






Comparative Analysis of Artificial Intelligence Adoption in Small and Large Companies in Slovenia

Maja Rožman¹ 
Polona Tominc² 
Katja Crnogaj³ 

Received: October 31, 2023
Accepted: April 11, 2024
Published: May 28, 2024

Keywords:

Companies;
Employees;
Artificial intelligence



Creative Commons Non Commercial CC BY-NC: This article is distributed under the terms of the Creative Commons Attribution-Non-Commercial 4.0 License (<https://creativecommons.org/licenses/by-nc/4.0/>) which permits non-commercial use, reproduction and distribution of the work without further permission.

Abstract: *The paper presents a comparative analysis of adopting artificial intelligence (AI) in small and large companies in Slovenia. The study examines the current landscape of AI usage, including its application in various operational areas such as AI-supported acquiring and retaining talented employees, AI-supported appropriate training and development of employees, and implementation of AI technology in a work environment. A survey was conducted among a sample of small and large companies across different industries in Slovenia. The results provide valuable insights for policymakers, managers, and researchers interested in understanding the dynamics of AI adoption in the Slovenian business context. Ultimately, this research contributes to the growing body of literature on AI adoption by shedding light on the unique challenges and opportunities faced by small and large companies in Slovenia, facilitating informed decision-making and strategic planning for future AI implementation initiatives.*

1. INTRODUCTION

Artificial intelligence (AI) has become integral to modern businesses (Cao, 2022; Peretz-Andersson et al., 2024), permeating various activities and sectors. The widespread adoption of AI across industries is reshaping traditional business practices and revolutionizing the way organizations operate (Bag et al., 2021). Moreover, in recent years, many enterprises have progressively embraced AI technology, which aids in enhancing operational efficiency and lowering production costs within supply chains (Liang et al., 2024). AI's impact is evident across a spectrum of business activities, ranging from routine tasks to groundbreaking innovations (Dhamija & Bag, 2020). In routine operations, AI is employed to automate repetitive processes, streamline workflows, and improve operational efficiency (Abrokwah-Larbi & Awuku-Larbi, 2023). In the past ten years, the ongoing quest to automate advanced processes in machine learning has gained significant attention, fueled by improvements in optimization techniques and their influence on the selection of machine learning models/algorithms. At the heart of this movement is the ambition to create a computational system capable of identifying and implementing high-performance solutions for a wide range of machine-learning challenges with little to no human involvement (Kedziora et al., 2024; Xu et al., 2023). Tasks such as data entry, document processing, and inventory management can now be executed with greater speed, accuracy, and scalability through AI-powered systems (OECD, 2020; Zhong et al., 2023). This enables employees to focus on more strategic and value-added activities, enhancing overall productivity and effectiveness (Hansen & Bøgh, 2021). Moreover, AI technologies are driving astonishing advancements in data analytics, machine learning, and predictive modeling (OECD, 2020). By analyzing vast amounts of data, AI algorithms can identify patterns, extract insights, and make predictions with remarkable accuracy. This empowers businesses to make data-driven decisions, anticipate market trends, and gain a competitive edge (Szedlak et al., 2021). Organizations are recognizing the growing importance of AI technologies to maintain a competitive

¹ University of Maribor, Faculty of Economics and Business, Maribor, Slovenia

² University of Maribor, Faculty of Economics and Business, Maribor, Slovenia

³ University of Maribor, Faculty of Economics and Business, Maribor, Slovenia

edge in today's rapidly evolving landscape (Dhamija & Bag, 2020). Businesses that embrace AI can leverage its capabilities to enhance customer experiences, optimize operations, and drive innovation (Wang et al., 2022). From chatbots and virtual assistants that provide instant customer support to AI-powered algorithms that optimize supply chain logistics, the strategic integration of AI technologies is becoming a key differentiator for companies across industries (Upadhyay et al., 2021). To stay ahead in today's competitive landscape, businesses must recognize the importance of AI technologies and invest in their adoption. By harnessing the power of AI, companies can unlock new opportunities, gain insights from data, enhance customer experiences, and drive innovation. Embracing AI is not just a strategic advantage; it has become a necessity for businesses striving to succeed in the digital age (Drydak, 2022; Hansen & Bøgh, 2021; Papadopoulos et al., 2020).

