



(REVIEW ARTICLE)



The impact of AI technology on organisational efficiency: Analysing the pros and cons of digitalisation in the context of UAE

Essa Ahmed Almutawa ¹ and Tasfoura Dilawer ^{2,*}

¹ *Master in Business Administration, University of Central Lancashire, Dubai, UAE.*

² *Iraq University, Master in Business Administration, Karachi, Sindh, Pakistan.*

World Journal of Advanced Research and Reviews, 2023, 20(01), 911–920

Publication history: Received on 03 September 2023; revised on 18 October 2023; accepted on 20 October 2023

Article DOI: <https://doi.org/10.30574/wjarr.2023.20.1.2088>

Abstract

This research aimed to evaluate the impact of AI technology on organisational efficiency while discussing the pros and cons of digitalisation. The data has been collected from different organisations and sectors of the UAE through semi-structured interviews. The sample size of the research was 12 IT managers while the data assessment was based on a thematic analysis technique. The research outcomes disclosed that AI is beneficial for all sectors and positively contributes to organisational efficiency, but it does not come with challenges. To obtain maximum benefit from AI applications, it is pivotal for companies to address the associated challenges. AI's inefficiency in culturally diverse interactions is a relatively new finding that has been gained from the research outcomes. Further, unleashing the measures taken by the UAE government to handle the issues associated with AI has been less discussed in the existing literature.

Keywords: AI technology; Digitalisation; Organisational efficiency; Automation; Decision-making and analytics.

1. Introduction

AI is one of the key priorities for the UAE government, the country is known for its activities and policies to facilitate international businesses to attract Foreign Direct Investments (FDI). Now the UAE to facilitate its diversity of businesses and its governmental performance is seeking to implement AI technologies successfully in different industries and government organisations. The UAE's purpose behind using the AI strategy is to achieve the objectives of UAE Centennial 2071 which would help boost the performance of the government at all levels. The UAE's AI strategy also includes the incorporation of digitalisation that can speed up the process of providing efficient solutions and overcoming challenges. These AI and digital integrations will not only make the country leading in the field of AI investments in numerous sectors, but it will also include the creation of new markets with high economic value (UAE, 2023). The country has just launched a guide on the adoption of artificial intelligence (AI). The purpose of introducing this guide is to support government organisations to leverage AI benefits from education to healthcare. This guide highlights how using AI with digitalisation can help the government in providing excellent services and streamlining for the public. The benefits of AI and digitalisation will be to improve services for customers by automating the response to their queries, and improving efficiency and time (Kamel, 2023). Spending on digital technologies such as AI, IT and the Internet of Things (IoTs), in the UAE over the upcoming three years is expected to reach \$20 billion. AI and digitalisation have contributed towards enhancing the productivity of the country which will account for 25% to 30% of the GDP. The UAE in the next 10 years is expected to double the contribution of its digital economy to its GDP from 9.7% to 19.4% (Nair, 2023).

* Corresponding author: Tasfoura Dilawer

When the UAE government is keen to invest in AI technologies and encourage digitalisation with AI features, it is necessary to explore the impact of AI and digitalisation on improving organisational efficiency within the UAE. Further, it is realised that in recent years digitalisation and new technologies have brought important changes for individuals, society, and organisations. Digitalisation delivers organisations with large opportunities to find new sources to generate value. However, it is realised that the mechanism that can help companies take advantage of these digital technologies for increasing organisational excellence and performance has not been defined clearly. Hence, this research is needed to overcome this gap by evaluating the impact of AI technology on organisational efficiency while analysing the pros and cons of digitalisation within the context of the UAE.

2. Literature Review

The theoretical underpinning of the topic is necessary to consider to better understand the topic and its relevant aspects. For example, sociological theory helps employees make their social world easier within the organisations and creates richer insights into the organisations (Deegan 2019). This means social theory supports this phenomenon that good relationships with people, effective communication, and collaborative working are necessary for organisational success. This theory explains that organisations can use digital and AI technologies to interact with people within and outside the organisation to strengthen communication (Dillon, 2020) which leads companies towards operational efficiency and improved services to their customers. On the contrary, Scott (2012) discussed that sociological theory is useful in understanding personalities, minds, and consciousness as social products. The theory also says that understanding human social life should be a necessary and integral feature for humans. This means that the theory encourages the application of AI technologies and digitalisation as a way to enhance the understanding of human aspects, necessary to promote organisational growth. Sociological theory can support the argument that AI technologies and digitalisation by creating a supportive culture can improve organisational efficiency. Social theory is used in this paper to understand the social aspect of the research, while another theory which is relevant to the topic is innovation diffusion theory.

