

Exploring the Intersection of Artificial Intelligence, Organizational Behaviour, and Communication Dynamics in the Modern Workplace

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Abstract

While organizations struggle to improve efficiency and productivity, the interaction between AI, organizational behaviour, and communication dynamics tends to be complex in the rapidly evolving modern workplace. Moreover, understanding the implications of this intersection is necessary to encourage a balanced and effective workplace. Hence, employing AI technologies in organizational structures introduces challenges such as workforce adaptation, psychological impact, and communication patterns. This research explored how AI influences organizational behaviour and communication dynamics in the modern workplace. A mixed method was used. The survey was distributed among employees across various industries, measuring their experiences of organizational behaviour and communication dynamics. Further, in-depth interviews were conducted with key stakeholders (n = 13) to obtain additional insights into goodness and trustworthiness. The research findings revealed the pathways to how AI influences organizational behaviour and communication dynamics. Initial analysis of survey data and interviews offered insights into employee perceptions, identifying potential challenges and opportunities.

Keywords: artificial intelligence, digital communication, organizational behaviour, communication dynamics, innovation, work-life balance, modern workplace

INTRODUCTION

Recent major changes in the work environment are mostly associated with the period of COVID-19 pandemic (Espitia et al., 2022; Madero Gómez et al., 2022; Bal, Bulgur, 2023), which has led to a more flexible working system, that gave opportunities for remote work (Bulgur, 2023) and also, increased usage of artificial intelligence (AI) in various sectors (Younis, Ibrahim, Azzam, 2024). Even after the pandemic is over, AI is being used, given that it can be applied in many areas and has many benefits (Benhamou, 2020), the position is taken that AI will only be integrated into the activities of organizations at an increasing rate. As organizations strive to optimize efficiency and productivity, the interaction between AI, organizational behaviour, and communication dynamics is complex. Understanding the implications of this intersection is fundamental for fostering a balanced and effective workplace.

Integrating AI technologies into organizational operations introduces countless challenges regarding workforce adaptation, psychological impact, and dynamic communication patterns. Moreover, the changing nature of work environments raises questions about the potential consequences on employee engagement, team dynamics, and overall organizational effectiveness (Gabelaia, Bagočiūnaitė, 2024).

This research article aims to explore relationships between AI, organizational behaviour, and communication dynamics and showcase the challenges and opportunities in the modern workplace. By examining the impact of AI on employees' attitudes, collaboration, and communication patterns, this research aims to contribute viable insights for organizations navigating the integration of AI into their structures.

LITERATURE REVIEW

Organizations active in the era of Industry 5.0, characterized by the integration of advanced technologies, to remain competitive must understand and adopt such tools as Generative Artificial Intelligence (AI) as it is crucial for shaping the future of industries (Gupta, Nair, Mishra, Ibrahim, & Bhardwaj, 2024). Organizations are increasingly integrating AI into their business models and moving towards more autonomous, efficient, and innovative operations (Dwivedi et al., 2021). Aydin & Karaarslan (2023) agree that generative AI, especially ChatGPT, is rising in popularity and gaining significant attention across organizations in various fields despite its early stages.

According to the latest Eurostat data, in 2021, 8% of companies in the EU used at least one technology of AI, 3% of companies used at least two, and 2% used at least three technologies of AI. In addition, the European Commission, in the 2030 Digital Compass, stated that by 2030, 75% of EU companies will use cloud computing services and perform big data and AI technologies. More than 90% of SMEs should reach at least a basic level of digital intensity.

Sarker (2022) describes AI as a leading technology incorporating human behavior and intelligence into machines or systems to solve real-world issues. Generative AI is used in areas such as business, finance, healthcare, agriculture, smart cities, cybersecurity (Sarker, 2022), manufacturing, retail, supply chain, logistics, utilities (Dwivedi et al., 2021), and marketing (Gupta et al., 2024; Verma et al., 2021).

Understanding these AI tools' technical and structural elements is essential for organizations to integrate them into their operations effectively. Gupta et al. (2024) argue that AI is transforming content creation in a way that can enhance customer experience and increase return on investment (ROI) through

personalized content and improved customer interaction. Analysis of user interactions with AI provides organizations with valuable insights into consumer behaviour and expectations, which can shape organizational strategies in marketing, customer service, and product development (Aydin & Karaarslan, 2023). AI enables organizations to make smarter, faster decisions regarding the business process, ultimately improving the whole operation's productivity and profitability (Sarker, 2022); it is the key strategic element for innovation and efficiency increase (Dwivedi et al., 2021).

