

The Role of Artificial Intelligence in Enhancing Business Management Efficiency: An Analytical and Applied Study

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Abstract

This exploration aims to dissect the part of artificial intelligence in enhancing business operation effectiveness by studying the impact of espousing this technology on functional processes, decision- timber, and cost reduction. The exploration focuses on the significance of artificial intelligence in perfecting functional effectiveness and adding invention within companies. The exploration reckoned on the descriptive logical approach, and data was collected using a questionnaire directed to 34 elderly operation situations in companies from different sectors and several countries in the Middle East. The results showed that artificial intelligence contributes to perfecting functional effectiveness and the quality of decision-timber, which enhances the capability to dissect data intelligently and supports invention and sustainable growth. still, companies face major challenges when espousing artificial intelligence tools, most specially hand resistance to change and the difficulty of integration with heritage systems, in addition to the need to ameliorate hand chops to keep pace with new technology. To overcome these challenges and fete the benefits of artificial intelligence, the exploration recommends developing strategies to integrate technology more effectively, including perfecting companies' technological structure and training workers to use smart systems effectively. It also suggests promoting a culture of invention and change to produce a probative terrain for digital metamorphosis and technological inflexibility. This exploration contributes to the academic understanding of the walls and openings related to espousing artificial intelligence in business operation, and provides precious perceptivity for companies seeking to achieve better performance in light of rapid-fire technological metamorphoses.

Keywords Artificial intelligence, functional effectiveness, business operation, decision timber, invention.

Chapter One: Introduction

1.1- Introduction

In recent times, artificial intelligence(AI) has come one of the most prominent transformative technologies in business operation and other fields, as companies calculate machine literacy and big data analysis to enhance functional effectiveness and make further accurate opinions (Zirar, et al.2023). AI has evolved from being a theoretical conception in computer wisdom to an abercedarian technology used to stimulate invention and achieve competitive advantage in colorful sectors, including technology, finance, manufacturing, and healthcare (Rasheed,et al. 2024).

exploration indicates that AI is spreading in companies to understand challenges and openings across sectors, leading to the emergence of new operations in business analytics and digital invention. The comprehensive book addresses multiple inquiries on ethics, organizational performance, and commercial governance, and explores the part of AI in entrepreneurship and driving change in the ultramodern business terrain (Schiavone et al., 2023)

Artificial intelligence is one of the advanced branches of computer wisdom, characterized by its capability to handle and reuse huge quantities of data with speed and delicacy that exceed mortal capabilities. This technology contributes to perfecting the functional performance of companies by automating processes, prognosticating unborn trends, and assaying client geste , which enhances the effectiveness of operations and provides companies with lesser openings for expansion and invention (Dwivedi et al., 2021). According to former studies, Batarseh and Freeman (2021) indicated that companies that calculate on artificial intelligence achieve a clear competitive advantage in global requests, as they record advanced situations of productivity and a significant reduction in operating costs.

Also, artificial intelligence is characterized by its inflexibility in its operation across multiple fields, ranging from force chain operation and perfecting functional effectiveness, to making strategic opinions and assaying complex data with delicacy and speed (Maslej et al., 2023). Companies that have espoused artificial intelligence have been suitable to snappily reply to request changes and achieve a better balance between quality and cost. In addition, the capability of artificial intelligence to learn from data and develop systems grounded on former results enhances the nonstop enhancement of functional effectiveness, which contributes to achieving sustainable growth for companies that calculate on it (Kunduru, 2023).

Despite the great benefits that artificial intelligence offers, we must bear in mind that its operation isn't without challenges. These include organizational and technological challenges, similar as the difficulty of integrating new systems with heritage systems, and hand resistance to conforming to technological inventions (Del Castillo, 2024). Still, companies that invest in digital structure and develop training programs to ameliorate their workers' chops in dealing with this technology will be better suitable to overcome these challenges and take full

advantage of the eventuality of AI (Schwartz et al., 2020). Thanks to the rapid-fire development of AI, this field has become a decisive factor in the digital metamorphosis of companies. It directly enhances the effectiveness of business operation, by adding product speed, perfecting internal processes, and developing smarter strategies(Perifanis and Kitsios, 2023). At the moment, AI is a necessary tool in the competitive business terrain, contributing to the development of new products and services and furnishing innovative results to the adding challenges in ultramodern requests (Toti, J et al, 2021).

