and automotive production. Managerial-level participants were chosen for their direct involvement in AI adoption decisions. A cross-sectional design was used with an online survey, and convenience sampling was applied for its efficiency in gathering relevant insights from key decision-makers. Data were analyzed using structural equation modeling (SEM) with SmartPLS version 4.0. The findings indicate that business innovation ($\beta = 0.351$, $p = 0.001$), entrepreneurial orientation ($\beta = 0.264$, $p = 0.00$), and technology orientation ($\beta = 0.435$, $p = 0.023$) significantly enhance the intention to adopt AI. Furthermore, leadership was found to moderate these relationships positively, strengthening the effects of business innovation ($\beta = 0.212$, $p = 0.00$), entrepreneurial orientation ($\beta = 0.371$, $p = 0.004$), and technology orientation ($\beta = 0.251$, $p = 0.031$) on AI adoption. These results underscore the importance of fostering a culture of innovation and entrepreneurship, enhancing technological readiness, and developing effective leadership strategies to promote AI integration in the manufacturing sector.

Keywords artificial intelligence, technology, manufacturing, innovation

JEL Classification M10, M20, L21, O32

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INTRODUCTION

Artificial intelligence (AI) is rapidly reshaping global enterprises, with its adoption poised for significant growth across industries. As a transformative general-purpose technology, AI parallels major technological breakthroughs of the past (Goldfarb et al., 2020). Organizations worldwide are leveraging AI to transcend traditional industrial boundaries, reimagine consumer value creation, and enhance decision-making processes through advanced digital technologies (Sebastian et al., 2020; Malik et al., 2022; Upadhyay et al., 2022). AI stands out as a critical enabler in the manufacturing sector, offering innovations such as predictive maintenance to foresee equipment failures, reduce downtime, and extend machinery lifespans (Chryssolouris et al., 2023; Alateeg et al., 2024).

Despite its transformative potential, AI adoption in manufacturing faces notable hurdles, including technological complexities, financial constraints, and organizational resistance to change (Mypati et al., 2023). Vision 2030 serves as a driving force behind technological advancement in Saudi Arabia, aiming to diversify the economy beyond oil dependency (Nurunnabi, 2017). The manufacturing sector is cen-

tral to this vision, attracting substantial investments to modernize operations and enhance technological capabilities. This strategy prioritizes cutting-edge technologies to boost global competitiveness, supported by government and private sector collaborations that include funding for research, development, and digital infrastructure improvements (Khan & Iqbal, 2020; Alateeg & Alhammadi, 2023). However, while existing research often focuses on the technical dimensions of AI, limited attention has been given to the psychological and organizational factors shaping employees' intentions to adopt AI.

1. LITERATURE REVIEW

The intention to use AI refers to the likelihood that individuals within organizations are willing to adopt and effectively utilize AI technologies (Fishbein & Ajzen, 1975). It is a critical determinant in understanding how AI technologies, such as machine learning and deep learning, can be successfully integrated into business operations (Buzko et al., 2016). These technologies present transformative potential for industries, offering improvements in governance, operational efficiency, and organizational performance. Behavioral intention is a strong predictor of actual adoption behaviors, making it a key focus for organizations aiming to embrace technological advancements.

In the context of AI adoption, business innovation plays a central role. It refers to an organization's ability to develop and implement new products, services, processes, and models that create competitive advantages in both local and global markets (Seyfang & Smith, 2007). Business innovation is particularly important in driving AI adoption, as it fosters an environment where organizations continuously seek out advanced technologies and innovative solutions. Business innovation is multidimensional, encompassing technological advancements, novel business models, and process optimizations (Popenici & Kerr, 2017; Sutrisno et al., 2023). This dynamic approach is essential for ensuring sustainability and positioning organizations for long-term success, particularly in family-owned businesses (Kellermanns et al., 2012). Business innovation ultimately enables organizations to explore new AI-driven opportunities, improving operational efficiency and competitive positioning (Herrera, 2016).

Entrepreneurial orientation is another critical determinant of AI adoption. It involves an organization's strategic focus on innovation and opportunity recognition through risk-taking and proactive behaviors (Beekman et al., 2012; Boso et al., 2013). Entrepreneurial orientation reflects a commitment to identifying and capitalizing on emerging market opportunities, and it fosters innovation by encouraging experimentation and embracing technological advancements. Research has shown that organizations with a strong entrepreneurial orientation are more likely to adopt AI, as they are better equipped to leverage new technologies and create value (Rauch et al., 2009). The role of leadership in shaping entrepreneurial orientation is significant, as it influences the organization's willingness to take risks and explore new technologies (Preda, 2013). Leadership promotes an environment conducive to innovation, which ultimately enhances employees' willingness to engage with AI technologies (Fischer et al., 2023).