However, ethical concerns and the necessity for new skills are a few challenges organizations face when introducing this new, rapidly evolving technology (Dwivedi et al., 2021; Gupta et al., 2024). Organizations need to proactively address the ethical concerns surrounding the use of AI, including privacy issues, bias in AI outputs, and transparency of AI-driven decisions, as well as implement strong data protection measures (Aydin & Karaarslan, 2023). Dwivedi et al. (2021) point out that AI is expected to profoundly impact the labor market regarding job displacement and job creation, which leads to the need for employee development and training. The decision-makers will be challenged to navigate the opportunities and challenges posed by AI and balance innovation with ethical considerations and societal impact (Dwivedi et al., 2021).

According to Aydin & Karaarslan (2023), a few key aspects exist to integrate AI into organizations' operations successfully. These include identifying areas where AI can add the most value. Authors suggest that these could be content creation, customer service through chatbots, personalized marketing, and process automation; training of employees in practical usage of generative AI tools as well as understanding its limitations; implementing cybersecurity measures to protect sensitive data; integrating AI with the existing IT infrastructure; implementing of pilot projects and constant monitoring of AI performance.

Although the integration of AI technologies into organizational processes caused great debates, emphasizing AI's impact on workplaces as well as employees (Bankins et al., 2023), AI technologies are increasingly integrated into organizational processes; therefore, understanding its interfaces and impact on organizational behaviour is critical like never before. Scholars and practitioners agree that AI fundamentally changes organizational behaviour by augmenting human capabilities and automating routine tasks. This transformation allows organizations to harness creativity, improve decision-making, and foster a culture of innovation. However, some AI technologies raise concerns about reliability, stability, validity, etc. (Tippins, Oswald, McPhail, 2021).

Bankins et al. (2023) highlight the importance of customizing how AI tools are designed and presented in the workplace. To fully benefit from AI assistance, the tools should be tailored to fit the unique circumstances (context-specific) of each workplace and the specific needs of its employees (employee-centred). It is emphasized that to facilitate employees' acceptance and use of AI technologies, they must trust technologies, be well prepared, and feel confident, so companies' organizational cultures should be innovative and supportive (Bankins et al., 2023).

AI influences communication dynamics in modern workplaces, improving internal and external communication processes to make them more effective, personalized, and data-driven. In scientific literature, the impact of AI on communication dynamics is mainly analyzed through improved customer service (Feine, Gnewuch, Morana, & Maedche, 2019), AI-driven content creation (Gupta et al., 2024; Radziwill & Benton, 2017), and increased employee efficiency (Gupta et al., 2024).

According to Aydin & Karaarslan (2023), generative AI can be diversely applied in organizations for communication purposes; for example, chatbots are becoming increasingly popular, and organizations are exploring its use for customer service efficiency (Dwivedi et al., 2021) and other automated interactions. This improves the customer experience and reduces human workload, allowing employees to focus on more complex tasks (Feine et al., 2019). AI applications can automate the creation of reports, emails, and marketing content, reducing the time and effort required to complete these tasks. This automation enables personalized communication, increasing customer satisfaction (Gupta et al., 2024; Radziwill & Benton, 2017). The use of ChatGPT for collecting multiple sources indicates the potential of ChatGPT to be used as a research and information management tool in organizations (Aydin & Karaarslan, 2023). Besides, the workplace is one of the most important social spaces for people active in industries, and its features have changed from classical (before the millennium change) to modern (Namiq, 2018). The modern workplace is undergoing significant paradigm shifts driven by technological advances, changing workforce demographics, and societal values.

The four main features that define the modern workplace are diversity, cultural changes, technology, and the generation gap (Namiq, 2018). Moreover, the modern workplace is also about flexibility, a growing need to learn and improve, and an unstable work-life balance (Ruhle et al., 2018). Ruhle et al. (2018) note that in today's contemporary work environment there are a lot of various potential negative consequences, e.g., stress (Sparks et al., 2001; Sverke et al., 2002; Stansfeld & Candy, 2006; Weiß, 2017), impairments related to employees' physical or mental health, as well as overall well-being (Dobson, & Rosskam, 2009; Siegrist & Wahrendorf, 2016; Weiß & Süß, 2017) and job satisfaction. These consequences should be seen as substantiated threats to companies, as they tend to result in reduced work engagement and stronger intentions of employees to leave their jobs (Li et al., 2005; Kinnunen et al., 2008; Ruhle et al., 2018).