According to Arundel, Bloch, and Ferguson (2019), the purpose of the theory known as the "diffusion of innovation" is to explain the process by which novel ideas and innovations spread from one person to the next. According to this belief, a new idea or innovation will spread throughout society as a result of its social influence. Individual users of a new product or technology will play an important role in the distribution of the creation. According to the concept of the diffusion of innovations, the rate at which a new product or technology is accepted is affected not only by the characteristics of the invention itself but also by the communication channels that are used to spread knowledge about the innovation and the social system in which the innovation is being diffused. It has been suggested that the diffusion hypothesis can explain a range of occurrences, such as the adoption of novel entertainment forms, the adoption of revolutionary medical procedures and technologies, and the spread of various ideologies. The diffusion of innovation theory is a well-known communication theory that investigates how, why, and how rapidly new ideas, goods, and practices spread across cultural boundaries. According to Arundel, Bloch, and Ferguson (2019), the concept may be utilised to explain why certain types of content are disseminated more broadly than others in the context of digital information.

2.1. Empirical Research

AI contains multiple benefits for companies and one of them is automation of routine tasks. AI-driven automation has revolutionised the business processes in multiple sectors by handling most repetitive tasks and freeing up employees to focus on tasks that need more attention. AI applications make industries more efficient by tailoring the services as per the customers' needs while improving the safety and security of organisations. However, the application of AI systems is not limited to the benefits, it also contains some challenges including the ethical responsibilities and challenges related to employment and automation (Villar and Khan, 2021). Similarly, Vieira and Sehgal (2017) highlighted the automation of regular tasks as a benefit of AI applications by using chatbots to answer customer queries. Further, Qadiri, Shabir and Qadri (2020) emphasised the use of chatbots, threat detection, and credit scores, as AI tools that enhance operational efficiency by automating operations that result in transforming the workforce. Similarly, Rezaei et al. (2023) found that AI algorithms play an important role in diagnosing disease more accurately. It contains an ability to analyse medical images, and patient symptoms, and propose solutions, but the outcomes concluded that human interventions are also necessary to make unbiased and fair decisions and ensure accuracy. The findings of Kumar, Singla and Ijaz (2022) are in alignment with (Rezaei et al., 2023).

Saif and Yeop (2020), specifically highlighted public organisations and stated that organisations within the public sector make use of information management to store and organise data that is critical to the functioning of their operations. Using this data, it is possible to generate reports, analyse market trends, and evaluate performance. The implementation of decision-making that is driven by data, which is necessary for the efficient running of governmental sectors, is also

dependent on information management. Further, De Sousa et al. (2019) found that information management is vital for the secure processing of data, which is essential for protecting the privacy of citizens. This is why information management is of critical importance for organisations and the technologies that keep delivering organisations with updated information. Information management holds an equal amount of significance in many government sectors. This is done to ensure that information management can provide the government with assistance in accumulating, storing, analysing, and disseminating data. As a direct consequence of this, decisions are reached, services are enhanced, and the effectiveness of the government is boosted (Khan, Shael, and Majdalawieh, 2019). In addition to this, it helps in the construction of effective communication channels and the dissemination of information that is both accurate and up-to-date to the general population. With the assistance of information management, the government can identify problems and come up with remedies. The government gains the ability to notice and keep track of trends, as well as monitor development and evaluate performance thanks to effective management of information.

Bui and Nguyen (2023) supported the use of digitalisation for enhancing organisational performance. The study found that digitalisation incorporates distinctive new technologies including artificial intelligence (AI) to all different areas of the business and demands companies to modify their old business models. The study found that AI technologies incorporated in digitalisation are relatively new for companies and hold the ability to influence societies and industries. These technologies contain cognitive techniques with the ability to imitate human behaviours and result in advanced analytical models that do just not assist companies in enhancing their operational efficiency, service quality, and customer engagement leading organisations towards improved sales. Continuing with the positives of digitalisation including the features of AI, Bonnet and Westerman (2020) found that AI contains some capabilities for building simulation models and a propensity to personalise the purchasing process using recommendation systems that are based on machine learning systems and virtual aid. Digitalisation is a key to enhancing customer experience, due to the advancement in technologies and digitalisation, the ways organisations communicate with their customers and attract them have changed. Digitalisation plays an important role in information management leading firms towards operational excellence. The management of information is essential in governmental sectors because it encourages openness, contributes to the efficient use of resources, and makes it easier to make decisions based on accurate information.