Technology orientation, defined as an organization's readiness to integrate and leverage new technologies, plays a pivotal role in AI adoption. Firms with strong technology orientations prioritize investments in the necessary infrastructure to explore and implement innovative solutions (Masa'deh et al., 2018). They exhibit a proactive approach to technological advancements, fostering experimentation, and driving innovation within the organization (Yousaf et al., 2020). A technology orientation aligns with AI adoption as it facilitates the integration of advanced technologies into organizational processes, thereby improving competitiveness (Costa et al., 2015). Organizations with a technology orientation are more likely to perceive AI as a useful tool, and their focus on technological experimentation increases the likelihood of successful AI integration (Gatignon & Xuereb, 1997). Therefore, technology orientation plays a direct role in influencing employees' perceptions of AI's usefulness and their intention to adopt it.

Leadership is a moderating factor in the relationship between business innovation, entrepreneurial orientation, technology orientation, and AI

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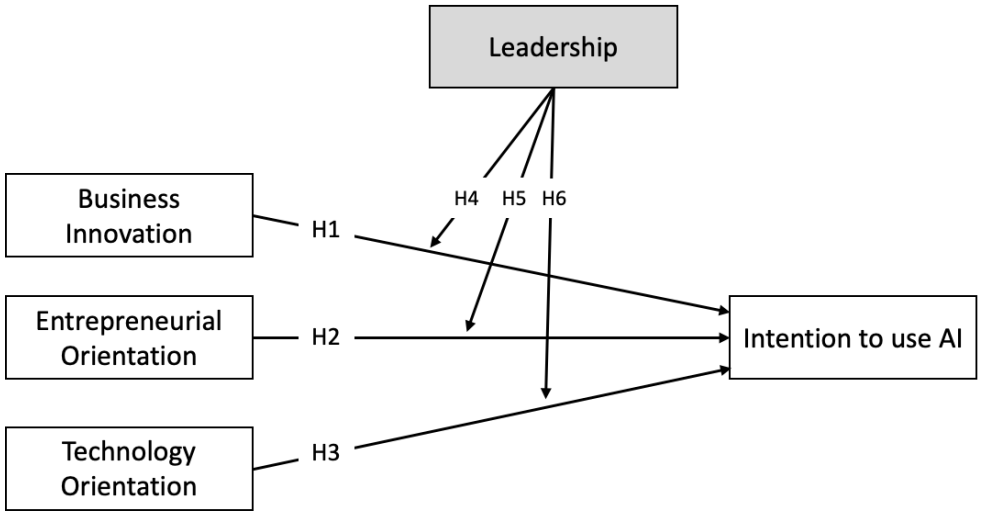

Figure 1. Research model

adoption. Leaders who foster a culture of innovation encourage the adoption of new technologies by creating an environment where employees are empowered to experiment and take risks (Carton, 2022). Leadership enhances business innovation by guiding organizational strategies and translating innovative ideas into practical solutions, such as AI adoption (Fischer & Sitkin, 2023). In this context, leadership strengthens the effects of entrepreneurial orientation and technology orientation on AI adoption, as leaders provide the direction, resources, and support necessary to integrate these technologies successfully (Singh et al., 2023). Effective leadership builds confidence in AI, reduces uncertainty, and aligns technological initiatives with organizational strategies, facilitating smoother AI integration (Djordjevic et al., 2020).

Synthesizing the previous research, it is evident that business innovation, entrepreneurial orientation, and technology orientation are critical factors that drive AI adoption. However, the role of leadership in moderating these relationships is crucial, as it directly influences the extent to which these determinants impact employees' intention to adopt AI. Therefore, understanding how leadership interacts with innovation and technology orientation is essential for organizations looking to foster AI adoption.

This study aims to explore these relationships in the manufacturing sector by examining how these factors influence employees' intention to use AI, guided by the following hypotheses:

H1: Business innovation influences intention to use AI.

H2: Entrepreneurial orientation influences intention to use AI.

