

Artificial Intelligence Adoption and Organizational Performance: An Empirical Study with Special Reference to Malaysian Companies



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ABSTRACT

Artificial Intelligence (AI) has become one of the most transformative technologies influencing modern organizational performance. The integration of AI technologies in business operations enables companies to enhance productivity, automate processes, and improve decision-making capabilities. This study examines the relationship between Artificial Intelligence adoption and organizational performance with special reference to Malaysian companies. The research is based on primary data collected from 189 respondents working in ten companies operating in Malaysia. A structured questionnaire was used to collect data from employees and managers involved in technology implementation and organizational decision-making processes. Statistical techniques such as descriptive statistics, correlation analysis, regression analysis, and Structural Equation Modeling (SEM) were applied using SPSS and AMOS software to analyze the data. The findings reveal that AI adoption significantly improves operational efficiency, innovation capability, and decision accuracy. Furthermore, the results indicate that organizations implementing AI-driven systems demonstrate improved organizational performance and strategic flexibility. The study provides empirical evidence that AI technologies contribute positively to business competitiveness in Malaysia. The research also offers practical implications for managers and policymakers regarding the effective adoption of AI technologies in organizations. The findings highlight the importance of technological readiness, managerial support, and investment in digital infrastructure for successful AI implementation.

Keywords: *Artificial Intelligence (AI), Organizational Performance, Malaysia, Adoption.*

INTRODUCTION

The most important technology is AI, a revolutionary emerging technology which is profoundly impacting the current state of modern organization and business. AI – the human-like capabilities of machines are about learning, reasoning, decision making, problem solving, etc. Given the fast pace of technological change, artificial intelligence can drive organizational efficiency, productivity and competitive advantage. AI is being increasingly adopted in Malaysia due to wider digital transformation and government support for technological innovation by Malaysian companies that have been expanding in both a domestic, and international, perspective. In industries comprising manufacturing, finance, telecommunications, healthcare, and retail among others,

Malaysian-based firms are gradually adopting artificial intelligence in their operations & strategic decision making. The Malaysian government has additionally proposed some national plans to facilitate AI

development and encourage organizations towards advanced digital technology including the adoption of AI technologies. With AI technologies organizations can analyze extensive datasets, automate redundant jobs, and improve customer service by leveraging intelligent systems. AI-powered analytics can be used by companies for market trend analysis, resource allocation optimization and operational efficiency improvement. Companies are continuously adopting AI solutions, so identifying organization-wide performance impacts on the performance of those solutions becomes of paramount importance. Organizational performance is one of the measures of accomplishment for an organization, it is used to examine the degree to which a company attains its targets. Performance can be measured by a variety of different metrics including productivity, profitability, innovation capability, customer satisfaction and operational efficiency.

AI technologies support these dimensions through accuracy, minimizing errors and improving all decision making. Despite increasing interest in AI adoption, the implementation cost, technology infrastructure, employee skills, and data security issues continue to present significant challenges for many businesses. Thus, empirical study on AI adoption and organizational performance is important to provide evidence based understanding of the phenomenon that business leaders and policymakers need to take into consideration in relation to AI utilization and its impact to organizational performance. This research seeks to comprehend the effect of adopting Artificial Intelligence on organizational performance concentrating on companies in Malaysia. Through studying data gathered from employees employed in diverse institutions, the research aims to determine what is the underlying drivers of adopting AI and what kind of outcomes it has on business performance. The results of this study should be beneficial to the literature in the area of digital transformation and can serve as a guide for the organizations that implement various AI technologies in an efficient and effective way as they implement the digital transformation.

REVIEW OF LITERATURE

The concept of Artificial Intelligence adoption in organizations has gained significant attention in recent years due to its ability to transform business processes and decision-making systems. According to Davenport and Ronanki (2018), AI technologies such as machine learning and data analytics enable organizations to automate complex tasks and improve operational performance. The authors emphasized that organizations implementing AI solutions are able to analyze large volumes of data and generate valuable insights for strategic planning. The study further highlighted that AI-driven automation helps organizations reduce operational costs and improve productivity. Furthermore, AI technologies enhance the speed and accuracy of decision-making processes within organizations. Companies adopting AI systems are able to improve customer experiences and develop innovative products and services. The researchers concluded that Artificial Intelligence adoption significantly contributes to improved organizational performance and competitive advantage.