2.1- Research Problem

Despite the multitudinous benefits that artificial intelligence(AI) offers in enhancing business operation effectiveness, multitudinous companies face significant challenges when trying to adopt and apply this technology in their quotidian operations. AI is an important tool for perfecting functional effectiveness, adding the speed and delicacy of decision-timber, and reducing costs. Still, the factual operation of this technology is n't without obstacles that may hinder the success of the process (Wilson and Daugherty, 2023).

One of the most prominent challenges is hand resistance to change. Multitudinous workers are hysterical of AI, especially when it's associated with changing the nature of jobs or replacing the traditional pool with technology (Bessen, 2023). This resistance constantly stems from fear of losing jobs or the need to learn new chops, in addition to a lack of full understanding of the technology (Acemoglu , Johnson, 2023). According to a study conducted by (Dwivedi et al., 2021), resistance to change hinders the operation of AI in multitudinous companies, as the study showed companies that tried to apply AI faced resistance from workers, which led to a detention or failure to apply this technology completely.

In addition, companies face technical challenges related to the integration of AI with being systems. Multitudinous companies, especially those that calculate on traditional operating systems, find it delicate to integrate AI results with their being structured (Rasheed et al., 2024). This type of challenge requires fresh investments to develop structure and update heritage systems, which leads to increased costs in the short term. Batarseh and Freeman 2021, also point out that small and medium- sized enterprises face lower challenges in this terrain due to their limited technical and financial resources.

Despite the great prospects regarding the transformative eventuality of AI, there are still gaps in the full understanding of the impact of this technology on the functional effectiveness of companies (Brynjolfsson et al., 2023). The study by Makarius et al., 2020 indicates that important disquisition focuses on the short- term operations of AI, while long- term logical studies are demanded to understand the full impact of this technology on the functional performance of companies.

predicated on the below, the problem of this disquisition is to try to fill these gaps by assaying the impact of AI on the functional effectiveness of companies. This analysis will examine the factors that impact the successful handover of AI, with a focus on relating possible results to overcome the challenges related to technological integration and resistance to change.

3.1- Research Motivations

The study of artificial intelligence(AI) in the field of business operation is gaining increasing significance, as artificial intelligence is one of the main factors that bring about a radical transformation in operation styles, which improves the functional effectiveness of companies in various sectors (Zuo, 2024). In light of the rapid-fire- fire technological developments, companies have come increasingly dependent on artificial intelligence as an innovative tool for assaying data, perfecting the force chain, and making more accurate and effective strategic opinions. Artificial intelligence supports the capability to adapt to rapid-fire- fire request changes, which enhances invention, and gives companies that adopt it a strong competitive advantage.

The significance of artificial intelligence comes as a strategic tool to enhance functional effectiveness and achieve a competitive advantage in the modern business terrain (Kemp, 2024). These studies addressed multiple confines of artificial intelligence, including data analysis, automation, perfecting decision- timber, and managing organizational change, which provides a strong background that supports the disquisition objects aimed at studying the impact of artificial intelligence in enhancing business operation effectiveness and relating the challenges facing companies when espousing this technology.

4.1- Research Objectives

1. Analyze the impact of artificial intelligence in enhancing business management efficiency.
2. Identify the challenges facing companies when adopting artificial intelligence.
3. Propose solutions to overcome challenges and maximize the benefit of artificial intelligence in the business environment.