H3: Technology orientation influences intention to use AI.

H4: Leadership moderates the relationship between business innovation and intention to use AI.

H5: Leadership moderates the relationship between entrepreneurial orientation and intention to use AI.

H6: Leadership moderates the relationship between technology orientation and intention to use AI.

Figure 1 presents the research model.

2. METHODOLOGY

This study utilized a cross-sectional design with a single data collection phase to explore the factors influencing the intention to use AI in the manufacturing sector. The sample comprised 314 managerial-level employees drawn from 18 manufacturing organizations in Saudi Arabia. These organizations span a diverse range of key industries, including automotive manufacturing, tex-

tiles, electronics, and machinery production, all of which play a crucial role in the Saudi economy. The selection of these sectors ensures that the study captures a wide array of industry perspectives on AI adoption, offering a comprehensive understanding of the challenges and opportunities organizations face in integrating AI technologies into their operations.

A convenience sampling technique was used to select participants, allowing for the efficient inclusion of individuals who were readily accessible and willing to participate. This approach was practical for collecting data within a specific timeframe and ensured that the respondents were directly involved in decision-making processes related to AI adoption. Managerial-level employees were specifically targeted because they hold key roles within their organizations, which include strategic planning, decision-making, and overseeing operational processes. These roles position them at the heart of AI implementation, making their insights valuable for understanding the factors influencing AI adoption, such as technological readiness, organizational culture, and resource allocation.

By focusing on managerial-level employees, the study ensures that the perspectives gathered reflect the strategic and operational priorities of organizations as they relate to AI. Furthermore, the diversity of industries included in the study allows for a broader understanding of how AI adoption might differ across various manufacturing contexts, considering factors such as production scale, technological infrastructure, and market demands. The selected organizations, being significant players in large-scale production and supply chain operations, provide a realistic and contextually relevant sample for studying AI adoption in a high-impact sector. This sample selection, therefore, not only supports the generalizability of the findings within the Saudi manufacturing context but also enhances the study's relevance for exploring the organizational and technological challenges associated with AI integration.

The data collection process was conducted through an online survey distributed to potential participants via email. The survey link included an introductory page explaining the purpose of the study, ensuring anonymity, and obtaining informed consent. Participants completed the survey using a 5-point Likert scale, ranging from 1 (strongly disagree) to 5 (strongly agree), which captured their perceptions of AI adoption and related constructs. Efforts were made to enhance response rates by following up with participants through reminder emails over two weeks.

The measurement of constructs relied on established and validated scales adapted from prior studies, ensuring reliability and validity. Specifically, leadership was measured using four items adapted from Djordjevic et al. (2020). Business innovation was assessed using four items adapted from Seyfang and Smith (2007) and Bamgbade et al. (2022). Entrepreneurial orientation was evaluated with five items adapted from Dutot and Bergeron (2016), Fan et al. (2021), and Miller (1983). Technology orientation was measured using four items adapted from Bamgbade et al. (2022) and Gatignon and Xuereb (1997). Lastly, intention to use AI was gauged with three items adapted from Parra-López et al. (2011), Upadhyay et al. (2022), and Venkatesh et al. (2012). Detailed descriptions of the measurement items are provided in Appendix A.

The data analysis was performed using SmartPLS version 4.0, employing partial least squares structural equation modeling (PLS-SEM) to test the proposed relationships and hypotheses. This method was selected for its robustness in handling complex models with multiple constructs and its ability to accommodate the non-normal distribution of data.

3. RESULTS AND DISCUSSION

The demographic profile of the study participants (n = 314), as mentioned in Table 1, reveals a diverse group that predominantly consists of males (61%) compared to females (39%). Age-wise, the largest segment is between 25–34 years (47%), followed by those aged 35–44 (23%) and 18–24 (20%). Participants aged 45–54 and 55–64 are less represented, comprising 7% and 3% of the sample, respectively. In terms of education, the majority hold a Bachelor's degree (63%), with significant portions having a Master's degree (23%) or a High School education (10%). A small percentage (4%) possess a Doctoral degree. Regarding work expe-

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rience, 41% of participants have 1–5 years of experience, followed by 29% with 6–10 years and 18% with less than 1 year. The smallest group has 11–15 years of experience, accounting for 12% of the sample.