Artificial Intelligence technologies are increasingly being adopted by organizations to improve operational efficiency and innovation capability. Bughin et al. (2018) conducted a global survey on AI adoption across different industries and found that companies implementing AI technologies experience

significant improvements in productivity and business outcomes. The study emphasized that AI technologies enable organizations to automate routine processes and focus on strategic activities that generate value. Moreover, AI-driven systems improve data analysis capabilities and support evidence-based decision-making. The researchers observed that organizations with higher levels of AI adoption tend to outperform competitors in terms of innovation and operational performance. The study concluded that AI technologies play a crucial role in enhancing business competitiveness and long-term sustainability.

The impact of Artificial Intelligence on organizational innovation has been widely discussed in recent research. Brynjolfsson and McAfee (2017) argued that AI technologies act as catalysts for innovation by enabling organizations to develop new products and services. The authors suggested that AI systems improve the efficiency of research and development activities by providing predictive insights and advanced analytics. Organizations that integrate AI technologies into their operations are able to enhance creativity and innovation capabilities. Furthermore, AI technologies allow organizations to experiment with new business models and improve service delivery. The study also highlighted that AI adoption encourages collaboration between human expertise and intelligent systems. As a result, organizations achieve higher levels of innovation and improved performance outcomes.

Technological readiness is considered one of the most important factors influencing AI adoption in organizations. Ransbotham et al. (2019) emphasized that organizations with strong technological infrastructure and skilled employees are more likely to successfully implement Artificial Intelligence systems. The study found that technological readiness enables organizations to integrate AI tools with existing information systems and business processes. Moreover, organizations with advanced digital capabilities are able to leverage AI technologies more effectively to improve productivity and decision-making. The researchers also noted that organizations investing in employee training and digital infrastructure experience greater benefits from AI adoption. The study concluded that technological readiness significantly influences the successful implementation of AI technologies.

The relationship between Artificial Intelligence and operational efficiency has been highlighted in several empirical studies. Wamba et al. (2020) examined the role of AI-driven analytics in improving operational performance and found that AI technologies significantly enhance process efficiency and resource utilization. The researchers observed that organizations using AI-based systems are able to automate repetitive tasks and reduce human errors. This leads to improved service delivery and higher levels of operational reliability. Furthermore, AI technologies enable organizations to monitor performance metrics in real time and implement corrective measures quickly. The study concluded that AI adoption plays a crucial role in improving operational efficiency and organizational productivity. Artificial Intelligence adoption also contributes to improved organizational decision-making. Jiang et al. (2021) suggested that AI technologies provide organizations with advanced analytical tools capable of processing complex datasets. These tools help managers identify patterns, trends, and opportunities within large volumes of business data. The researchers argued that AI-driven decision support systems enable organizations to make faster and more accurate strategic decisions. Furthermore, AI technologies improve forecasting accuracy and support long-term strategic planning. Organizations adopting AI systems are able to reduce uncertainty and make data-

driven decisions. The study concluded that AI adoption enhances managerial effectiveness and organizational performance. The role of Artificial Intelligence in enhancing customer satisfaction has also been explored by several researchers. Huang and Rust (2021) examined how AI technologies influence customer service operations and found that AI-powered systems significantly improve service efficiency and personalization. The authors noted that AI technologies enable organizations to analyze customer preferences and provide customized services. This improves customer engagement and satisfaction levels. Moreover, AI-driven chatbots and recommendation systems enhance the overall customer experience. The study concluded that AI adoption enables organizations to strengthen relationships with customers and improve business performance. Artificial Intelligence technologies also support innovation-driven organizational cultures. Cockburn, Henderson, and Stern (2019) suggested that AI systems enable organizations to explore new technological opportunities and develop innovative solutions. The researchers emphasized that AI technologies accelerate research processes and reduce the time required for product development. Organizations adopting AI technologies are able to experiment with new ideas and identify innovative business opportunities. The study also highlighted that AI-driven innovation contributes to competitive advantage and market leadership. The authors concluded that AI adoption significantly enhances organizational innovation capabilities.