Additionally, it enhances operational effectiveness while simultaneously cutting costs and enhancing the quality of services provided to citizens. Adversely, Ey (2018) highlighted the challenges associated with AI applications and one of them is the huge cost associated with the application of AI programs or systems. The outcome stated that financial feasibility is one of the major parts associated with AI applications. On the other hand, Roberts (2017) emphasised infrastructural developments as a key challenge associated with AI applications. Wirtz, Weyerer and Geyer (2019) highlighted that lack of specialisation, educational programs and human expertise are some of the key factors that pose challenges to AI applications. Significant training and development (T&D) is needed to implement AI programs successfully. Further, data privacy and safety are some of the key challenges associated with AI applications.

Saif and Yeop (2020), specifically highlighted public organisations and stated that organisations within the public sector make use of information management to store and organise data that is critical to the functioning of their operations. Using this data, it is possible to generate reports, analyse trends, and evaluate performance. The implementation of decision-making that is driven by data, which is necessary for the efficient running of governmental sectors, is also dependent on information management. Further, De Sousa et al. (2019) Information management is vital for the secure processing of data, which is essential for protecting the privacy of citizens. This is why information management is of critical importance for organisations and the technologies that keep delivering organisations with updated information. Information management holds an equal amount of significance in many government sectors. This is done to ensure that information management can provide the government with assistance in accumulating, storing, analysing, and disseminating data. As a direct consequence of this, decisions are reached, services are enhanced, and the effectiveness of the government is boosted (Khan, Shael, and Majdalawieh, 2019). In addition to this, it helps in the construction of effective communication channels and the dissemination of information that is both accurate and up-to-date to the general population. With the assistance of information management, the government can identify problems and come up with remedies. The government gains the ability to notice and keep track of trends, as well as monitor development and evaluate performance thanks to effective management of information.

However, some of the studies discussed the limitations of AI applications such as Prentice, Dominique Lopes and Wang (2020) found that AI lacks emotional intelligence (EI), EI is personal intelligence while AI is machine intelligence and the combination of these is necessary for enhancing the organisational performance or efficiency. Further, Riedl (2019) highlighted that AI systems are designed in a culturally specific manner hence, efficient in culturally specific interactions. This means it may not work for people from different cultures and they might face difficulties in getting their answers.

3. Methodology

The purpose of this research is to evaluate the impact of AI technology on organisational efficiency within the context of the UAE. For the attainment of this purpose, the researcher used an interpretivism research philosophy that encourages the evaluation of different experiences and perspectives. Using an interpretivism research philosophy, the qualitative research method was used. The qualitative method allowed the researcher to reflect on the detailed responses and present a comprehensive view of the respondents. The researchers included the perspectives of IT managers working in the different government organisations of the UAE such as schools, universities, manufacturing organisations, banks and healthcare organisations. For data collection, a total of 12 participants were selected to remain *focused*; the reason behind selecting IT managers was their relevancy to the topic and their knowledge about the subject. IT managers were the target audience that could better answer the interview questions and could help reach the research aim.

The data was collected using semi-structured interviews and an open-ended technique was used. During the interview process, some probing questions were also asked of respondents to ensure their availability of additional information and to maintain their focus on the topic. For analysing the data, the researcher used a content analysis technique. The words appearing mostly in the content allowed the researchers to understand the emphasis of the respondents on different factors.

4. Data Analysis and Discussion

4.1. Theme 1: Automation and workforce transformation

It has been found that AI contributes significantly to automation and plays an immense role in improving organisational performance by transforming the workforce. Respondent 1 said,

“AI-driven automation revolutionised the job roles and business processes. In banks, most repetitive tasks include invoice processing, some aspects of customer service and data entry that are now handled by AI bots resulting in cost reduction and operational efficiency.”