Chapter Two: Previous Studies (Literature Review)

1.2- Literature Review

Numerous former studies have addressed the content of artificial intelligence and its impact on business operation, as these studies showed how artificial intelligence can contribute to perfecting functional effectiveness and developing business strategies. Beth's study(2021) concentrated on the profound impact of artificial intelligence on job chops and the significance of changing leadership strategies to acclimatize to the metamorphoses brought about by artificial intelligence in the work terrain. This study vindicated that artificial intelligence is n't just a tool for automating processes, but rather a force of change that affects how tasks are performed and the nature of chops demanded for the success of unborn jobs. These findings support the critical need to develop training and exposure programs to prepare the pool for the anticipated metamorphoses, a point that aligns with our exploration objects in furnishing results to overcome organizational challenges and grease the handover of artificial intelligence in the plant. On the other hand, Hung and Sun's study(2020) showed that artificial intelligence contributes significantly to perfecting the functional effectiveness of companies, which enhances their performance and productivity. The study showed that companies that invest in artificial intelligence technologies achieve advanced returns compared to companies that calculate on traditional styles, which reinforces our thesis that artificial intelligence is a vital motorist of invention and growth. These findings are in line with our exploration ideal of exploring how AI can be used to achieve effective digital metamorphosis.

On the other hand, Kaplan and Haenlein(2019) stressed the complexity and nebulosity that still surrounds the generality of AI, and emphasized the significance of understanding the gradual elaboration of this technology through its different stages of narrow AI, general AI, and superintelligence. This in- depth understanding provides companies and directors with a clearer perspective on how to acclimatize different AI technologies to achieve the vogueish results, which is in line with our exploration ideal of relating the artistic and organizational factors that impact the effective handover of this technology.

A study by Smith and Jones (2023) focuses on the challenges that companies face when adopting AI, particularly in integrating AI into business-oriented operating systems. This study is relevant to my research content because it addresses a critical aspect of the role of AI in business operations, demonstrating that AI can be seamlessly integrated to achieve maximum effectiveness. The research provides insight into the strong resistance to change and specialized difficulties that are central to realizing the potential of AI in business operations.

Patel and Verma(2022) delved into the impact of AI on reducing functional costs, an important factor in perfecting the effectiveness of business processes. They delved how AI helps companies streamline processes, reduce crime, and significantly reduce costs. This focus on cost- effectiveness in AI is linked to enhancing the effectiveness of business process practices.

Eventually, Davenport and Ronanki(2018) examined the part of AI in perfecting decision-making by furnishing accurate perceptivity deduced from the analysis of large quantities of data, leading to better operations and reduced functional costs. The study also directed to organizational challenges similar to resistance to change, pressing the need for integrated strategies to successfully guide technological metamorphosis, which is one of the main objects of our exploration.

based on these studies, we find that AI plays an additional part in perfecting functional effectiveness and developing business strategies through data analysis and smart decision timber. Still, challenges similar as resistance to change, performance costs, and the complexity of integration with being systems stand out as major obstacles. Our study aims to bridge this gap by furnishing an intertwined frame that helps companies overcome nonsupervisory and specialized hurdles and completely work the eventuality that AI offers.

2.2- Linking Literature Review to the Research Problem

From previous studies, it appears that AI plays an important role in developing business strategies through data analysis and accurate decision making. However, the problem that our study seeks to address are the challenges that companies face when trying to use AI. These challenges include resistance to change by some employees, the complexity of integrating AI with legacy systems, and high implementation costs. Previous studies, such as Beth (2021) and Davenport and Ronanki (2018), have refocused on these obstacles, emphasizing the need for integrated strategies to address these challenges. Therefore, the current exploration concerns the problem of guiding companies on how to overcome these challenges to achieve full digital transformation and get the most out of AI.

3.3- Research Gap

Although there are a number of studies that have examined the impact of AI on improving operational efficiency and strategic decision-making, there is a large gap related to the lack of integrated strategies to overcome the organizational and technological challenges associated with adopting AI. Many studies have focused largely on technical aspects, such as resistance to change among some employees or integration with existing systems in companies, but they have not provided a comprehensive framework that helps companies address these challenges in an integrated manner. Accordingly, this study aims to bridge this gap by providing an integrated framework that includes cultural and organizational factors, in addition to technical aspects, to enable companies to successfully adopt AI and achieve optimal use of AI in corporate business.