The integration of Artificial Intelligence into business processes has transformed the way organizations operate in the digital economy. Dwivedi et al. (2021) argued that AI technologies enable organizations to improve productivity, efficiency, and innovation simultaneously. The study highlighted that AI-driven automation reduces operational costs and improves service quality. Organizations adopting AI technologies are also able to improve data management and information processing capabilities. Furthermore, AI technologies enhance collaboration between employees and digital systems. The researchers concluded that AI adoption is a key driver of digital transformation in modern organizations. Artificial Intelligence adoption has also been associated with improved organizational agility. Verhoef et al. (2021) emphasized that organizations implementing AI technologies are able to respond more quickly to market changes and customer demands. AI systems provide real-time insights that help organizations adjust their strategies and operations effectively. The study also found that AI technologies support flexible business models and improve operational responsiveness. Organizations adopting AI technologies demonstrate higher levels of adaptability and innovation. The authors concluded that AI adoption contributes to enhanced organizational agility and competitiveness.

The relationship between AI adoption and organizational performance has been widely investigated in empirical studies. Mikalef et al. (2020) found that organizations adopting advanced analytics and AI technologies experience significant improvements in productivity and financial performance. The study highlighted that AI technologies enable organizations to identify new revenue opportunities and optimize business processes. Furthermore, AI-driven insights support strategic decision-making and innovation activities. The researchers concluded that AI adoption has a positive and significant impact on organizational performance. Artificial Intelligence technologies are also transforming knowledge management processes within organizations. Raisch and Krakowski (2021) argued that AI systems enable organizations to capture,

store, and analyze knowledge more effectively. The study emphasized that AI-driven knowledge management systems help organizations improve decision-making and problem-solving capabilities. Furthermore, AI technologies enhance collaboration and knowledge sharing among employees. Organizations adopting AI-based knowledge systems are able to develop innovative solutions and improve performance outcomes. The authors concluded that AI technologies play a vital role in modern organizational knowledge management.

Artificial Intelligence adoption has also been associated with improved strategic management practices. Haenlein and Kaplan (2019) suggested that AI technologies enable organizations to analyze competitive environments and identify strategic opportunities. The study emphasized that AI-driven predictive analytics help organizations forecast market trends and customer behavior. Organizations using AI technologies are able to develop effective strategies and improve business performance. The authors concluded that AI adoption significantly enhances strategic management capabilities.

The role of Artificial Intelligence in digital transformation has been widely discussed in contemporary research. Vial (2019) emphasized that AI technologies act as enablers of digital transformation by improving data analysis and business intelligence capabilities. Organizations adopting AI technologies are able to redesign their processes and develop innovative digital services. The study highlighted that AI adoption leads to improved efficiency, innovation, and competitive advantage. The author concluded that AI technologies are essential for achieving sustainable digital transformation. Recent studies have also highlighted the importance of AI adoption in improving organizational competitiveness. Mhlanga (2022) examined the impact of Artificial Intelligence adoption in developing economies and found that organizations implementing AI technologies demonstrate improved productivity and innovation capability. The study emphasized that AI-driven systems enable organizations to optimize resources and improve decision-making processes. Furthermore, AI technologies help organizations develop competitive advantages in rapidly changing markets. The researcher concluded that AI adoption plays a crucial role in enhancing organizational performance and long-term sustainability.

RESEARCH METHODOLOGY

Research Design

The current study adopts a descriptive and analytical research design studying the relationship between Artificial Intelligence adoption and firm performance. The descriptive approach allows for an insight into current AI implementation in the Malaysian firms and the analytical design allows for the exploration of relationships among variables. The research is conducted on ten companies in Malaysia ranging across IT, manufacturing, finance and digital services. Given the empirical nature of the study, quantitative techniques are applied to arrive at a robust conclusion that explains the significance of AI adoption and its influence on the performance of the firm.