Table 1. Demographic profile of participants

Characteristics	Frequency	Percent
Gender		
Male	191	61%
Female	123	39%
Age		
18–24	64	20%
25–34	147	47%
35–44	71	23%
45–54	23	7%
55–64	9	3%
Education		
High School or equivalent	31	10%
Bachelor's Degree	199	63%
Master's Degree	71	23%
Doctoral Degree	13	4%
Experience		
Less than 1 year	57	18%
1–5 years	129	41%
6–10 years	91	29%
11–15 years	37	12%

Note: n = 314.

Table 2 provides the reliability and validity assessments for the constructs in the study, including leadership, business innovation, entrepreneurial orientation, technology orientation, and the intention to use AI. All item loadings for the constructs exceeded the 0.7 threshold, confirming their robustness. For the leadership construct, the reliability indicators suggest acceptable internal consistency, with scores of 0.741 and 0.788 for internal reliability metrics, along with an average variance extracted (AVE) of 0.583, reflecting a reasonable amount of variance explained. The business innovation construct also exhibits strong reliability and internal consistency, supported by values of 0.755 and 0.841, and an AVE of 0.574. Entrepreneurial orientation shows even higher internal consistency, with reliability metrics reaching 0.84 and 0.886, and an AVE of 0.609, indicating a robust measurement model. Technology orientation also meets acceptable reliability standards, with measures of 0.731 and 0.831, and an AVE of 0.553. Lastly, the intention to use AI construct demonstrates solid reliability and internal consistency, supported by values of 0.735 and 0.8, with an AVE of 0.575.

Table 3 demonstrates the discriminant validity of the constructs using the Fornell-Larcker criterion. The diagonal values represent the square root of the average variance extracted (AVE) for each construct, which should be higher than the corresponding correlations with other constructs to establish discriminant validity. For business innovation, the AVE square root is 0.758, and its correlations with other constructs are 0.655 with entrepreneurial orientation, 0.505 with intention to use AI, 0.615 with leadership, and 0.47 with technology orientation. Entrepreneurial orientation has an AVE square root of 0.781 and correlations of 0.655 with business innovation, 0.568 with intention to use AI, 0.608 with leadership, and 0.537 with technology orientation. The intention to use AI has an AVE square root of 0.759, with correlations of 0.505 with business innovation, 0.568 with entrepreneurial orientation, 0.671 with leadership, and 0.567 with technology orientation. Leadership has an AVE square root of 0.695, with correlations of 0.615 with business innovation, 0.608 with entrepreneurial orientation, 0.671 with intention to use AI, and 0.614 with technology orientation. Finally, technology orientation has an AVE square root of 0.743, with correlations of 0.47 with business innovation, 0.537 with entrepreneurial orientation, 0.567 with the intention to use AI, and 0.614 with leadership.

Table 4 presents the path coefficients for the relationships between various constructs and the intention to use AI, including the moderating effects of leadership. The path from business innovation to the intention to use AI is significant, with a beta value of 0.351, supporting H1. Entrepreneurial orientation also significantly impacts the intention to use AI, with a beta of 0.264, validating H2. The effect of technology orientation on the intention to use AI is particularly strong, with a beta of 0.435, confirming H3. For the moderating effects of leadership, all hypotheses are also supported. H4, which examines the moderating effect of leadership on the relationship between business innovation and the intention to use AI, shows a significant interaction with a beta of 0.212. H5, exploring the moderating effect of leadership on the relationship between entrepreneurial orientation and the intention to use AI, is supported with a beta of 0.371. Similarly, H6, which assesses the moderating role of leadership on the relationship

between technology orientation and the intention to use AI, is significant, with a beta of 0.251.

Figure 2 presents the *R*-square value for the intention to use AI, which is 0.532. This indicates that approximately 53.2% of the variance in the intention to use AI can be explained by the combined effects of business innovation, entrepreneurial orientation, technology orientation, and the moderating effects of leadership. This *R*-square value reflects a moderate to substantial level of explanatory power of the model in predicting the intention to use AI.