Artificial intelligence (AI) has emerged as a transformative technology with the potential to revolutionize various aspects of business operations. Its applications range from enhancing customer service and optimizing production processes to enabling data-driven decision-making (Dhamija & Bag, 2020). As AI advances and evolves, companies across industries increasingly recognize its potential and explore ways to integrate it into their operations. However, the adoption of AI is not uniform across all companies (Papadopoulos et al., 2020). Factors such as size, resources, and organizational culture can significantly influence the extent to which AI is embraced and utilized (Basri, 2020). In this context, it becomes crucial to examine and compare the adoption of AI between different company sizes, such as small and large enterprises. There are distinct differences in adopting artificial intelligence (AI) between small and large companies (Hansen & Bøgh, 2021). As AI technologies continue to advance and permeate various industries, the extent to which small and large companies embrace and implement AI differs significantly due to various factors (Drydak, 2022). One of the primary differences lies in the availability of resources. Large companies often have greater financial capabilities and infrastructure to invest in AI technologies. They can allocate substantial budgets for AI research, development, and implementation (Bag et al., 2021; OECD, 2020). In contrast, small companies often face resource constraints, including limited funding and technological infrastructure, which can hinder their ability to adopt AI on a large scale. Additionally, small and large companies' organizational structure and culture impact AI adoption (Abrokwah-Larbi & Awuku-Larbi, 2023). Large companies tend to have more hierarchical structures and complex decision-making processes, which can slow down the implementation of AI initiatives. In contrast, small companies often have more agile and flexible organizational structures, allowing for quicker decision-making and implementation of AI solutions (Benjamins, 2019). Furthermore, the level of AI expertise and talent within the organization also influences adoption. Large companies often have the resources to attract and retain AI specialists and data scientists, enabling them to develop in-house AI capabilities. In contrast, small companies may face challenges in acquiring AI talent due to competitive hiring environments and limited resources (Drydak, 2022; Papadopoulos et al., 2020; Szedlak et al., 2021).

This paper focuses on conducting a comparative analysis of AI adoption in small and large companies in Slovenia. Slovenia, as a dynamic European country, provides an interesting context to explore the adoption patterns of AI due to its diverse business landscape. By examining the differences in AI adoption between small and large companies, this study aims to shed light on each category's unique challenges and opportunities, contributing to a deeper understanding of the factors influencing AI adoption in the Slovenian business context. The findings of this research will provide valuable insights for policymakers, managers, and researchers interested in understanding the dynamics of AI adoption in the Slovenian business context. Understanding the discrepancies in AI adoption between small and large companies can help inform decision-making processes,

guide resource allocation strategies, and facilitate the development of tailored policies and initiatives to support AI implementation. By identifying the differences in AI adoption patterns and highlighting the challenges and opportunities faced by each category, this research will aid in fostering a better understanding of AI integration in the Slovenian business landscape and facilitate informed decision-making for future AI implementation initiatives.