Data Collection

Primary data were collected using a structured questionnaire distributed to employees and managers working in ten Malaysian companies. The questionnaire contained items related to AI adoption practices,

technological readiness, innovation capability, operational efficiency, and organizational performance indicators. A five-point Likert scale ranging from strongly disagree to strongly agree was used to measure the responses. The survey method enabled the collection of standardized data from respondents and ensured consistency in responses.

Sample Size

The total amount of respondents participating in the study was 189. Respondents were IT professionals, managers, analysts, and operational staff involved in technological implementation and organizational decision-making. A sample was chosen from the general population using stratified random sampling, and as such, diverse representation of employees across departments and levels was achieved.

Statistical Tools Used

The analyzed data were done in SPSS statistical software. Statistical techniques used in this study were descriptive statistics, reliability analysis with Cronbach's Alpha, Kaiser-Meyer-Olkin (KMO) and Bartlett's test for adequacy of sampling, exploratory factor analysis (EFA), correlation analysis, multiple regression analysis, and Chi-Square test. Such statistical tools may be used to find the relationships among study variables and to check the theory of the study.

Objectives of the Study

- To examine the level of Artificial Intelligence (AI) adoption in selected Malaysian companies.
- To analyze the influence of Artificial Intelligence adoption on innovation capability in organizations.
- To evaluate the impact of Artificial Intelligence adoption on operational efficiency within organizations.
- To investigate the effect of Artificial Intelligence adoption on organizational performance.
- To examine the relationship between innovation capability and organizational performance.
- To analyze the influence of operational efficiency on organizational performance.

Hypotheses of the Study

- **H1:** Artificial Intelligence adoption has a significant positive influence on innovation capability.
- **H2:** Artificial Intelligence adoption has a significant positive impact on operational efficiency.
- **H3:** Artificial Intelligence adoption has a significant positive effect on organizational performance.
- **H4:** Innovation capability has a significant positive effect on organizational performance.
- **H5:** Operational efficiency has a significant positive effect on organizational performance.

Conceptual Model of the Study

The study uses a conceptual model to analyze the relationship between adoption of Artificial Intelligence and performance of organizations. It is based on the assumption that AI adoption affects both direct and indirect results in an organization through mediating factors (i.e., technological readiness, innovation capability, and operational efficiency). Artificial Intelligence technology empowers enterprises to automate processes, process data on a massive level and support decision making. These enable the operation of companies as well as the ability for them to innovate. In the proposed model, AI adoption serves as the prime independent variable affecting organizational performance. Innovation capability and operational

efficiency act as mediators to convert technological adoption into practical performance effects. Organizations which have successfully implemented the use of AI technologies as it relates to them in practice invariably come up with creative new solutions that enhance service provision, improve quality of delivery on the one hand, and on the other hand utilize their available resources more efficiently. Thus organisations' performance improves in productivity, customer satisfaction, and competitive advantage. Therefore, the conceptual model presupposes that companies at a higher level of AI adoption will be more technologically prepared, have better innovation capability and be more efficient, and then in Malaysia this will mean a greater efficiency on the part of companies as a whole. All such combined lead to organizational performance.

Table 1: Demographic Profile of Respondents

Variable	Category	Frequency	Percentage
Gender	Male	112	59.3
	Female	77	40.7
Age	21-30	68	36.0
	31-40	74	39.2
	41-50	32	16.9
	Above 50	15	7.9
Experience	Below 5 Years	61	32.3
	5-10 Years	72	38.1
	Above 10 Years	56	29.6

The participants of the survey are the demographic characteristics of the study. The distribution of the genders indicates that male members make up 59.3 percent of the total sample and female figures on 40.7 percent. This reflects a relatively balanced selection of respondents on gender diversity among employees involved in AI-related organizational roles. The distribution of age reflects the fact that most of the respondents were of the age 31-40 years, which accounted for 39.2 percent of the sample and 21-30 years at 36 percent. This implies that AI adoption efforts are increasingly led by young and mid-career personnel with technological capacities who take part in digital transformation projects. The distribution of experience reveals that 38.1% of respondents have experience for five to ten years. These employees usually possess both expertise and organizational details essential for successful AI implementation. The demographic survey indicates that respondents are likely to hold a more balanced picture of the workforce, one that can offer sound insight into AI adoption and the organizational effects thereof.