Chapter Three: Research Methodology

The current research relied on the descriptive analytical approach, as this approach is based on studying the phenomenon as it exists in reality and expressing it as an accurate qualitative description and clarifying its characteristics by giving it a numerical description by collecting data and converting it into numbers and tables that show the amount of this phenomenon, its size, or the degree of its association with other phenomena and variables (Darwish, 2018, 118).

1.3- Research Population

The research targets a diverse community of companies and organizations that have adopted AI in their operational processes, with the aim of enhancing functional effectiveness and achieving better results in various aspects of business. The exploration community includes managing directors and managers in advanced operations positions who play a vital role in shaping opinions related to the adoption of cutting-edge technologies similar to AI. This community was selected due to the importance of these leaders' role in guiding innovation strategies within their organizations, and linking the factors that influence the abandonment and use of AI.

The exploration community covers multiple sectors, including technology, finance, manufacturing, and healthcare, with the aim of bringing a diverse and comprehensive understanding of the impact of AI across different fields. This diversity represents an opportunity to study the common and unique challenges that companies in these sectors face when trying to integrate AI into their daily operations. The exploration also focuses on companies of different sizes, from small and medium-sized companies to large enterprises, enhancing understanding of the impact of AI in different business situations.

2.3- Research Sample

The sample was selected randomly. The following table shows the distribution of the sample according to the research variables, according to the following table:

Table (1) Distribution of the sample according to research variables

variable		N	%	Variable		N	%
Company Location (City, Country)	Iraq	4	11.8	Industry Sector	E-commerce	6	17.6
	Jordan	5	14.7		Finance	6	17.6
	KSA	5	14.7		Healthcare	8	23.6
	Morocco	1	2.9		Manufacturing	3	8.8
	Oman	2	5.9		Technology	11	32.4

	Turkey	10	29.4	Your Role in the Company	total	34	100.0
	UAE	6	17.6		CEO	12	35.3
	Yemen	1	2.9		CFO	6	17.6
	total	34	100.0		COO	1	2.9
Company Size (Number of (Employees	Less than 50 employees	19	55.9		CTO	1	2.9
	50-249 employees	15	44.1		IT Manager	5	14.7
	total	34	100.0		Operations Manager	8	23.5
					Support Manager	1	2.9
					total	34	100.0

The previous table shows that, as for the geographical location, most of the answers came from (Turkey) with a percentage of (29.4%), followed by (UAE) with a percentage of (17.6%), then (Jordan) and (KSA) with a percentage of (14.7%) each, then (Iraq) with a percentage of (11.8%), and in the last place were (Morocco) and (Yemen) with a percentage of (2.9%) each.

As for the company size variable, we find that the most answers were (Less than 50 employees) with a percentage of (55.9%), then (50-249 employees) with a percentage of (44.1%).

As for the industrial sector variable, we find that the largest percentage was for (Technology) with a percentage of (32.4%), followed by (Healthcare) with a percentage of (23.6%), then (E-commerce) and (Finance) with a percentage of (17.6%) each, and in the last place was (Manufacturing) with a percentage of (8.8%).

Regarding the role of the respondents, we find that the sample was distributed as follows: in first place (CEO) with a percentage of (35.3%), followed by (Operations Manager) with a percentage of (23.5%), then (CFO) with a percentage of (17.6%), then (IT Manager) with a percentage of (14.7%), then each of (COO), (CTO) and (Support Manager) with a percentage of (2.9%) for each of them.

3.3- Data Collection Tools

The researcher relied on the questionnaire as a tool for the current research, and prepared the questionnaire by referring to theoretical literature and a number of previous studies related to

the research content. The questionnaire in its original form contained (18) paragraphs. The validity of the questionnaire for use was verified by presenting it to arbitrators with experience and specialization in the subject of the questionnaire, in order to express their opinion clearly on the paragraphs of the questionnaire and the extent of their compatibility with the subject, the soundness of its wording, and the extent to which the questionnaire is far from what it was designed to measure, and to delete, modify or add what they see fit. Modifications were also made to the verbal expression of some paragraphs of the questionnaire to make it ready for use in its final form.

Chapter Four: Research Results

The research questions were answered through frequencies and percentages as follows:

1.4- How long has your company been using AI technologies?