When the question was asked the managers in the healthcare sector, the answer was different, as one respondent said,

“AI contains a capability to assist physicians in diagnosing the cause of disease by analysing the patients’ data.”

On the contrary, a respondent from a school argued,

“Transformation is not without challenges, though AI contains several benefits, but automation contains a risk of job displacement. Hence, organisations should carefully manage the transitions and should train and develop their employees for upskilling. Further, there is an immense need for data security.”

Two respondents from the manufacturing sector commented that AI handles assembly lines and reduces the risk of human errors. A respondent from the retail sector commented,

“AI automation is necessary for enhancing customer experience by providing 24/7 customer support and customising the recommendations that are based on customer preferences. However, companies need to adopt responsible strategies to ensure the effectiveness of AI automation and smooth transition.”

From the above comments, it is visible that in businesses throughout the United Arab Emirates (UAE), automation powered by artificial intelligence is having a significant impact on both traditional business processes and job duties (Villar and Khan, 2021). The streamlining of labour that is based on routine and rules is one of the consequences that is most readily apparent. In industries like as banking and finance, AI-powered bots are taking over routine tasks such as data entry, the processing of invoices, and even some aspects of customer service (Vieira and Sehgal, 2017); these bots also do other administrative tasks. This has resulted in increased operational effectiveness as well as decreased expenditures for a great number of businesses. Artificial intelligence is having a substantial impact on the job responsibilities that are performed in the banking business. Credit scoring, fraud detection, and algorithmic trading are three examples of processes that have benefited from automation's increased speed and accuracy (Qadiri, Shabir and Qadri, 2020). This transformation, on the other hand, raises questions about the future of employment in the banking sector as ordinary operations become increasingly automated and computerized.

In addition to this, AI is helping workers improve their skills. For instance, in the healthcare business, artificial intelligence algorithms may assist physicians in diagnosing illnesses by analysing patient data and medical imaging (Rezaei et al., 2023). This would free up the time of medical professionals so that they could focus on devising treatment plans and providing care for patients. This not only improves the accuracy of the diagnosis but also provides medical personnel with additional time to work with patients (Rezaei et al., 2023). One of the most noticeable shifts has occurred in the manufacturing sector. There, chatbots and robots controlled by artificial intelligence are increasingly controlling assembly line operations. This improves both precision and speed while simultaneously reducing the likelihood of errors caused by humans. As a direct consequence of this, businesses in the UAE are now more competitive on a global scale. In the United Arab Emirates (UAE), the retail business is embracing automation and AI to create a better shopping experience for customers. Chatbots and virtual assistants provide around-the-clock assistance to customers while also customising their suggestions according to the tastes of individual users (Bonnet and Westerman, 2020). This not only makes customers more satisfied but also contributes to increased income.

However, the transition will not be without its challenges. Organisations that rely heavily on routine tasks are more vulnerable to being automated, which may give rise to concerns about the loss of jobs. Organisations have a responsibility to properly manage this transition, which usually requires training and developing their existing workforce to fulfil more complex, inventive, and strategic activities that AI cannot quickly replace. There is also a requirement for stringent data security protocols to ensure the safety of sensitive data that is managed by AI systems. In other words, despite these advantages, equitable distribution of benefits is necessary; businesses need to adopt responsible AI policies that entail reskilling and upskilling activities to ensure that people can transition into new positions that need creativity, problem-solving, and empathy – areas in which AI fails to match human talents. This will allow businesses to guarantee that employees can move into new occupations that call for these types of skills.

In conclusion, artificial intelligence (AI)-driven automation is transforming the way tasks are done and the way organisations run in the United Arab Emirates (UAE). While this does have a significant positive impact on productivity and the delight of customers, it does necessitate proactive measures to manage the possibility of job displacement and gaps in skill sets.

4.2. Theme 2: Enhanced decision-making and analytics

When respondents were asked how AI technologies help them or are beneficial for enhancing their operational efficiency, two of the respondents shared similar thoughts and commented that AI technologies play a pivotal role in enhancing their operational efficiency within the organisation by enabling them to make data-driven decisions. These data-driven decision-making are empowered by AI technologies because these technologies enhance their ability to process and assess a large amount of data at unprecedented accuracy and speed.