Table 2. Measurement model

Items and Constructs	Loadings	Cronbach's alpha	Composite reliability	Average variance extracted (AVE)
Leadership		**0.741**	**0.788**	**0.583**
LD1	0.74			
LD2	0.739			
LD3	0.719			
LD4	0.77			
Business Innovation		**0.755**	**0.841**	**0.574**
BI1	0.73			
BI2	0.855			
BI3	0.818			
BI4	0.703			
Entrepreneurial Orientation		**0.84**	**0.886**	**0.609**
EO1	0.767			
EO2	0.859			
EO3	0.805			
EO4	0.71			
EO5	0.754			
Technology Orientation		**0.731**	**0.831**	**0.553**
TO1	0.701			
TO2	0.755			
TO3	0.745			
TO4	0.774			
Intention to use AI		**0.735**	**0.8**	**0.575**
INT1	0.808			
INT2	0.831			
INT3	0.719			

Table 3. Discriminant validity (Fornell-Larcker criterion)

Construct	Business Innovation	Entrepreneurial Orientation	Intention to Use AI	Leadership	Technology Orientation
Business Innovation	0.758				
Entrepreneurial Orientation	0.655	0.781			
Intention to Use AI	0.505	0.568	0.759		
Leadership	0.615	0.608	0.671	0.695	
Technology Orientation	0.47	0.537	0.567	0.614	0.743

Table 4. Path coefficients

Paths	Beta	Standard deviation	T statistics	P values	Results
Business Innovation → Intention to Use AI	0.351	0.137	6.254	0.001	H1 accepted
Entrepreneurial Orientation → Intention to Use AI	0.264	0.129	9.267	0.00	H2 accepted
Technology Orientation → Intention to Use AI	0.435	0.104	5.27	0.023	H3 accepted
Leadership x Business Innovation → Intention to Use AI	0.212	0.116	5.397	0.00	H4 accepted
Leadership x Entrepreneurial Orientation → Intention to Use AI	0.371	0.122	7.579	0.004	H5 accepted
Leadership x Technology Orientation → Intention to Use AI	0.251	0.103	6.475	0.031	H6 accepted

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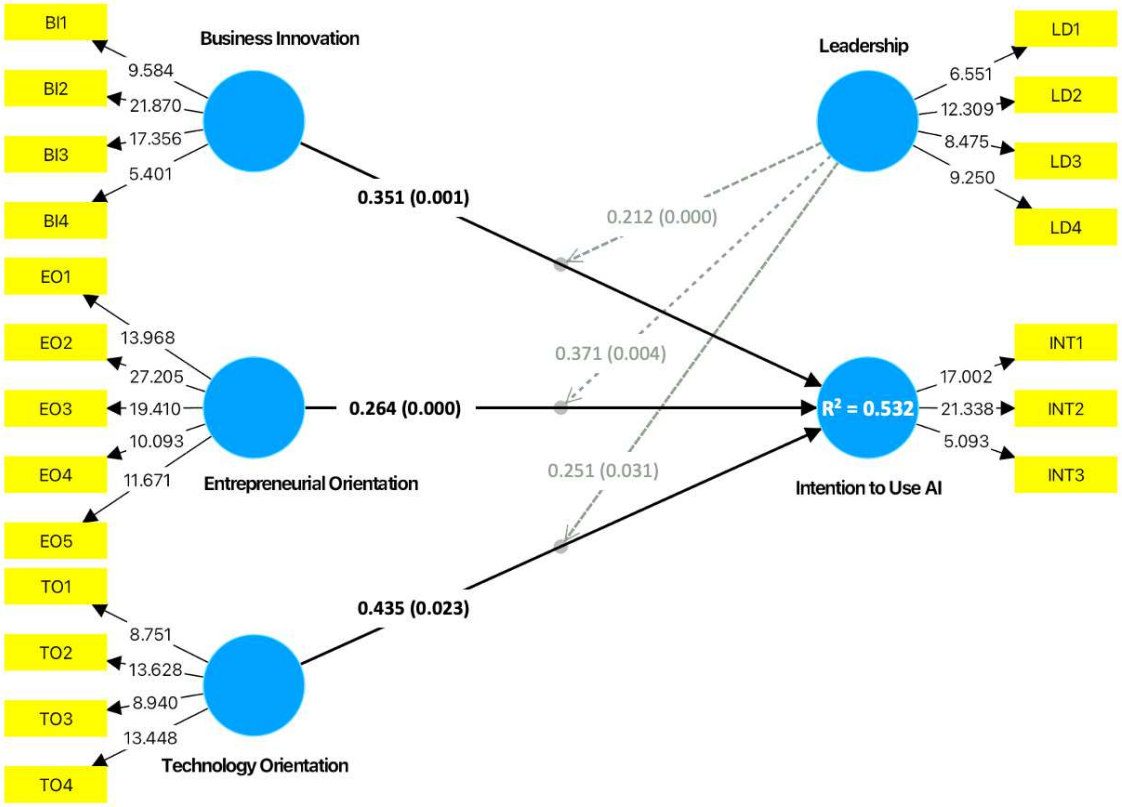