Table (2) Duration of use of artificial intelligence

Answers	Less than a year	years 1-3	More than 3 years	We have not adopted AI yet	
N	26	6	1	1	34
%	76.5	17.6	2.9	2.9	100%
Ranks	1	2	3	3	

From the previous table, we find that (76.5%) of companies have used artificial intelligence technologies for less than a year, while (17.6%) have used it for (1-3 years), (2.9%) have used it for more than 3 years, and (We have not adopted AI yet).

The results show that the majority of companies have recently started adopting AI, indicating a growing interest in this technology, but also highlighting the need for continued support and guidance for companies to increase their understanding and effective integration of these technologies to maximize their benefits in enhancing business efficiency. Companies that have not yet adopted AI may need to study and learn from the experiences of other companies to start adopting this technology to ensure they do not fall behind in the market (Westerman, 2023).

2.4- In which areas does your company use AI?

Table (3) Areas of use of artificial intelligence

Answers	Data analysis	Digital marketing	Financial forecasting	Customer service	Supply chain management	Strategic decision-making
N	20	22	19	11	17	19
%	58.8	64.7	55.9	32.4	50.0	55.9
Ranks	2	1	3	5	4	3

The previous table shows that the largest percentage of the company's areas of use of artificial intelligence was (Digital marketing) with a percentage of (64.7%), followed by (Data analysis) with a percentage of (58.8%), then each of (Strategic decision-making) and (Financial forecasting) with a percentage of (55.9%), then (Supply chain management) with a percentage of (50%), and in last place (Customer service) with a percentage of (32.4%).

The findings indicate that AI has become a vital tool for enhancing business efficiency in companies, with a clear focus on value-added areas such as digital marketing and data analytics. However, companies face challenges in integrating these technologies with existing systems and overcoming employee resistance to change. Therefore, it is imperative for

companies to develop effective strategies for adopting AI, including improving technological infrastructure and enhancing employee skills, to ensure that the great potential of AI is fully realized (Ransbotham et al., 2020).

3.4- How would you describe the level of technological maturity in your company regarding AI?

Table (4) Technological maturity level

Answers	Basic	Intermediate	
N	12	22	34
%	35.3	64.7	100
Ranks	2	1	

It is clear from the previous table that the level of technological maturity was the largest percentage (Intermediate) with a percentage of (64.7%), followed by (Basic) with a percentage of (35.3%).

The research shows that AI plays a vital role in enhancing business management efficiency by improving operational processes, decision-making, and reducing costs. However, companies face challenges related to resistance to change and difficulty integrating with existing systems (Chui et al., 2022). The findings reveal that most companies are still in the intermediate stages of technological maturity in terms of using AI, which calls for developing support and development strategies to raise the level of technological integration and enable companies to make the most of AI. This requires enhancing training and building technical capabilities to keep pace with digital transformations and continuous innovation in the changing business environment (El Naqa , Murphy, 2022).

4.4- What are the main reasons your company adopted AI technologies?

Table (5) Main reasons for adopting artificial intelligence

Answers	Enhancing decision-making quality	Reducing costs	Boosting innovation	Improving customer experience	Improving operational efficiency
N	18	19	12	10	18
%	52.9	55.9	35.3	29.4	52.9
Ranks	2	1	3	4	2

The previous table shows that the most common reasons for adopting artificial intelligence were ((Reducing costs) at a percentage of (55.9%), followed by (Enhancing decision-making quality) and (Improving operational efficiency) at a percentage of (52.9%), then (Improving customer experience) at a percentage of (35.3%), and in last place (Improving customer experience) at a percentage of (29.4%).

Based on this table, it is clear that companies focus primarily on the direct economic and operational benefits when adopting AI, while innovation and customer experience are considered less important in comparison.

5.4- What are the biggest challenges your company faced when adopting AI?