One respondent voiced the benefits of AI technologies and stated,

“We use AI for risk assessment for our loan applications and finding investment opportunities and reduce the threat of lending money at places where we may not have any gain.”

Similarly, another respondent highlighted the benefits of AI technologies and claimed,

“We use AI technologies for analysing patient’s data that enables us to make an accurate diagnosis and help make recommendations related to the treatments of patients. In this way, I can say that AI applications not only enhanced our operational efficiency but delivered better outcomes and cost-saving benefits.”

One respondent voiced,

“AI technologies enable people to generate an actionable insight, it is beneficial for our sector in a way that AI-driven predictive analytics helps us optimising schedules and routes that directly affect our operational cost and enhance our service reliability.”

On the contrary, one respondent highlighted the downsides of AI technologies, as he commented,

“AI adoption is not an easy task, it contains cost with the deployment of technologies and for an efficient working, sufficient availability of skills and resources is necessary such as training and developing employees while creating an IT infrastructure to facilitate the implementation of AI technologies.”

Further, one respondent commented,

“Benefits of AI are enormous, but challenges associated with it cannot be ignored and should be handled to make progress such as the AI technology adoption contains high privacy concerns and algorithms contain high potential for bias. It is necessary for companies that they navigate the complexities while harnessing the AI’s power to improve their overall organisational efficiency by making the use of data-driven decision making.”

From the analysis of this section, it is evident that data-driven decision-making is one of the most powerful benefits of AI applications and cost-saving is a common outcome that companies achieve (Bonnet and Westerman, 2020). Using AI technologies, businesses contain immense insights into their market dynamics, customer behaviours, and operations. For example, companies in the UAE not only use AI technologies for making effective decisions related to their operational activities, but it also helps them develop strategies that can provide them financial benefits. By analysing the massive amount of data, which is not possible by humans, companies can make nearly accurate decisions that transform business operations (Khan, Shael, and Majdalawieh, 2019). For example, in the banking industry, people can make more accurate decisions related to the lending of their loans and making investments (Vieira and Sehgal, 2017). On the contrary, in the healthcare sector, doctors can better suggest treatments to their patients resulting in greater health outcomes. AI is beneficial in detecting risk factors associated with each decision-making option and allows companies to choose the best option (Rezaei et al., 2023). Reliance on AI delivers companies the benefits of enhancing organisations’ operational efficiency and minimisation of errors that conclusively lead organisations towards improved decision-making. However, it is also found that overstating the benefits of AI is not justified because it also contains some challenges. For example, it is realised from the analysis that AI adoption is not as easy as it looks, it contains huge costs for some companies. For example, to take advantage of AI applications, organisations must have a proper IT infrastructure to ensure the successful implementation of AI technologies and their effective working. Further, hiring new employees who know AI applications or training and developing (T&D) old employees are costly processes (Ey, 2018; Roberts, 2017; Wirtz, Weyerer and Geyer, 2019). Further, some other factors such as data privacy issues and bias associated with AI algorithms are also drawbacks of AI technologies. They said that tools like virtual assistance and chatbots contribute significantly towards resolving customer queries promptly (Wirtz, Weyerer and Geyer, 2019).

4.3. Theme 3: Customer Experiences

When respondents were asked about the ways AI technologies impact their organisational efficiency. 3 of the respondents highlighted the role of AI in shaping customer interactions and regarded AI as a tool to enhance customer satisfaction, as it helps enhance the personalised recommendations leading customers towards discovering the relevant services and products resulting in improved customer satisfaction. The tailored promotions and services based on historical data help companies retain their customers. The personalised approach towards making offers creates customer loyalty and ensures customer retention.

Contrary to the positive sides of AI applications, one of the respondents highlighted the cons of AI applications and commented,

“AI is not fit to all situations, it lacks human empathy and touch that clients desire sometimes that lead customers towards frustration in a highly complex and emotionally charged situations.”

This means that AI can be a good solution to many problems and help enhance organisational efficiencies, but this is not possible in all situations. Throughout the entirety of the customer lifecycle, artificial intelligence has helped to streamline processes and reduce points of friction. An excessive dependence on technology, on the other hand, may prove problematic in situations in which customers need human support or demand a more personalised touch. It is essential to strike the right balance between the use of AI and human connection to keep providing excellent service to customers and this is more important in the medical field than any other industry.