Organizations that successfully transition to these changes by integrating AI into their operations and adapting to new workplace paradigms will drive innovation and competitiveness. At the same time, those that fail to do so – might face significant challenges, such as operational inefficiencies, strategic blindspots, talent attrition, decreased competitiveness, etc.

RESEARCH METHOD AND METHODOLOGY

A mixed methodology was used to explore relationships between AI, organizational behaviour, and communication dynamics, and showcase the challenges and opportunities in the modern workplace. The survey was distributed among employees across various industries, measuring their perceptions of organizational behaviour and communication dynamics in the context of AI integration. Simultaneously, in-depth interviews were conducted with key stakeholders, including managers and HR professionals, to gain deeper insights into organizational strategies and challenges related to AI implementation.

Survey Results and Analysis

The survey was distributed among employees across various industries, measuring their perceptions of organizational behaviour and communication dynamics in the context of AI integration.

Respondents were reached using snowball and convenience sampling techniques. Convenience and snowball sampling involves choosing participants based on their accessibility and proximity to the researcher. Overall, 199 respondents voluntarily participated in the survey study.

To have insights on different industry categories for the survey was fundamental, as it offers insight into the industry composition and adds relevance to the research study. Of 199 respondents, 23 represented the IT sector, creating 11.6% of the total; 17 healthcare with 8.5%; 32 Banking/Finance with 16.1%; 21 education with 10.6%; 8 manufacturing with 4.0%; 26 retail, with 13.1%; 33 hospitality, with 16.6% ; 3 government, with 1.5%; 24 non-profits with 12.1%, and lastly, 12 respondents with 6.0% of the total chose not to identify industry. Besides, all respondents had various years of experience. Thirty-two respondents had less than one year experience, with 16.1% of the total; 41 respondents, 1-2 years, with 20.6%; 49 3-5 years, with 24.6%; 31 respondents, 6-10 years, with 15.6%; 27 with 11-15 years, for 13.6%; 11 respondents, 16-20 years, constituting 5.5%, and eight respondents, 21+ years constituting 4.0% of the total.

Employing AI technologies in organizational structures introduces challenges such as workforce adaptation, psychological impact, and communication patterns. Moreover, the changing nature of work environments raises questions about the potential consequences on employee engagement, team dynamics, and overall organizational effectiveness. Hence, the authors surveyed respondents to rank different aspects of the modern workplace based on their importance on a scale of 1 to 5, with 1 being the lowest and 5 being the highest. "Workplace adaptation" was the first aspect, and feedback from respondents was divided. Approximately 41% stated that it was important, while another 39% indicated that it was not. Additionally, "psychological impact" was ranked as an important aspect by 42.8% of respondents. This indicates the significance of organizations caring for employee well-being and work-life balance.

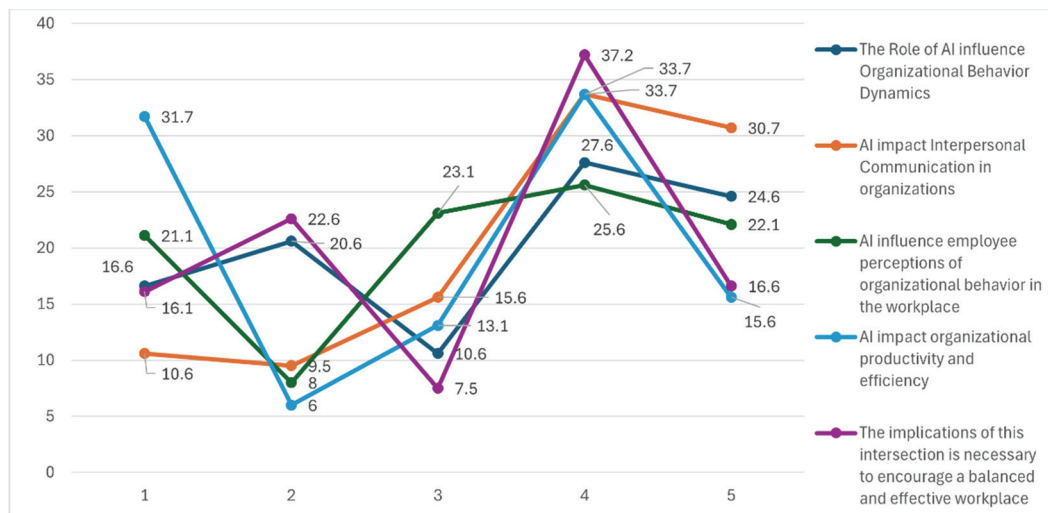
On the other hand, "communication patterns" received the lowest ranking, with almost 44% of respondents identifying it as the least important aspect, while 29.6% were neutral. Similarly, "employee engagement" received similar rankings, with almost 44% stating that it is not an important aspect of the workplace, while 30.2% remained neutral. There was also confusion around "team dynamics," with respondents torn on its importance. Around 37.7% of respondents stated it was unimportant, while 36.7% stated it was important. Lastly, "overall organizational effectiveness" had almost an equal distribution of responses. It received around 22% importance in every ranking except "2". Respondents do not fully agree on the importance of all the aspects offered to them.