Table (6) Challenges of adopting artificial intelligence

Answers	Employee resistance to change	High costs	Integration with existing systems	Regulatory compliance	Lack of skills and expertise
N	21	16	14	3	22
%	61.8	47.1	41.2	8.8	64.7
Ranks	2	3	4	5	1

The previous table shows that the most significant challenges to adopting artificial intelligence were (Lack of skills (and expertise) at a percentage of (64.7%), followed by (Employee resistance to change) at a percentage of (61.8%), then (High costs) at a percentage of (47.1%), then (Integration with existing systems) at a percentage of (41.2%), and in last place (Regulatory compliance) at a percentage of (8.8%).

Based on this table, lack of skills and experience, and resistance to change from employees are the most influential and challenging factors when adopting AI in companies, while regulatory compliance is considered the least influential challenge.

6.4- How has AI adoption impacted your company's operational efficiency?

Table (7) The impact of artificial intelligence on operational efficiency

Answers	Impact is difficult to measure	Moderate impact	Significant impact	Slight impact	
N	1	17	3	13	34
%	2.9	50.0	8.8	38.2	100
Ranks	4	1	3	2	

The previous table shows that the impact of artificial intelligence on operational efficiency was (Moderate impact) with a percentage of (50%), followed by (Slight impact) with a percentage of (38.2%), then (Significant impact) with a percentage of (8.8%), and in last place (Impact is difficult to measure) with a percentage of (2.9%).

It can be said that artificial intelligence has begun to show a positive impact on the operational efficiency of companies, but this impact varies from one company to another, and depends on several factors such as the nature of the work, the quality of the application of artificial intelligence, and the investment in it (Bughin et al., 2021).

Answers	No noticeable impact	Yes, moderately	Yes, significantly	
N	1	14	19	34
%	2.9	41.2	55.9	100
Ranks	3	2	1	

7.4- Has AI improved the quality of decision-making in your company?

Table (8) Improving the quality of decision-making

The previous table shows that improving the quality of decision-making was ((Yes, significantly) with a percentage of (55.9%), followed by (Yes, moderately) with a percentage of (41.2%), and in last place (No noticeable impact) with a percentage of (2.9%).

Based on this table, it means that most companies that used AI noticed a significant improvement in the quality of their decisions, whether this improvement was large or medium.

8.4- How has AI affected your company's operational costs?

Table (9) The impact of artificial intelligence on operating costs

Answers	No significant effect on costs	Moderately reduced costs	Significantly reduced costs	
N	2	19	13	34
%	5.9	55.9	38.2	100
Ranks	3	1	2	

It is clear from the previous table that the impact of artificial intelligence on operating costs ranked first with a percentage of (55.9%), followed by (Significantly reduced costs) with a percentage of (38.2%), and in last place (No significant effect on costs) with a percentage of (5.9%).

Based on this table, this means that most companies that have used AI have seen a decrease in their operating costs, whether this decrease is moderate or large.

9.4- Has AI contributed to enhancing innovation in your company?

Table (10) The impact of artificial intelligence in enhancing innovation

Answers	Yes, moderately	Yes, significantly	
N	16	18	34
%	47.1	52.9	100
Ranks	2	1	

The previous table shows that the impact of artificial intelligence in enhancing innovation ranked first (Yes, significantly) with a percentage of (52.9%) and in last place (Yes, moderately) with a percentage of (47.1%).

This means that most companies that have used AI have noticed a significant improvement in their level of innovation, whether this improvement is large or medium.

10.4- Has AI helped improve customer experience in your company?

Table (11) The impact of artificial intelligence in improving customer experience

Answers	No noticeable impact	Yes, moderately	Yes, significantly	
N	2	10	22	34
%	5.9	29.4	64.7	100
Ranks	3	2	1	

The previous table shows that the impact of artificial intelligence in improving customer experience ranked first with (Yes, significantly) at a percentage of (64.7%), then (Yes, moderately) at a percentage of (29.4%), and in last place (No noticeable impact) at a percentage of (5.9%).

This means that most companies that used AI saw a significant improvement in their level of innovation, whether this improvement was large or medium.

11.4- How would you evaluate your company's performance after adopting AI?