One respondent said,

“AI is beneficial in adding value to the tasks by freeing up staff from routine and monotonous duties. When it comes to the customers, it is beneficial in reducing wait time, streamlining the processes, and providing customers with consistent services. However, companies should take care of the fact that these systems are designed in a culturally specific manner that can bring inefficiency to customer queries leading them to dissatisfaction.”

From the analysis of this section, it can be stated that AI contains multiple benefits, but this is not the case all the time in all situations. Some of the benefits that companies gain by deploying AI applications include improved customer

engagement, interactions, and experiences, enhanced customer satisfaction, and improved personalised experience of customers (Bui and Nguyen, 2023; Bonnet and Westerman, 2020). The responses collected in this section maintained a balance between highlighting the pros and cons of AI while highlighting the role of AI in organisational efficiency. For example, it is evident from the applications that AI delivers multiple benefits to companies, but certain things cannot be addressed by these applications such as AI programs not containing emotional intelligence (Prentice, Dominique Lopes and Wang, 2020). In the medical field, sometimes customers need emotional support and touch, but the absence of these features can lead customers towards frustration which means unsatisfied services and lack of customer engagement. Further, these systems may add value for customers by responding to their queries 24/7 and quickly, but these are designed in a culturally specific manner (Riedl, 2019), which means they may be inefficient in culturally specific interactions that can result in dissatisfaction and misunderstanding of statements or services provided by companies and the chances are more in the UAE as diversity is inherent in this market.

From this theme, it can be concluded that throughout the entirety of the client experience, AI helps to increase consistency, automates repetitive tasks, and simplifies procedures (Villar and Khan, 2021). Companies need to ensure that their AI solutions are designed correctly so that they can be seamlessly integrated into the customer experience without causing any disruptions. An excessive reliance on AI may also result in a lack of human engagement, which may affect the overall customer experience. This might be a problem for businesses that rely heavily on consumer spending. In conclusion, the United Arab Emirates is seeing a revolution in consumer interactions brought on by AI-powered solutions, which are bringing about major gains in terms of personalisation and efficiency. Automation and human interaction need to coexist for businesses to achieve their goals of producing a positive experience for customers, maintaining high levels of customer happiness, and increasing customer retention.

4.4. Theme 4: Challenges and ethical considerations

When respondents were asked about the challenges associated with AI applications that influence organisational efficiency, 2 of the respondents said that bias is one of the key ethical concerns that is associated with AI applications. Bias is an ethical application that cannot only lead companies towards inaccurate decision-making but also affect the quality of automation processes and lead organisations towards inefficient organisational operations. The ethical concern of bias creates transparency issues in AI systems and this lack of transparency not only hinders the ability of organisations to understand the processes, but also the ways they are fine-tuned, which impacts the efficiency gains. Hence, organisations must remain accountable to address the adverse results to continuously improve AI systems for efficiency. It is pivotal for companies the work on navigating the ethical concerns to minimise the potential pitfalls and maximise the AI's benefits. However, these ethical concerns of bias can be addressed by having diversity and fairness in the operational activities. For transparency in the system, companies can provide explanations to their stakeholders and document AI processes of decision-making. In UAE many organisations to address the concern of bias are being reinforced for accountability mechanisms with the help of organisations who are taking responsibility for setting channels for redness and AI-driven outcomes.

On the other hand, one of the respondents held,

“Though the issue of biases is associated with AI, the government of UAE is making efforts to address these ethical concerns including bias. The country to address such issues has introduced regulatory frameworks that include the introduction of AI ethical guidelines. These ethical guidelines emphasise accountability, transparency and fairness of AI systems. Furthermore, the government is continuously appreciating the collaboration with organisations and international experts to ensure ethical standards aligned with the best global practices.”

Three of the respondents particularly discussed the steps that have been taken by the UAE's government to address ethical concerns associated with the adoption of AI to ensure organisational efficiency. One of these three respondents said that the government of UAE 2019 introduced ethical guidelines for companies adopting AI to align their practices with the mentioned concerns. Further, including personal data protection, the government is working on the personal data protection law. These laws a crucial to handling AI applications and addressing data-related issues. Two of the respondents highlighted that the UAE AI Regulatory Authority is responsible for enforcing and overseeing the ethical guidelines. These authorities are one of the major reasons and play a pivotal role in addressing ethical concerns and ensuring accountability.