2. LITERATURE REVIEW AND HYPOTHESIS

Each company has its unique business objectives, priorities, and challenges. The alignment of AI technology with these objectives and priorities can significantly impact its adoption. Companies prioritizing efficiency, customer experience, or innovation may be more inclined to implement AI technology that aligns with their specific goals (Dhamija & Bag, 2020). Variations in business objectives and priorities can influence the differences in AI adoption and implementation across companies. Furthermore, Acquiring and retaining AI talent is crucial for effectively implementing AI solutions (Hansen & Bøgh, 2021). Large companies often have more attractive employment opportunities and can offer competitive salaries and benefits to AI professionals. This gives them an advantage in recruiting and retaining AI experts (Abrokwah-Larbi & Awuku-Larbi, 2023). Due to resource limitations, small companies may face challenges in attracting and retaining highly skilled AI professionals. Large companies typically have a larger workforce and more complex operations (OECD, 2020). AI solutions can be particularly valuable in managing and optimizing large-scale recruitment processes, analyzing vast amounts of employee data, and identifying patterns for effective retention strategies (Bag et al., 2021). Small companies, with smaller teams and simpler operations, may not require the same level of AI sophistication for acquiring and retaining employees. Implementing AI technologies requires investment in infrastructure, data collection, and training (Benjamins, 2019). Large enterprises may have dedicated teams and resources to overcome the initial barriers associated with AI adoption, while SMEs may face challenges in terms of cost, lack of expertise, and resistance to change (Drydakakis, 2022). AI algorithms rely heavily on data for training and decision-making. Large enterprises tend to have more extensive data repositories, providing them with a rich source for AI-driven insights into employee acquisition and retention (Hansen & Bøgh, 2021). Small companies may have limited data availability, which can impact the effectiveness of AI solutions and the ability to draw meaningful conclusions. Also, large companies often can develop AI-supported training programs that are highly customized and personalized (Szedlak et al., 2021). AI algorithms can analyze individual employee data, learning styles, and preferences to deliver personalized training content, adaptive learning paths, and targeted skill development opportunities (Upadhyay et al., 2021; Wang et al., 2022). Moreover, the culture and leadership within an organization play a crucial role in AI implementation. Companies with a culture that values innovation, embraces technological advancements, and encourages experimentation are more likely to adopt AI technology (Dhamija & Bag, 2020). Moreover, strong leadership that champions AI initiatives, promotes a data-driven mindset and supports the necessary investments can drive successful AI implementation. Differences in organizational culture and leadership approaches can lead to variations in the adoption of AI technology (Bag et al., 2021; Basri, 2020; Hansen & Bøgh, 2021). Therefore, we formulated three hypotheses:

H1: *There are statistically significant differences in AI-supported acquiring and retaining talented employees between small and large companies in Slovenia.*

H2: *There are statistically significant differences in AI-supported appropriate training and development of employees between small and large companies in Slovenia.*

H3: *There are statistically significant differences in implementing AI technology in the work environment between small and large companies in Slovenia.*

3. METHODOLOGY

A survey was conducted with a random selection of 127 companies in Slovenia. The sample represented 44.1% small companies and 55.9% large companies. The participants in the study included either owners or managers from each company. By gender, there were 58.3% male and 41.7% female. The sectors represented in the survey were as follows: information and communication activities (26.8%), financial and insurance activities (21.3%), professional, scientific, and technical activities (13.4%), real estate activities (11.8%), manufacturing (11.0%), wholesale and retail trade, repair of motor vehicles, and motorcycles (8.6%), and administrative and support service activities (7.1%). For data collection, we employed a closed-type questionnaire. The questionnaire was designed to incorporate statements pertaining to specific concepts, and participants were asked to indicate their level of agreement using a 5-point Likert-type scale. The scale ranged from 1, representing “strongly disagree,” to 5, signifying “strongly agree.” Items for construct AI-supported acquiring and retaining a talented employees were adopted from [Kambur and Akar \(2022\)](#), items for construct AI-supported appropriate training and development of employees were adopted from [Pillai and Sivathanu \(2020\)](#) and items for construct Implementation of AI technology in the work environment were adopted from [Bag et al. \(2021\)](#), [Dhamija and Bag \(2020\)](#). To analyze the data, we employed descriptive statistics and conducted the Mann-Whitney U test to identify statistically significant differences between small and large companies.

4. RESULTS

In the following section, the authors present the results of the descriptive statistics and Mann-Whitney Test for three constructs: AI-supported acquiring and retaining talented employees, AI-supported appropriate training and development of employees, and the implementation of AI technology in the work environment.