Figure 2. Assessment of the structural model

This study provides significant insights into the factors influencing the intention to use AI among employees in the manufacturing sector in Saudi Arabia. The findings reveal that business innovation, entrepreneurial orientation, and technology orientation positively and significantly influence the intention to use AI. Employees in organizations that emphasize innovative business practices, foster a culture of entrepreneurial thinking, and prioritize technological advancement are more likely to embrace AI technologies (Zeba et al., 2021; Kim et al., 2022). This indicates that organizations committed to these areas create an environment conducive to AI adoption (Arinez et al., 2020). Moreover, the study highlights the critical role of leadership as a moderating factor in these relationships. Effective leadership enhances the positive effects of innovation, entrepreneurial orientation, and technology orientation on the intention to use AI (Alateeg & Alhammadi, 2024a). Leaders who can drive innovation and technology adoption play a pivotal role in fostering a culture that embraces AI. Their ability to support and amplify the impact of these factors is crucial for successful AI integration within organizations (Chryssolouris et al., 2023). The model explains a substantial portion of the variance in the intention to use AI, demonstrating its explanatory power. This suggests that the combined effects of business innovation, entrepreneurial orientation, technology orientation, and leadership are significant predictors of AI adoption intentions among employees in the manufacturing sector.

The implications of these findings are multifaceted and hold significant importance for various stakeholders in the manufacturing sector, particularly in Saudi Arabia. For managers and leaders, the results underscore the importance of fostering an innovative and entrepreneurial environment (Alateeg & Alhammadi, 2024b). Organizations can significantly boost their employees' intention to adopt AI technologies by promoting business innovation and encouraging entrepreneurial orientation. Creating an organizational culture that encourages innovation and entrepreneurial thinking is crucial. Investing in training programs, workshops, and incentives that promote creative problem-solving and risk-taking will lead to a more innovative environment conducive to AI adoption.

Additionally, organizations need to prioritize technological readiness and ensure that employees have access to the latest tools and resources, including AI infrastructure, software, and hardware (Mypati et al., 2023). Providing ongoing training and development opportunities to enhance employees' technical skills and familiarity with AI technologies is essential. Leadership development programs focusing on change management, strategic thinking, and the ability to inspire and motivate teams are also critical. Leaders should adopt a visionary leadership style that supports and amplifies the positive impacts of business innovation, entrepreneurial orientation, and technology orientation on AI adoption (Mahmood et al., 2025).

For policymakers and industry stakeholders, the findings highlight the need to support initiatives for innovation adoption. Policies aimed at incentivizing research and development activities focused on AI and related technologies, such as providing grants, subsidies, or tax incentives, are vital. Establishing innovation hubs or centers of excellence where businesses can collaborate with academic institutions and research organizations can promote knowledge sharing and technological advancement. Additionally, policies incentivizing technological upgrades in the manufacturing sector, such as financial incentives for companies investing in modernizing their technological infrastructure or adopting AI solutions, are crucial. Providing low-interest loans or grants for small and medium-sized enterprises to invest in AI technologies can also be beneficial. Creating platforms for knowledge sharing and collaboration between industry players can facilitate the dissemination of best practices and success stories related to AI adoption. Encouraging industry associations to organize training programs, webinars, and networking events can support knowledge sharing.

Educational institutions and training providers play a critical role as well. Developing and offering curricula that focus on AI and its applications in the manufacturing sector, including specialized courses, degree programs, and certification programs, will equip students with the necessary skills and knowledge to work with AI technologies. Collaborating with industry to ensure curricula alignment with the latest technological advancements and industry needs can enhance graduates' employability. Training providers should offer continuous professional development programs for employees in the manufacturing sector, focusing on upskilling and reskilling the workforce to keep pace with technological advancements and AI adoption. Providing flexible learning options, such as online courses and part-time programs, can facilitate continuous learning for working professionals.

