Journal DOI: 10.36713/epra1013 | SJIF Impact Factor (2026): 8.748 ISSN: 2347-4378
EPRA International Journal of Economics, Business and Management Studies (EBMS)
Volume: 13 | Issue: 2 | February 2026 -Peer-Reviewed Journal

BRIDGING THE SKILLS GAP: DATA-DRIVEN WORKFORCE DEVELOPMENT FOR EMERGING U.S. ORGANIZATIONS

Chioma Peace Okonkwo
Ainsworth Inc, New Jersey, USA.

Article DOI: https://doi.org/10.36713/epra26142
DOI No: 10.36713/epra26142

ABSTRACT

This study examines how data-driven workforce development supports emerging firms in the United States in managing the growing skills gaps created by the rapid adoption of artificial intelligence (AI). As organizations integrate AI into daily operations, the demand for advanced digital and analytical skills has increased, exposing significant gaps in employee capabilities. Using a descriptive qualitative design, this study analyzes secondary data published between 2020 and 2025, including academic literature, government reports, and industry publications. Thematic analysis reveals that AI adoption intensifies talent shortages, particularly in emerging firms that lack structured training systems. However, the evidence shows that data-driven workforce development enables firms to identify specific skill gaps, design targeted learning programs and improve employee adaptability. These practices enhance competence, innovation, productivity, and competitiveness. The study argues that integrating data-driven workforce strategies is critical for preparing employees for technological transformation and sustaining long-term organizational performance in the evolving U.S. labor market.

KEYWORDS: *Artificial Intelligence, Skills Gap, Workforce Development, Digital Skills, Emerging Firms*

INTRODUCTION

Rapid advances in artificial intelligence, data analytics, and automation are disrupting business processes and reshaping the skills expected of employees in the United States (Jaiswal et al., 2023). As AI technologies become increasingly embedded in organizational workflows, U.S. businesses face a significant skills gap, particularly among new organizations such as startups and small to medium-sized enterprises (Olarenwaju, 2023). These firms often lack the extensive human resource infrastructure of larger corporations yet are under pressure to adapt quickly to remain competitive in a rapidly changing market.

Recent studies indicate that many employees already use AI systems, yet more than half believe that improved training is the most urgent requirement for using these technologies effectively and efficiently (Morandini et al., 2023). Understanding which skills employees currently possess, which skills are becoming obsolete, and which new competencies are required for future growth presents a strategic challenge for emerging firms in the United States. While many organizations recognize the importance of reskilling, relatively few have implemented predictive analytics, talent intelligence tools, or AI-based skills assessments to guide training decisions (Morandini et al., 2023). In addition, a substantial number of firms do not systematically apply data-driven workforce development initiatives. This gap contributes to inefficiencies, constrains organizational growth, and limits the ability of firms to compete in technology-intensive markets (Omowole et al., 2024).

For emerging firms in the United States, skill shortages continue to impede productivity and competitiveness, especially in technical, digital, and AI-related domains (Joshi, 2025). Evidence suggests that organizational transformation often outpaces employees' ability to acquire the necessary competencies, resulting in a persistent mismatch between the supply and demand of skills. This mismatch can stifle innovation, delay growth, and jeopardize the long-term sustainability of dynamic and adaptable businesses (Challoumis et al., 2024). To address this challenge, firms must adopt data-driven workforce development strategies that provide actionable insights into skills gaps and potential areas for employee development (Okon et al., 2024). Through AI-powered skills inference, labor market

analytics, and predictive workforce modelling, emerging firms can plan more effectively, allocate training resources more efficiently, and anticipate future talent requirements (Kumar et al., 2024). By integrating data-driven approaches with human judgment, organizations can more accurately detect gaps, focus reskilling efforts, and ensure that employees acquire the competencies most critical to organizational success (Bobitan et al., 2024).

Existing research on AI, skills gaps, and workforce development has largely focused on large multinational corporations that possess mature HR infrastructures and formal learning systems. In contrast, emerging firms such as startups and small to medium-sized enterprises face distinct constraints in terms of funding, HR capacity, and access to advanced analytics. As a result, there is limited empirical and conceptual work that explains how these organizations can use data-driven approaches to address AI-related skills gaps. By concentrating specifically on emerging U.S. firms, this study fills an important gap in the literature and offers a focused analysis of how data-driven workforce development can be leveraged in resource-constrained contexts.

This study aims to identify the major barriers that emerging firms face in adopting data-driven workforce development whether financial, technological, or cultural and to suggest practical, evidence-based strategies that can support the development of a skilled, adaptable, and future-ready workforce. By focusing on emerging organizations, the study addresses a notable void in the existing literature, which frequently centers on larger international corporations while overlooking smaller companies that confront distinct workforce development challenges.

The study has both theoretical and practical implications. Theoretically, it contributes to knowledge on workforce development, human capital, and HR analytics by examining a group of firms that are often underrepresented in research. Practically, it provides clear guidance to founders, human resource managers, and operations executives on how to make data-driven talent management decisions. The findings can inform public- and private-sector initiatives aimed at aligning training programs with the evolving needs of smaller and high-growth firms, ensuring that investments in reskilling and upskilling generate maximum impact.