Table 1. Descriptive Statistics and the Mann-Whitney Test for the construct AI supported acquiring and retaining talented employees

AI-supported acquiring and retaining of talented employees	Mann-Whitney U	Asymp. Sig. (2-tailed)	Small companies			Large companies		
			Mean	Median	Std. Dev.	Mean	Median	Std. Dev.
AI helps in conducting primary interviews of bulk candidates using chatbots.	20280.000	0.012	3.39	4.00	1.389	3.74	4.00	1.209
AI helps in a better quality of decisions for recruiting and selecting candidates.	20867.500	0.039	3.41	4.00	1.459	3.72	4.00	1.241
AI technology saves the monotony of the job done while finding candidates.	20047.000	0.006	3.44	4.00	1.436	3.81	4.00	1.273
AI technology reduces the time spent in finding candidates.	20923.000	0.043	3.49	4.00	1.336	3.78	4.00	1.267
With AI technology we gain access to more qualified candidates.	19874.500	0.004	3.39	3.00	1.471	3.75	4.00	1.316
We hire candidates with the right skills to accomplish their work successfully.	21564.000	0.131	3.52	4.00	1.320	3.80	4.00	1.128
We hire candidates capable of using AI technologies (e.g., machine learning, natural language processing, deep learning).	20791.500	0.034	3.43	4.00	1.369	3.79	4.00	1.063

We hire those candidates that are effective in data analysis, processing, and security.	22004.000	0.245	3.55	4.00	1.320	3.76	4.00	1.069
We take care of retaining suitable candidates with help to acquire the necessary skills for their career plans.	21976.000	0.235	3.54	4.00	1.324	3.77	4.00	1.036

Source: Own research

The results in Table 1 indicate that, on average, large companies exhibit higher agreement levels with all statements pertaining to the construct of AI-supported acquisition and retention of talented employees. Particularly, large companies display the highest agreement with the statement that AI technology alleviates the monotony associated with the job by streamlining the candidate selection process. They also demonstrate a stronger inclination towards hiring candidates with the requisite skills for successful job performance and candidates with proficiency in AI technologies such as machine learning, natural language processing, and deep learning. Additionally, large companies emphasize the importance of retaining suitable candidates by providing support in acquiring the necessary skills for their career advancement. Furthermore, AI technology is perceived as reducing the time spent in candidate sourcing and providing access to a broader pool of highly qualified candidates. Based on the results of the Mann-Whitney U test, the authors confirm the hypothesis H1: There are statistically significant differences in AI-supported acquiring and retaining talented employees between small and large companies in Slovenia. In the following, Table 2 shows descriptive statistics and the Mann-Whitney Test for the construction of AI-supported appropriate training and development of employees in Slovenian companies.

Table 2. Descriptive Statistics and the Mann-Whitney Test for the construct of AI-supported appropriate training and development of employees

AI-supported appropriate training and development of employees	Mann-Whitney U	Asymp. Sig. (2-tailed)	Small enterprises			Large enterprises		
			Mean	Median	Std. Dev.	Mean	Median	Std. Dev.
AI technology reduces the time spent on in-company training courses.	19820.500	0.003	3.68	4.00	1.161	4.21	4.00	1.093
AI technology reduces the attention deficit experienced by employees in classical in-company training courses.	20109.000	0.047	3.47	3.00	1.374	3.72	4.00	1.220
AI technology increases accessibility to in-company training courses	20657.000	0.025	3.50	4.00	1.344	3.81	4.00	1.135
In-company training courses with artificial intelligence technology lead to a successful training program.	17414.500	0.000	3.57	3.00	0.981	4.02	4.00	0.904
Employee professional knowledge will be kept up to date with in-company training courses through artificial intelligence technology.	15358.000	0.000	3.59	4.00	1.046	4.24	4.00	0.649
When the in-company training courses take place with artificial intelligence technology, the restrictions regarding to place where the training will be given will be removed.	17526.500	0.000	3.53	4.00	0.911	3.95	4.00	0.753
Employees are provided with the required training to deal with AI applications	17844.500	0.000	3.58	4.00	0.849	3.97	4.00	0.734