This study contributes to the growing body of knowledge on AI adoption in the manufacturing sector, particularly within the context of Saudi Arabia. The findings emphasize the importance of fostering an innovative and entrepreneurial culture supported by strong leadership to enhance the intention to use AI. Future research could further explore these relationships in different contexts and industries to generalize the findings. Additionally, longitudinal studies could provide deeper insights into the causal relationships and long-term impacts of these factors on AI adoption.

CONCLUSION

The objective of this study was to investigate the antecedents influencing employees' intention to use AI in the manufacturing sector. The analysis identified three key determinants: business innovation, entrepreneurial orientation, and technology orientation. These factors were found to be essential in driving AI adoption within organizations. Additionally, leadership was found to play a pivotal moderating role, significantly enhancing the impact of these determinants on employees' AI adoption intentions. The key results suggest that fostering a culture of innovation and entrepreneurship, alongside ensuring technological readiness, is critical for AI adoption. Business innovation encourages organizations to explore and implement new technologies, while entrepreneurial orientation drives proactive approaches to integrating these technologies. Technology orientation ensures that organizations remain aligned with the latest technological advancements. Furthermore, leadership emerged as a key enabler, amplifying the

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positive effects of these factors on AI adoption. From these findings, it can be concluded that organizations aiming to adopt AI should prioritize not only technological advancements but also the cultivation of a supportive organizational culture and leadership strategies that empower employees to embrace AI. Leaders must play an active role in guiding the organization through this transformation, ensuring that innovation and technology adoption are aligned with strategic goals. Future research could extend these findings by examining the dynamics across different sectors and regions and employing longitudinal methods to explore the long-term impact of these factors on AI adoption. This would provide deeper insights into the sustainability of AI integration and offer more precise recommendations for organizations looking to achieve lasting technological transformation.

AUTHOR CONTRIBUTIONS

Conceptualization: Abdulaziz Alhammadi.
Data curation: Abdulaziz Alhammadi.
Formal analysis: Abdulaziz Alhammadi.
Funding acquisition: Abdulaziz Alhammadi.
Investigation: Abdulaziz Alhammadi.
Methodology: Abdulaziz Alhammadi.
Project administration: Abdulaziz Alhammadi.
Resources: Abdulaziz Alhammadi.
Software: Abdulaziz Alhammadi.
Validation: Abdulaziz Alhammadi.
Visualization: Abdulaziz Alhammadi.
Writing – original draft: Abdulaziz Alhammadi.
Writing – review & editing: Abdulaziz Alhammadi.

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APPENDIX A

Table A1. Questionnaire

Statements	Sources
Leadership	
LD1: "Senior managers promote the importance of innovation in the company"	Djordjevic et al. (2020)
LD2: "Senior management is interested in the development of strategies and plans relating to innovation"	
LD3: "Improvement plans developed by senior managers are based on the management of feedback"	
LD4: "Values that are based on the innovation in our company are clearly expressed in the form of objectives, principles, and actions and represent the foundation of strategic planning"	
Business Innovation	
BI1: "Creating new ideas, processes, products, and systems is critical to the success of our firm"	Seyfang and Smith (2007) and Bamgbade et al. (2022)
BI2: "Our firm tends to be an early adopter of innovative technologies"	
BI3: "Our firm actively seeks innovative technologies"	
BI4: "Our firm proactively uses innovative technologies to meet changing customer needs"	
Entrepreneurial Orientation	
EO1: "Our firm appreciates innovations above everything else"	Dutot and Bergeron (2016), Fan et al. (2021), and Miller (1983)
EO2: "Our firm emphasizes risk-taking"	
EO3: "Our firm intends to get into markets before our competition"	
EO4: "Our firm, in the last five years, has brought several new products or services to the market"	
EO5: "Our firm emphasizes R&D, technological leadership, and innovativeness instead of trusting only those products and services, which we have traditionally found to be good"	
Technology Orientation	
TO1: "Our firm uses innovative technologies in providing solutions"	Bamgbade et al. (2022) and Gatignon and Xuereb (1997)
TO2: "Our firm uses state-of-the-art technology for product development"	
TO3: "Our firm is very proactive in providing innovative solutions to respond to clients' needs"	
TO4: "Our firm has the will and the capacity to build and market innovative solutions"	
Intention to use AI	
INT1: "Our firm is planning to adopt AI"	Parra-López et al. (2011), Upadhyay et al. (2022), and Venkatesh et al. (2012)
INT2: "Our firm will adopt AI for all my requirements"	
INT3: "I think that our firm will adopt AI"	

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