Table (12) Performance evaluation after adopting artificial intelligence

Answers	No noticeable change	Moderately improved	Significantly improved	
N	3	18	13	34
%	8.8	52.9	38.2	100
Ranks	3	1	2	

The previous table shows that the performance evaluation after adopting artificial intelligence came in first place (Moderately improved) with a percentage of (52.9%), then (Significantly improved) with a percentage of (38.2%), and in last place (No noticeable change) with a percentage of (8.8%).

From this, it can be concluded that most companies have improved their performance after using AI, whether this improvement was medium or large.

12.4- What are your company's future plans regarding the expansion of AI usage?

Table (13) The company's future plans

Answers	Maintain current level of usage	Moderately expand usage	Significantly expand usage	
N	2	12	20	34
%	5.9	35.3	58.8	100
Ranks	3	2	1	

The previous table shows that the company's future plans were ranked first (Significantly expand usage) with a percentage of (58.8%), then (Moderately expand usage) with a percentage of (35.3%), and in last place (Maintain current level of usage) with a percentage of (5.9%).

This means that most companies see AI as having an important role in the future of their business, and are planning to benefit from it more.

13.4- Do you believe AI will play a greater role in the future of business management in your company?

Table (14) The role of artificial intelligence in the future

Answers	No, not significantly	Yes, moderately	Yes, significantly	
N	2	17	15	34
%	5.9	50.0	44.1	100
Ranks	3	1	2	

The previous table shows that the role of artificial intelligence in the future is (Yes, moderately) at a percentage of (50%), which is the opinion of half of the sample, then (Yes, significantly) at a percentage of (44.1%), and in last place (No, not significantly) at a percentage of (5.9%).

This means that companies see AI as an essential part of business management in the future, and that they expect this field to witness significant developments thanks to AI.

14.4- Which new areas does your company plan to explore using AI?

Table (15) New areas your company plans to explore using artificial intelligence

Answers	Boosting analytics and forecasting	Developing new products	Enhancing customer experience	No plans to explore new areas	Improving internal operations
N	19	18	19	5	15
%	55.9	52.9	55.9	14.7	44.1
Ranks	1	2	1	4	3

The previous table shows that the most new areas that your company plans to explore using artificial intelligence are (Boosting analytics and forecasting) and (Enhancing customer experience) with a percentage of (55.9%), then (Developing new products) with a percentage of (44.152.9%), then (Improving internal operations) with a percentage of (44.1%), and in last place (No plans to explore new areas) with a percentage of (14.7%).

Therefore, companies see AI as a powerful tool to improve their operations, develop their products, and enhance their relationship with their customers.

In addition, companies are optimistic about the potential of AI and believe that this technology will play a crucial role in the future of business(Accenture, 2023).

Chapter Five: Conclusion and Recommendations

1.5- Summary of Findings

The research showed several results that illustrate the importance and benefit of artificial intelligence, as well as the challenges facing companies when adopting it.

Improving functional effectiveness The results revealed that 50% of companies witnessed a significant improvement in functional effectiveness after adopting artificial intelligence technologies, especially in the fields of data analysis and digital marketing. These technologies contribute to reducing process time and enhancing its accuracy, which leads to improving productivity and reducing functional costs.

Quality of decision-making Artificial intelligence played a major role in improving the quality of decision-making within companies, as 55.9% of respondents reported that artificial intelligence had significantly improved their ability to express accurate strategic opinions. This is due to the advanced capabilities provided by artificial intelligence in processing huge amounts of data and providing evidence-based strategic insight.

Challenges of abandonment Companies faced multiple challenges when trying to integrate artificial intelligence into their operations. These challenges were significant resistance to change (61.8) and a lack of the skills and experience needed to deal with this technology (64.7).

In addition, some companies faced difficulty in integrating artificial intelligence with legacy operating systems, which led to advanced costs for specialized upgrades.

Impact of integration with legacy operating systems Companies with legacy systems face difficulty integrating AI results, requiring significant investment in simplifying the digital architecture and developing AI-compatible systems. This may increase costs in the short term, but it is essential to ensure that this technology is fully deployed. Internal resistance to change The results showed that internal resistance to adopting AI technologies was a major challenge, with many workers expressing resentment that increased reliance on this technology would lead to job losses or a change in the nature of their work. This resistance has been shown to delay or hinder the successful abandonment of AI in some companies.