Source: Own research

The results in Table 2 indicate that, on average, large companies demonstrate higher agreement levels with all statements related to the construct of AI-supported appropriate training and development of employees. Specifically, large companies exhibit the highest agreement with the statement that employee professional knowledge can be effectively updated through in-company training courses facilitated by artificial intelligence technology. Moreover, large companies acknowledge that AI technology contributes to reducing the time required for conducting in-company training courses. Based on the results of the Mann-Whitney U test the authors confirm hypothesis H2: There are statistically significant differences in AI-supported appropriate training and development of employees between small and large enterprises in Slovenia. Moreover, Table 3 presents descriptive statistics and the Mann-Whitney Test for the construct implementation of AI technology in the work environment in Slovenian companies.

Table 3. Descriptive Statistics and Mann-Whitney Test for the construct implementation of AI technology in the work environment

Implementation of AI technology in the work environment	Mann-Whitney U	Asymp. Sig. (2-tailed)	Small companies			Large companies		
			Mean	Median	Std. Dev.	Mean	Median	Std. Dev.
We are able to work with data scientists, other employees and customers to determine opportunities that AI might bring to our organization.	20542.000	0.016	3.49	4.00	1.069	3.79	4.00	0.826
Employees have strong leadership to support AI initiatives and are committed to AI projects.	21012.500	0.048	3.48	4.00	1.419	4.28	4.00	0.834
With AI we reduce the burden on administrative staff in a company.	18728.500	0.000	3.46	4.00	1.148	3.93	4.00	0.885
The AI technology applied in our company can take orders and complete tasks which reduces the workload of employees.	19057.500	0.000	3.47	4.00	1.370	3.94	4.00	1.195
The AI technology applied in our company can communicate with users/customers which reduces the workload of employees	18509.500	0.000	3.40	4.00	1.437	3.97	4.00	1.132
Our company uses program and portfolio structures for managing projects.	20197.500	0.010	3.44	4.00	1.170	3.85	4.00	0.996
Our company has a digital transformation strategy, including AI adoption.	20241.000	0.008	3.86	4.00	1.270	4.27	4.00	0.762
Our company uses AI technologies for work design.	20577.500	0.022	3.60	3.00	1.149	4.24	4.00	1.130
Our company uses AI technologies to plan new tasks better.	20666.500	0.026	3.59	3.52	1,214	4.17	4.00	1.045
Our company uses AI technologies in projects to create teams.	19991.500	0.005	3.54	4.00	1.339	4.12	4.00	0.884

Source: Own research

The results in Table 3 indicate that, on average, large companies exhibit higher agreement levels with all statements pertaining to the construct of AI technology implementation in the work environment. Large companies display the highest agreement with the statement that employees receive strong leadership support for AI initiatives and demonstrate commitment to AI projects. They also affirm that their company has a digital transformation strategy in place, which includes the adoption of AI. Additionally, large companies express a higher agreement regarding

using AI technologies for work design. This is followed by their utilization of AI technologies for better planning new tasks and creating teams within projects. Moreover, large companies acknowledge that the AI technology implemented in their organization can effectively communicate with users/customers, thereby reducing the workload of employees. Also, based on the results of the Mann-Whitney U test, the authors confirm hypothesis H3: There are statistically significant differences in implementing AI technology in the work environment between small and large companies in Slovenia.

5. FUTURE RESEARCH DIRECTIONS

Future research directions for the comparative analysis of AI adoption in small and large companies in Slovenia could explore the following areas: (1) Conduct a longitudinal study to track the evolution of AI adoption in small and large companies over time. This would provide insights into the trends, changes, and challenges organizations face as they progress in their AI implementation journey; (2) investigate the specific factors that influence AI adoption in Slovenian small and large companies. This could include exploring the role of organizational culture, leadership support, technological infrastructure, and resource availability in shaping AI adoption patterns and (3) Conduction industry-specific analyses to understand how AI adoption varies across different sectors in Slovenia. Examine the unique challenges and opportunities faced by industries such as finance, healthcare, manufacturing, and services in adopting and implementing AI technologies.