The survey participants were requested to evaluate statements regarding the integration of AI technology in the contemporary workplace using a scale of 1 to 5, with 1 representing the lowest and 5 the highest. Figure 1 displays the comparison of the statements. The initial statement, "The role of AI impacts Organizational Behaviour Dynamics," was supported by approximately 52% of the respondents, while around 37% of them expressed the belief that AI does not have an impact. This indicates varying perspectives on the integration and impact of AI in the modern workplace. The second statement, "AI affects interpersonal communication in organizations," received agreement from about 64% of the respondents, while only approximately 20% believed that AI has no effect. Given that interpersonal communication in organizations is a fundamental aspect of behaviour dynamics, the responses to the two statements were similar.

The third statement, "AI influences employee perceptions of organizational behaviour in the workplace," elicited mixed feedback. For example, 21.1% strongly disagreed, whereas 22.1% strongly agreed. Additionally, 23.1% remained neutral in their response, indicating that employees are not fully engaged in the process of change or organizational transformation. The subsequent statement, "AI impacts organizational productivity and efficiency," resulted in divided feedback, with 31.7% in disagreement

compared to 33.7% in agreement. This underscores the significance and importance of the issue within organizations. The final statement, "The implication of this intersection is necessary to promote a balanced and effective workplace," was supported by 37.2% of the respondents who believed that this intersection has the potential to establish a robust modern workplace, while 22.6% indicated disagreement. This still demonstrates a favorable distribution, highlighting the necessity of this intersection.

Figure 1. The Intersection of AI, Organizational Behaviour, and Communication Dynamics



To determine if organizational behaviour, communication dynamics, and work-life balance are statistically significant predictors of artificial intelligence's impact on the modern workplace, multiple regression analysis was used to run the SPSS analysis.

A multiple regression analysis was conducted to determine the extent to which organizational behaviour, communication dynamics, and work-life balance predict the impact of artificial intelligence on the modern workplace. Results of the analysis revealed that the combination of independent variables significantly predicted Artificial Intelligence impact in the modern workplace, $F(3, 196) = 67.143, p < .001$, accounting for 51% ($R^2 = .507$) of the variance in Artificial Intelligence impact. The variables of organizational behaviour ($\beta = -.285, p < .001$), communication dynamics ($\beta = .407, p < .001$) and work-life balance ($\beta = .275, p < .001$) were statistically significant predictors. Table 1 provides the unstandardized regression coefficients (b), the standard error for the unstandardized regression coefficient ($SE b$), standardized regression coefficients (β), and the variance (R^2) explained.

Table 1. Multiple Regression Results for Artificial Intelligence Impact

Variable	B	95% CI for B		SE B	β	R^2
		LL	UL			
Constant	-5.685***	-7.338	-4.032	.838***		.507***
Organizational Behaviour	-.117***	-.159	-.075	.021***	-.285	
Communication Dynamics	.020***	.015	.026	.003***	.407	
Work-life Balance	.016***	.009	.022	.003***	.275	

Note. CI = confidence interval; LL = lower limit; UL = upper limit

* $p < .05$, ** $p < .01$, *** $p < .001$

In-depth Interview analysis

The authors conducted interviews with 13 stakeholders with 4-9 years of experience implementing AI in the modern workplace. Respondents represented two tech companies, three SMEs in hospitality, and two front-end developers. The majority of the interviews were conducted in a face-to-face format and lasted around 25-30 minutes.