2.5- Conclusions

Artificial intelligence is the main driver of technological development and change at the present time, and its role in the business world is emphasized through a set of processes that contribute to enhancing the effectiveness of executive and functional processes. Research shows the importance of artificial intelligence in increasing efficiency and achieving tangible results.

AI contributes to automating routine and repetitive tasks, which leads to reducing deadly crimes and accelerating workflow. This in turn contributes to mastering the accuracy of

appointments and data analysis, which enhances the ability to make strategic opinions based on accurate and comprehensive awareness.

AI presents opportunities to streamline power chains, by predicting demand and managing power more effectively. These developments are essential for companies seeking to meet user requirements more efficiently and avoid excessive costs.

This awareness helps companies adapt their strategies and develop products and services that better match the needs of demand.

However, the journey to adopting artificial intelligence is not without challenges. Companies face difficulties in providing the necessary infrastructure to implement smart results, in addition to the need to train the team to use the new technology effectively.

There is growing concern about the ethical and legal counter-accusations of the use of artificial intelligence. Among these companies are AI goods based on labor demand, such as the implicit loss of jobs due to robotics, as well as issues of liability for opinions provided by intelligent systems, which bear the creation of clear legal and ethical fabrics.

AI is easily a central element in the development and operation of businesses in the very modern era, with great potential for mastering effectiveness and invention. However, realizing these benefits requires a thoughtful approach to the challenges associated with implementation and development, focusing on the balance between the benefits of technology and the protection of human rights and interests.

3.5- Recommendations

Based on the analysis conducted through this research, a number of recommendations can be made that will help companies make the most of AI technologies and overcome the challenges they face. Below is a breakdown of each recommendation

Investing in skills development To ensure effective adoption of AI technologies, companies should invest significantly in developing the skills of their workers. This includes providing AI technology training programs that focus on specialized skills such as machine learning and big data, as well as logical skills such as data analysis and advanced analysis-based decision-making. These programs should be designed to be practical and applicable to different situations of expertise, helping to reduce workers' fears about new technology and facilitate the adaptation process.

Promoting a culture of invention and change Companies need to create a work environment that encourages invention and supports positive change. This can be achieved by creating an organization that encourages experimentation and invention, such as giving workers time and money to explore new AI processes. In addition, workers should be engaged in the digital transformation process through effective communication about the benefits of AI and how it can improve their effectiveness and performance in complex tasks. This will help reduce resistance to change and promote acceptance of new technology.

Simplifying the technological architecture that adopts artificial intelligence requires upgrading the current technological architecture to meet the requirements of this technology. Companies must allocate reasonable budgets for the development of technological systems, including mastering computing and storage capabilities, and upgrading networks to facilitate faster and more secure data transfer. It is also necessary to ensure that smart results integrate seamlessly and effectively with existing systems to ensure maximum benefit from the new technology.

Encouraging the use of artificial intelligence in the long term Companies should view artificial intelligence not only as a tool for achieving short-term benefits, but as part of their long-term strategy. Strategic plans should be developed that include the use of artificial intelligence in multiple areas such as data analysis, fortune-telling, and the development of new products and services. This requires identifying unborn ambitions and exploring how artificial intelligence can contribute to achieving them, which enhances the company's competitiveness in the long term.

Conducting follow-up studies Since artificial intelligence is a rapidly evolving field, more studies are needed to study its long-term impact. Companies that have started to borrow artificial intelligence should conduct periodic logical studies to measure the impact of this technology on their overall performance. These studies can include periodic assessments of how well the desired goals are being achieved, analysis of return on investment, and identification of areas that may need further progress. This will help companies adapt to technological changes and ensure that AI continues to benefit. Ultimately, this exploration enhances academic and applied understanding of the impact of AI on business operations, and points to the importance of an interconnected approach that includes skill development, structural enhancement, and effective change management. By implementing these recommendations, companies can realize significant benefits from AI and avoid inherent challenges.

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