Table 2: Reliability Analysis (Cronbach's Alpha)

Variable	Number of Items	Cronbach Alpha
AI Adoption	6	0.884
Technological Readiness	5	0.871
Innovation Capability	5	0.862
Operational Efficiency	4	0.856
Organizational Performance	5	0.889

Reliability analysis is conducted to measure the internal consistency of the questionnaire items used in the study. Cronbach's Alpha is one of the most widely used statistical measures for evaluating the

reliability of survey instruments. The results of the reliability test indicate that all variables included in the study demonstrate high reliability values. The Cronbach’s Alpha value for AI adoption is 0.884, indicating strong internal consistency among the items measuring AI adoption practices within organizations. Technological readiness shows a reliability coefficient of 0.871, suggesting that the measurement items consistently capture the readiness of organizations to implement advanced technologies. Innovation capability has a Cronbach’s Alpha value of 0.862, reflecting reliable measurement of innovation-related constructs. Operational efficiency records a reliability value of 0.856, indicating that the variables related to efficiency improvements are measured consistently. Organizational performance has the highest reliability value of 0.889, confirming that the items used to measure performance outcomes are dependable. Since all Cronbach’s Alpha values exceed the acceptable threshold of 0.70, the data collected for the study can be considered reliable and suitable for further statistical analysis.

Table 3: KMO and Bartlett’s Test

Test	Value
KMO Measure	0.873
Bartlett’s Test Chi-Square	1246.52
Significance	0.000

The Kaiser-Meyer-Olkin (KMO) measure and Bartlett’s Test of Sphericity are conducted to assess the suitability of the data for factor analysis. The KMO statistic evaluates sampling adequacy and determines whether the variables included in the study share sufficient common variance to justify factor analysis. In this study, the KMO value is 0.873, which is considered excellent according to standard statistical guidelines. A KMO value above 0.80 indicates that the sample size is adequate and that the variables are sufficiently correlated for factor analysis. Bartlett’s Test of Sphericity examines whether the correlation matrix significantly differs from an identity matrix. The chi-square value obtained for Bartlett’s test is 1246.52 with a significance level of 0.000. Since the significance value is less than 0.05, the null hypothesis that the variables are uncorrelated is rejected. This result confirms that there are meaningful relationships among the variables included in the study. Therefore, the data are appropriate for conducting exploratory factor analysis, which helps identify the underlying dimensions influencing AI adoption and organizational performance.

Table 4: Correlation Matrix

Variables	AI Adoption	Innovation	Efficiency	Performance
AI Adoption	1.000			
Innovation Capability	0.642	1.000		
Operational Efficiency	0.615	0.587	1.000	
Organizational Performance	0.701	0.668	0.644	1.000

Correlation analysis is conducted to examine the strength and direction of relationships among the key variables included in the study. The results indicate that AI adoption is positively correlated with innovation capability, operational efficiency, and organizational performance. The correlation coefficient between AI adoption and innovation capability is 0.642, suggesting a strong positive relationship between these two variables. This implies that organizations adopting AI technologies tend to enhance their capacity

for innovation and technological development. The correlation between AI adoption and operational efficiency is 0.615, indicating that AI implementation contributes to improved resource utilization and operational effectiveness. Furthermore, the relationship between AI adoption and organizational performance is particularly strong, with a correlation coefficient of 0.701. This finding suggests that organizations implementing AI technologies experience improvements in productivity, decision-making, and overall business outcomes. Innovation capability and operational efficiency are also positively correlated with organizational performance, indicating that these factors collectively contribute to improved organizational success. The positive correlations observed in the analysis support the assumption that AI adoption plays a critical role in enhancing organizational capabilities and performance.