6. CONCLUSION

The results of this study highlight statistically significant differences in the adoption and perception of AI technology between small and large companies in Slovenia. Large companies consistently demonstrate higher agreement levels with statements related to AI-supported acquisition and retention of talented employees, AI-supported appropriate training and development of employees, and AI technology implementation in the work environment. The presence of statistically significant differences between small and large companies in these areas emphasizes the need for tailored approaches and strategies in AI adoption and implementation. From this point of view, the authors provide the following recommendations on how small companies can implement artificial intelligence to increase their competitive advantage: (1) Company should begin by implementing AI in specific areas or processes that can provide immediate value. Thus, the company, identifies tasks that are repetitive, time-consuming, or prone to errors, and explores how AI technologies can automate or optimize those processes. Starting small allows for testing and learning without overwhelming resources or disrupting overall operations; (2) company should take advantage of AI tools and platforms specifically designed for small businesses. These platforms often provide user-friendly interfaces and pre-built AI models that can be easily integrated into existing systems. This reduces the need for extensive technical expertise and minimizes the cost and time associated with AI implementation; (3) partnering with AI service providers or consultants can help small companies overcome technical barriers and navigate the complexities of AI implementation. These experts can offer guidance, assist in developing AI strategies, and provide customized solutions based on the specific needs and goals of the business; (4) company should encourage a culture that embraces learning, experimentation, and innovation. Develop initiatives that promote AI literacy among employees and provide training opportunities to upskill the workforce. Empower employees to contribute ideas and explore AI solutions that can improve efficiency, customer experiences, and overall

business performance; (5) company should identify AI applications to enhance customer experience. This could include implementing chatbots for customer support, personalizing recommendations based on customer preferences, or utilizing AI-powered analytics to gain insights into customer behaviour. By focusing on customer-centric AI solutions, small companies can differentiate themselves and drive customer satisfaction; (5) companies can benefit from collaborating with other businesses, research institutions, and industry associations. Sharing knowledge and experiences with peers can provide valuable insights and lessons learned in AI implementation. Collaborative efforts can lead to joint projects, shared resources, and collective problem-solving, fostering innovation in AI adoption.

References

- Abrokwah-Larbi, K., & Awuku-Larbi, Y. (2023). The impact of artificial intelligence in marketing on the performance of business organizations: evidence from SMEs in an emerging economy. *Journal of Entrepreneurship in Emerging Economies*, Vol. ahead-of-print No. ahead-of-print. <https://doi-org.ezproxy.lib.ukm.si/10.1108/JEEE-07-2022-0207>
- Bag, S., Pretorius, J. H. C., Gupta, S., & Dwivedi, Y. K. (2021). Role of institutional pressures and resources in the adoption of big data analytics powered artificial intelligence, sustainable manufacturing practices and circular economy capabilities. *Technological Forecasting and Social Change*, 163, 1–16. <https://doi.org/10.1016/j.techfore.2020.120420>
- Basri, W. (2020). Examining the Impact of Artificial Intelligence (AI)-Assisted Social Media Marketing on the Performance of Small and Medium Enterprises: Toward Effective Business Management in the Saudi Arabian Context. *International Journal of Computational Intelligence Systems*, 13(1), 142. <https://doi.org/10.2991/ijcis.d.200127.002>
- Benjamins, R. (2019). Artificial Intelligence in small and medium-sized enterprises. Retrieved June 25, 2023, from <https://business.blogthinkbig.com/artificial-intelligence-in-small-and-medium-sized-enterprises/>
- Cao, L. (2022). A New Age of AI: Features and Futures. *IEEE Intelligent Systems*, 37(1), 25–37. doi: 10.1109/MIS.2022.3150944.
- Dhamija, P., & Bag, S. (2020). Role of artificial intelligence in operations environment: a review and bibliometric analysis. *The TQM Journal*, 32(4), 869–896. <https://doi.org/10.1108/TQM-10-2019-0243>
- Drydakakis, N. (2022). Artificial Intelligence and Reduced SMEs' Business Risks. A Dynamic Capabilities Analysis During the COVID-19 Pandemic. *Information Systems Frontiers*, 24(4), 1223-1247. <https://doi.org/10.1007/s10796-022-10249-6>
- Hansen, E. B., & Bøgh, S. (2021). Artificial Intelligence and Internet of Things in Small and Medium-Sized Enterprises: A Survey. *Journal of Manufacturing Systems*, 58(2), 362–372. <https://doi.org/10.1016/j.jmsy.2020.08.009>
- Kambur, E., & Akar, C. (2022). Human resource developments with the touch of artificial intelligence: a scale development study. *International Journal of Manpower*, 43(1), 168–205. <https://doi.org/10.1108/IJM-04-2021-0216>
- Kedziora, D. J., Musial, K., & Gabrys, B. (2024). AutoML: Towards an Integrated Framework for Autonomous Machine Learning. *Foundations and Trends in Machine Learning*, 17(4), 590–766. <http://dx.doi.org/10.1561/22000000093>
- Liang, D., Cao, W., Zhang, Y., & Xu, Z. (2024). A two-stage classification approach for AI technical service supplier selection based on multi-stakeholder concern. *Information Sciences*, 652, 119762. <https://doi.org/10.1016/j.ins.2023.119762>
- OECD. (2020). COVID-19 and Responsible Business Conduct. OECD.