In conclusion, it can be seen from the above responses that the government of the UAE supports education and awareness of AI ethics by introducing different laws and guidelines. These efforts provide individuals and businesses with the knowledge and tools necessary to effectively traverse difficult ethical situations. These legislative frameworks and efforts aim, together, to establish an environment in which the use of AI for organisational efficiency may grow

responsibly. A significant focus is placed on the reduction of ethical problems like as bias, transparency, and responsibility. Though companies have challenges in place, they also have solutions as well.

4.5. Theme 5: Cybersecurity and Risk Management

Some respondents said that AI technology has been of considerable assistance to firms in the UAE in their efforts to boost their cybersecurity measures. It is of significant assistance in identifying and responding to threats. Systems that are driven by artificial intelligence (AI) may search through huge volumes of data to detect strange patterns or behaviours that may indicate the presence of a cyber threat. Because of this proactive strategy, companies can swiftly recognise potential risks and react appropriately, hence reducing the likelihood of suffering any adverse effects. However, it is necessary to have an understanding of the risks that come along with increasing reliance on AI. One of the primary causes for concern is the probability of obtaining false positives and false negatives. Artificial intelligence (AI) systems may give false alarms, diverting expensive resources towards fake hazards; conversely, they may ignore actual risks as a result of computational flaws. False alarms and algorithmic errors are both examples of potential problems with AI. To solve these problems, companies and organisations need to find a happy medium between the use of AI automation and human engagement. While artificial intelligence can boost productivity, it should only be utilised in combination with qualified cybersecurity specialists who can provide oversight, comprehend difficult threats, and make decisions when the AI may not be able to.

One respondent supported the positive use of AI and highlighted,

“AI integration is transforming the cybersecurity landscape of UAE, it is enhancing the security posture by enabling companies to have access to automated responses and real-time data. AI can learn and adapt things continuously, which means organisations can easily recognise the threat patterns and bring solutions to the issues while some of the AI systems such as behavioural analytics and biometrics boost the protection of sensitive systems and data.”

Similarly, one respondent voiced the positives of AI and said,

“In the process of threat detection, AI systems are key at identifying irregular or abnormal patterns and behaviours which is a key to identifying cyber threats. Further, AI contains the capability to analyse real-time data which means enabling organisations to rapidly respond to breaches and reduce the threat of cyberattacking.”

Conversely, one respondent adhered,

“Addressing the potential risk associated with overreliance on AI is pivotal for companies such as AI systems are interconnected that create weaknesses due to which these systems can be easily exploited.”

The analysis of this section helped highlight the positives and negatives of AI in terms of identifying threats and finding solutions. For example, it is found from the analysis that though AI bring some threats with it organisations relying on AI for their operations tend to continuously monitor their AI systems and upgrade them to ensure that the organisations can prevent any potential threats. From the analysis, it can be concluded that companies overreaching on AI systems should be vigilant related to the risks associated with AI. If organisations are quick then criminals are also quick in adopting technological advances and attackers can easily manipulate the AI algorithms to evade detection. Hence, companies are suggested that to mitigate the potential risks associated with AI they should develop robust security strategies and should include human expertise. It should be understood that companies relying on AI operations need to adopt a multi-layered approach that includes both human institutions and AI efficiency through which a more resilient defence against cyber threats can be created.

5. Conclusion

The recommendations from the analysis such as overreliance on AI demand company's significant considerations and some issues associated with the application of AI such as inefficiency in cultural intelligence are some of the relatively new aspects of this research. It is found that though AI as a part of digitalisation contains multiple benefits for organisational efficiency, it also contains some challenges that include ethical considerations as well. AI is a solution to deal with cyber-attacks, but it can be a cause as well. automation is one of the major benefits of AI applications that have transformed the ways employees work in organisations as it provides opportunities for employees that they focus on more important operations and activities. It is realised that AI enhances the decision-making capabilities of companies by providing them critical information and by developing informed decisions through data analytics, companies can improve their operational and organisational overall efficiency. Improving customer experience by offering

personalised services is also one of the major tactics. However, it is also realised that AI is not immune to ethical considerations and cost-related challenges.