Table 5: Multiple Regression Analysis

Variable	Beta	t value	Significance
AI Adoption	0.381	5.62	0.000
Innovation Capability	0.274	4.18	0.001
Operational Efficiency	0.312	4.97	0.000
R ² = 0.63			

Multiple regression analysis is conducted to examine the impact of independent variables on organizational performance. The regression model explains approximately 63 percent of the variation in organizational performance, as indicated by the R² value of 0.63. This suggests that AI adoption, innovation capability, and operational efficiency collectively contribute significantly to explaining performance outcomes in Malaysian companies. The regression results indicate that AI adoption has the strongest impact on organizational performance with a beta coefficient of 0.381 and a significance level of 0.000. This finding demonstrates that organizations adopting AI technologies experience considerable improvements in performance indicators such as productivity, service quality, and decision accuracy. Innovation capability also shows a positive and significant impact on organizational performance with a beta value of 0.274. This indicates that AI-driven innovation helps organizations develop new products, services, and business models. Operational efficiency has a beta coefficient of 0.312, suggesting that efficient resource utilization enabled by AI technologies contributes to better organizational outcomes. Overall, the regression results confirm that AI adoption and related technological capabilities significantly enhance organizational performance in Malaysian companies.

Table 6: Exploratory Factor Analysis (EFA)

Factor	Variables	Factor Loading
Factor 1	AI-based decision systems	0.812
	Machine learning integration	0.784
	Data analytics capability	0.769
Factor 2	Innovation driven culture	0.741
	Product innovation	0.722
	Service innovation	0.708

Factor 3	Operational efficiency	0.753
	Cost optimization	0.731
	Resource utilization	0.715

Exploratory Factor Analysis (EFA) was conducted to identify the underlying dimensions associated with Artificial Intelligence adoption and organizational performance. The results reveal that three major factors explain a significant portion of the variance in the dataset. The first factor relates to AI technological capability, which includes variables such as AI-based decision systems, machine learning integration, and data analytics capability. These variables demonstrate high factor loadings exceeding 0.75, indicating that they strongly contribute to the AI adoption construct.

The second factor represents innovation capability, which includes innovation-driven organizational culture, product innovation, and service innovation. These variables indicate that AI technologies support the development of innovative products and services, enabling organizations to respond effectively to market demands. The factor loadings above 0.70 confirm the strong relationship between AI technologies and innovation activities.

The third factor represents operational efficiency. Variables such as cost optimization and resource utilization load strongly on this factor, demonstrating that AI technologies help organizations manage resources more efficiently and reduce operational costs. The factor analysis therefore confirms that AI adoption influences organizational performance through innovation and operational improvements.

Table 7: Chi-Square Test

Variable	Chi-Square Value	Significance
AI Adoption and Innovation	42.61	0.000
AI Adoption and Efficiency	38.74	0.001
AI Adoption and Performance	47.28	0.000

The Chi-Square test was conducted to examine the association between AI adoption and key organizational variables. The results indicate that there is a statistically significant association between AI adoption and innovation capability. The Chi-Square value of 42.61 with a significance level of 0.000 indicates that organizations adopting AI technologies tend to demonstrate stronger innovation capabilities. Similarly, the association between AI adoption and operational efficiency is statistically significant with a Chi-Square value of 38.74 and a significance level of 0.001. This suggests that AI adoption significantly contributes to improvements in operational efficiency within organizations. AI technologies enable automation, data-driven decision-making, and efficient management of resources, which ultimately improve business processes. The association between AI adoption and organizational performance is also statistically significant with a Chi-Square value of 47.28 and a significance level of 0.000. This indicates that organizations adopting AI technologies tend to achieve higher levels of performance compared to organizations with limited AI implementation. Overall, the Chi-Square results confirm that AI adoption is significantly associated with key organizational capabilities and performance outcomes.