The authors, based on the interview responses, identified three major themes such as impact on organizational culture, communication dynamics, and work-life balance.

Analysis of Impact on Organizational Culture, Communication Dynamics, and Work-life Balance

Respondent A emphasized that AI technology integration has brought about a revolution in our organizational culture, making us more flexible and open to change. In contrast, Respondent B raised concerns about AI technology streamlining processes but weakening traditional values, leading to a growing sense of disconnection among employees. Additionally, Respondent M mentioned that AI technology has changed our organizational culture, promoting innovation and adaptability. Furthermore, respondent L pointed out that while AI technology brings efficiencies, it also erodes traditional values and creates a separation among employees.

The different perspectives on AI technology as a medium for positive cultural transformation or a threat to traditional values may stem from adaptations in organizational contexts and leadership approaches. Organizations that successfully integrate AI technology while sustaining core values often experience horizontal transitions and higher employee satisfaction. Organizations must establish a balance by leveraging AI technology to enhance agility while safeguarding core values through effective leadership and cultural initiatives.

Respondent C stressed that technology has enhanced communication, promoting collaboration among teams and in different locations, and has made real-time exchanges possible. Respondent D, however, warned that despite its convenience, miscommunication is common, as digital interactions lack the restraints of face-to-face communication, often leading to misunderstandings. According to Respondent G, technology has renovated communication, enabling seamless collaboration and the sharing of knowledge. On the other hand, Respondent H argued that digital communication lacks the richness of face-to-face interactions, often causing misunderstandings and straining relationships.

The contrasting opinions on communication dynamics emphasize the dual impact of AI technology. While it increases openness and accelerates collaboration, it also exhibits challenges such as misunderstanding and information overload. Effective communication strategies, incorporating clear principles for digital interactions and consistent face-to-face meetings, are fundamental for addressing these challenges. These opposing opinions highlight the complexities of communication dynamics in the digital era.

Respondent F stated AI technologies provide flexibility, allowing for remote work and improving work-life balance. It has given employees the capability to effectively manage their schedules. In contrast, Respondent G contended, that continuous connectivity shadows the line between work and personal life. It is difficult to disconnect, leading to burnout and reduced productivity. Respondent E asserted AI technology allows for adaptable work setups, promoting work-life balance and employee happiness.

Respondent M argued that the constant nature of technology shapes boundaries, forming challenges in disconnecting and leading to burnout.

The discussion on work-life balance emphasizes the ongoing attempts to utilize AI technology's advantages while avoiding its drawbacks. While remote work preferences provide flexibility, organizations must prioritize employee well-being by setting boundaries and encouraging digital detox practices. Finding a middle ground between remaining connected and disconnecting is fundamental for maintaining long-term productivity and morale. The discussions on work-life balance emphasize AI technology's double-edged impact on employee welfare.

In conclusion, the intersection of AI, organizational behaviour dynamics, and interpersonal communication presents a complex framework challenged by technological innovation and societal norms. While AI technologies are promising, their impact extends beyond mere efficiency gains. By critically analyzing the relationship between AI technologies and organizational dynamics, we can navigate the complexities and ensure that human values and well-being remain at the forefront of organizational evolution.

CONCLUSION

Integrating artificial intelligence technology has impacted organizational behaviour and communication dynamics. The authors explored the Intersection of Artificial Intelligence, Organizational Behaviour, and Communication Dynamics in the Modern Workplace. Summarizing the literature review and practical data, adopting AI-driven solutions offers organizations high productivity, collaboration, and innovation improvements. However, they also present challenges. Moreover, AI has facilitated a shift towards data-driven decision-making, empowering employees to use AI technology that enhances performance, job satisfaction, and motivation.

The implications of AI adoption for other organizations are fundamental. Organizations considering AI adoption should recognize the potential of AI technology as it nurtures organizational behavior and communication dynamics. They must also be invested in addressing any challenges. The most fundamental challenge is resistance to change. According to research, employees do not fully support AI technologies. By implementing an AI governance ecosystem, organizations can maximize the benefits of AI integration while mitigating risks.

Future research should explore the long-term effects of AI integration on organizational behaviour and communication dynamics. It must also address challenges such as remote and hybrid work and their impact on future job design and skill requirements. Moreover, analyze a business or business in their application of AI in Organizations and its impact.