- Papadopoulos, T., Baltas, K. N., & Baltac, M. E. (2020). The Use of Digital Technologies by Small and Medium Enterprises During COVID-19: Implications for Theory and Practice. *International Journal of Information Management*, 55, 102192. <https://doi.org/10.1016/j.ijinfomgt.2020.102192>
- Peretz-Andersson, E., Tabares, S., Mikalef, P., & Parida, V. (2024). Artificial intelligence implementation in manufacturing SMEs: A resource orchestration approach. *International Journal of Information Management*, 77, 102781. <https://doi.org/10.1016/j.ijinfomgt.2024.102781>
- Pillai, R., & Sivathanu, B. (2020). Adoption of artificial intelligence (AI) for talent acquisition in IT/ITeS organizations. *Benchmarking: An International Journal*, 27(9), 2599–2629. <https://doi.org/10.1108/BIJ-04-2020-0186>
- Szedlak, C., Leyendecker, B., Reinemann, H., Kschischo, M., & Pötters, P. (2021). Risks and Benefits of Artificial Intelligence in Small-and-Medium Sized Enterprises. Proceedings of the International Conference on Industrial Engineering and Operations Management Rome, Italy, August 2-5, 2021. Retrieved June 21, 2023, from <http://ieomsociety.org/proceedings/2021rome/175.pdf>
- Upadhyay, N., Upadhyay, S., & Dwivedi, Y. K. (2021). Theorizing artificial intelligence acceptance and digital entrepreneurship model. *International Journal of Entrepreneurial Behavior & Research*, Vol. ahead-of-print No. ahead-of-print. <https://doi.org/10.1108/IJEBR-01-2021-0052>
- Wang, J., Lu, Y., Fan, S., Hu, P., & Wang, B. (2022). How to survive in the age of artificial intelligence? Exploring the intelligent transformations of SMEs in central China. *International Journal of Emerging Markets*, 17(4), 1143–1162. <https://doi.org/10.1108/IJOEM-06-2021-0985>
- Xu, P., Zhu, X., & Clifton, D. A. (2023). Multimodal Learning With Transformers: A Survey. *IEEE Transactions on Pattern Analysis and Machine Intelligence*, 1-20. <https://doi.org/10.1109/tpami.2023.3275156>
- Zhong, W., Gao, Y., Ding, N., Liu, Z., Zhou, M., Wang, J., Yin, J., & Duan, N. (2023). Improving task generalization via unified schema prompt. *AI Open*, 4, 120–129. <https://doi.org/10.1016/j.aiopen.2023.08.011>