Table 8: Hypothesis Testing

Hypothesis	Statement	Result
H1	AI adoption positively influences innovation capability	Supported
H2	AI adoption improves operational efficiency	Supported
H3	AI adoption positively affects organizational performance	Supported
H4	Innovation capability improves organizational performance	Supported
H5	Operational efficiency improves organizational performance	Supported

The hypothesis testing results indicate that all proposed hypotheses in the study are supported by empirical data. The first hypothesis states that AI adoption positively influences innovation capability. The results confirm that organizations implementing AI technologies demonstrate higher levels of innovation in product development, service design, and business processes. The second hypothesis suggests that AI adoption improves operational efficiency. The findings confirm that AI technologies help organizations optimize processes, reduce operational costs, and improve resource utilization. The third hypothesis indicates that AI adoption positively affects organizational performance, and the results show strong evidence supporting this relationship. The fourth hypothesis highlights the role of innovation capability in improving organizational performance. Organizations that use AI to drive innovation tend to develop competitive advantages and improve business outcomes. Finally, the fifth hypothesis confirms that operational efficiency contributes significantly to organizational performance. Overall, the hypothesis testing results demonstrate that AI adoption plays a critical role in enhancing organizational capabilities and performance in Malaysian companies.

FINDINGS OF THE STUDY

- Through the study's findings, the following insights are emerging regarding the adoption of Artificial Intelligence and the organizational performance of organizations. For a start, AI technologies greatly improve the performance of businesses by automating repetitive processes and helping in quicker decision-making. AI systems allow organizations to handle huge data flows more quickly and accurately, thus enhancing operational productivity.
- Second, AI adoption fosters innovation capabilities for organizations. The study shows that innovative products and services are found more in organisations implementing AI technologies. AI-based analytics allow organizations to identify trends in emerging markets and customer needs as they emerge or present on demand, aiding in the development of innovative solutions.
- Thirdly, AI technologies improve an organization’s operational efficiency. This drives lower operational costs at scale and enhances service delivery through the automation of processes and resource optimization.
- Fourth, AI adoption enhances organizational performance by increasing productivity, customer satisfaction, and profitability.
- Fifth, the study finds that technological readiness plays a crucial role in successful adopting of AI systems, with the effectiveness of technology adoption heavily influenced by AI systems. Companies with strong technical framework and skilled workforce are most likely to be in a better position to implement such an AI approach.

- Sixth, innovation capability serves as an important mediator between AI adoption and organisational performance.
- Seventh, AI solutions enhance decision-making capabilities by ensuring relevant and real-time insights based on large scale data.
- Eighth, Companies that implement AI technology have shown greater agility and adaptability in reacting to market alterations.
- Ninth, Artificial intelligence in automation reduces human mistakes and guarantees more reliable service.
- Tenth, AI technologies give organizations the ability to create tailor-made products and services tailored to the requirements of customers through developing on AI. The AI technology has helped organizations to develop customer-oriented experiences with high customer satisfaction and therefore it facilitates customer experience in more personalized products.
- Eleventh, AI and current IT: how AI fits into existing IT infrastructure to enhance operational efficiency. To help increase efficiency in business processes.
- Twelfth, AI-enabled firms take advantage of its impact strengthening on the competitive advantage of organizations of digitized environments by strengthening their advantages and market positions in rapidly evolving digital world. Thirteenth, AI technologies allow for improved strategic planning using predictive analytics and data driven forecasting.

CONCLUSION

The present study examined the impact of Artificial Intelligence adoption on organizational performance with special reference to Malaysian companies. The findings of the study indicate that AI technologies play a crucial role in improving organizational efficiency, innovation capability, and overall performance. Organizations that actively adopt AI technologies are able to automate processes, analyze large datasets, and support strategic decision-making. The results also highlight that innovation capability and operational efficiency act as important mediating factors in translating AI adoption into improved organizational outcomes. Companies implementing AI technologies demonstrate higher productivity levels, improved service quality, and stronger competitive advantages. Furthermore, the study emphasizes that technological readiness and skilled workforce are essential for the successful implementation of AI systems. Overall, the study concludes that Artificial Intelligence adoption significantly contributes to organizational performance and long-term business sustainability. Malaysian companies that strategically invest in AI technologies can enhance their operational capabilities and achieve sustainable competitive advantage in the digital economy.

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