REFERENCES

- American Psychological Association. (2010). *Publication manual of the American Psychological Association* (6th ed.). Washington, DC: Author.
- Aydın, Ö., & Karaarslan, E. (2023). Is ChatGPT leading generative AI? What is beyond expectations? *SSRN Electronic Journal*. <https://doi.org/10.21541/apjess.1293702>
- Bal, Y., & Bulgur, N. E. (2023). Remote work: A paradigm shift in the modern workplace and its impact on the workforce. In *Enhancing Employee Engagement and Productivity in the Post-Pandemic*

- Multigenerational Workforce* (pp. 374–391). IGI Global. <https://doi.org/10.4018/978-1-6684-9172-0.ch019>
- Bankins, S., Ocampo, A. C., Marrone, M., Restubog, S. L. D., & Woo, S. E. (2023). A multilevel review of artificial intelligence in organizations: Implications for organizational behavior research and practice. In *Journal of Organizational Behavior* (Vol. 45, Issue 2, pp. 159–182). John Wiley and Sons Ltd. <https://doi.org/10.1002/job.2735>
- Benhamou, S. (2020). Artificial intelligence and the future of work. *Revue d'Économie Industrielle*, 169(1), 57–88. <https://doi.org/10.4000/rei.8727>
- Dwivedi, Y. K., Hughes, L., Ismagilova, E., Aarts, G., Coombs, C., Crick, T., ... & Galanos, V. (2021). Artificial intelligence (AI): Multidisciplinary perspectives on emerging challenges, opportunities, and agenda for research, practice and policy. *International Journal of Information Management*, 57, 101994. <https://www.sciencedirect.com/science/article/abs/pii/S026840121930917X?via%3Dihub>
- Feine, J., Gnewuch, U., Morana, S., & Maedche, A. (2019). A taxonomy of social cues for conversational agents. *International Journal of Human-Computer Studies*, 132, 138-161. <https://doi.org/10.1016/j.ijhcs.2019.07.009>
- Gabelaia, I., & Bagociunaite, R. (2024). The Impact of “Quiet Quitting” on Overall Organizational Behavior and Culture. *Reliability and Statistics in Transportation and Communication* (pp. 366–378). Springer. https://doi.org/10.1007/978-3-031-53598-7_33
- Gupta, R., Nair, K., Mishra, M., Ibrahim, B., & Bhardwaj, S. (2024). Adoption and impacts of generative artificial intelligence: Theoretical underpinnings and research agenda. *Journal of Management Information Systems*, 41(2), 560-595. <https://doi.org/10.1016/j.jjime.2024.100232>.
- Radziwill, N. M., & Benton, M. C. (2017). Evaluating quality of chatbots and intelligent conversational agents. *arXiv preprint arXiv:1704.04579*. <https://arxiv.org/ftp/arxiv/papers/1704/1704.04579.pdf>
- Ruhle, S., Siegrist, J., Süß, S., & Weiß, E. E. (2018). Editorial: Challenging demands in the modern workplace. In: *Management Revue* (Vol. 29, Issue 1, pp. 1–4). Nomos Verlagsgesellschaft mbH und Co. <https://doi.org/10.5771/0935-9915-2018-1-1>
- Sarker, I. H. (2022). AI-Based Modeling: Techniques, Applications and Research Issues Towards Automation, Intelligent and Smart Systems. *Springer Nature Applied Sciences*, 4(1), 123-145. <https://link.springer.com/article/10.1007/s42979-022-01043-x>
- Tippins, N. T., Oswald, F. L., & Mcphail, S. M. (2021). *Personnel Assessment and Decisions Scientific, Legal, and Ethical Concerns about AI-Based Personnel Selection Tools: A Call to Action*. <http://scholarworks.bgsu.edu/pad/ReseaRchArticles>
- Verma, S., Bhattacharyya, S. S., Kumar, S., Sharma, K., & Tyagi, S. (2021). Artificial intelligence in marketing: Systematic review and future research direction. *Journal of Business Research*, 117, 12-28. <https://www.sciencedirect.com/science/article/pii/S2667096820300021?via%3Dihub>
- Younis, Z., Ibrahim, M., & Azzam, H. (2024). The Impact of Artificial Intelligence on Organisational Behavior: A Risky Tale between Myth and Reality for Sustaining Workforce. *European Journal of Sustainable Development*, 13(1), 109. <https://doi.org/10.14207/ejsd.2024.v13n1p109>