Compliance with ethical standards

Disclosure of conflict of interest

No conflict of interest is to be disclosed.

Statement of informed consent

The study complied with all necessary ethical standards, the study. The researchers took consent from all interviewees before conducting their interviews, the researchers maintained the anonymity of respondents by not using their names and designation in the research. For secondary data, each source from which the ideas were taken was referenced properly.

References

- [1] Bonnet, D. and Westerman, G., 2020. The new elements of digital transformation. *MIT Sloan Management Review*, 62(2)
- [2] Bui, T.H. and Nguyen, V.P., 2023. The impact of artificial intelligence and digital economy on Vietnam's legal system. *International Journal for the Semiotics of Law-Revue internationale de Sémiotique juridique*, 36(2), pp.969-989.
- [3] Deegan, C.M., 2019. Legitimacy theory: Despite its enduring popularity and contribution, time is right for a necessary makeover. *Accounting, Auditing & Accountability Journal*, 32(8), pp.2307-2329.
- [4] Ey, 2018. *The Growing Impact of AI on Business*. Available at: <https://www.technologyreview.com/2018/04/30/143136/the-growing-impact-of-ai-on-business/> [accessed on 19th September 2023]
- [5] Kamel, D., 2023. *UAE launches guide on adopting AI technology in key sectors*. Available at: <https://www.thenationalnews.com/business/technology/2023/04/30/uae-launches-guide-on-adopting-ai-technology-in-key-sectors/>[accessed on 19th September 2023]
- [6] Kumar, Y., Koul, A., Singla, R. and Ijaz, M.F., 2022. Artificial intelligence in disease diagnosis: a systematic literature review, synthesizing framework and future research agenda. *Journal of ambient intelligence and humanized computing*, pp.1-28.
- [7] Nair, D., 2023. *UAE spending on digital technology to hit \$20bn by 2026, BCG says*. Available at: <https://www.thenationalnews.com/business/technology/2023/03/28/uae-spending-on-digital-technology-to-hit-20bn-by-2026-bcg-says/>
- [8] Prentice, C., Dominique Lopes, S. and Wang, X., 2020. Emotional intelligence or artificial intelligence—an employee perspective. *Journal of Hospitality Marketing & Management*, 29(4), pp.377-403.
- [9] Qadiri, R.M., Shabir, N. and Qadri, M., 2020. Conceptualizing possibilities of artificial intelligence in furtherance of the banking sector: an effective tool for improving customer relationship, customer service and public relations.
- [10] Rezaei, M., Rahmani, E., Khouzani, S.J., Rahmanna, M., Ghadirzadeh, E., Bashghareh, P., Chichagi, F., Fard, S.S., Esmaeili, S., Tavakoli, R. and Seighalani, H.H., 2023. Role of artificial intelligence in the diagnosis and treatment of diseases. *Kindle*, 3(1), pp.1-160.
- [11] Riedl, M.O., 2019. Human-centered artificial intelligence and machine learning. *Human behavior and emerging technologies*, 1(1), pp.33-36.
- [12] Roberts, A., 2017. *Five big challenges to AI adoption and success*. Available at: <https://www.clickz.com/five-big-challenges-to-ai-adoption-and-success/112795/> [accessed on 19th September 2023]
- [13] Scott, J., 2023. *Sociological theory: Contemporary debates*. USA: Edward Elgar Publishing.

- [14] U.AE., 2023. *UAE Strategy for Artificial Intelligence*. Available at: <https://u.ae/en/about-the-uae/strategies-initiatives-and-awards/strategies-plans-and-visions/government-services-and-digital-transformation/uae-strategy-for-artificial-intelligence> [accessed on 19th September 2023]
- [15] Vieira, A. and Sehgal, A., 2017. How banks can better serve their customers through artificial techniques. In *Digital marketplaces unleashed* (pp. 311-326). Berlin, Heidelberg: Springer Berlin Heidelberg.
- [16] Villar, A.S. and Khan, N., 2021. Robotic process automation in banking industry: a case study on Deutsche Bank. *Journal of Banking and Financial Technology*, 5(1), pp.71-86.
- [17] Wirtz, B.W., Weyerer, J.C. and Geyer, C., 2019. Artificial intelligence and the public sector—applications and challenges. *International Journal of Public Administration*, 42(7), pp.596-615.