While this study provides valuable insights, it is confined to emerging U.S. firms and relies on secondary data sourced from industry reports, policy publications, academic research, and publicly available databases. Limitations include potential inconsistencies in how “skills gaps” and “emerging organizations” are defined, restricted insight into proprietary workplace practices, and time lags in reporting. Despite these limitations, the study offers a comprehensive evaluation of how data-driven workforce development can help emerging companies address skills gaps, strengthen employee capabilities, and enhance organizational resilience in a rapidly changing labor market. By exploring these dynamics, the study emphasizes the importance of integrating data-driven methods into organizational planning and highlights how emerging firms in the United States can build a workforce that not only meets current business demands but is also prepared for future challenges and opportunities.

METHODOLOGY

This chapter describes the research methodology used to investigate how data-driven workforce development helps emerging firms in the United States respond to skills gaps associated with the expanding adoption of artificial intelligence. Because the study relies on existing literature, government statistics, and previously published findings, a secondary data approach is employed. This design makes it possible to capture recent labor market trends and organizational responses without conducting primary data collection.

The study addresses the following central research question:
How can data-driven workforce development strategies help emerging U.S. firms bridge skills gaps created by the adoption of artificial intelligence?

RESEARCH DESIGN AND APPROACH

The study utilizes a descriptive qualitative research design. This approach is appropriate because the goal is to explain and analyze how skills gaps arise and how firms implement data-driven workforce initiatives, rather than to test causal relationships or measure variables quantitatively. A qualitative secondary data strategy is adopted, drawing on materials already available in academic journals, government reports, policy documents, and industry publications.

Journal DOI: 10.36713/epra1013 | SJIF Impact Factor (2026): 8.748 ISSN: 2347-4378
EPRA International Journal of Economics, Business and Management Studies (EBMS)
Volume: 13 | Issue: 2 | February 2026 -Peer-Reviewed Journal

Qualitative secondary analysis is well-suited to synthesizing patterns across a broad body of existing research and to interpreting complex workforce transitions in a structured way (Naeem et al., 2023).

The study uses credible sources, including peer-reviewed journal articles indexed in databases such as Google Scholar and Scopus, as well as reports from the U.S. Bureau of Labor Statistics, publications from the National Skills Coalition, OECD workforce development reports, and industry research on AI adoption, labor demand, and changing skill requirements. Only publications released between 2020 and 2025 are included. This timeframe ensures that the study reflects recent developments in AI usage, talent shortages, and workforce development strategies.

DATA ANALYSIS

The study interprets secondary data using thematic analysis, a versatile technique for identifying patterns across multiple documents (Naeem et al., 2023). Thematic analysis involves several stages: familiarization with the data, generation of initial codes, review and refinement of codes, clustering related concepts, and developing final themes. This method is widely accepted as a useful approach for synthesizing secondary data and analyzing how different authors conceptualize workforce issues arising from technological change (Aithal et al., 2023).

In this study, themes were organized around four core areas: (1) the adoption of artificial intelligence in emerging firms, (2) the emergence and nature of skills shortages, (3) the design and implementation of data-driven workforce initiatives, and (4) the resulting changes in employee capability and organizational competitiveness. To strengthen the credibility of the analysis, three strategies were used: triangulation, consistency, and transparency. Themes were confirmed using multiple sources, including academic studies, government statistics, and industry reports. All decisions regarding inclusion, exclusion, and theme development were documented to ensure that the analytical process remained clear and traceable.

LITERATURE REVIEW

The rapid emergence of artificial intelligence has altered the way businesses operate and the skills they require from their employees. Recent data indicate that artificial intelligence is affecting not only job titles but also the mix of jobs in practically every business in the United States. According to Rathore (2023), the integration of artificial intelligence into business operations has increased the demand for new digital and analytical skills. This transformation has been especially crucial for emerging organizations as well as small and medium-sized businesses that mostly operate with low financial and human resource capabilities while still competing in technology-driven markets (Raihan, 2024). According to research, firms now expect their employees to have a combination of specialized knowledge in artificial intelligence and broader digital literacy (Afzal et al., 2023).

According to Cramarenco et al. (2023), on the impact of artificial intelligence (AI) on employees' skills and well-being in global labor markets, employers are increasingly seeking people who can demonstrate adaptability, critical thinking, problem-solving, and excellent interpersonal skills. These skills are becoming increasingly important as artificial intelligence systems have taken over routine tasks, leaving workers to handle higher-level judgment, creativity, and collaboration (DĂNILOAIA et al., 2024). For firms emerging in the US, striking a balance between technical competence and human-centered competencies has become critical to maintaining competitive momentum (Bal et al., 2020). Small and medium-sized businesses face distinct challenges in their attempt to implement advanced digital tools and analytics (Omowole et al., 2024). A qualitative study of business analytics adoption among small enterprises in the United States discovered that while many organizations realize the benefits of data-driven decision making, many struggle due to inadequate internal expertise, cost burdens, and a lack of awareness of available technology (Kasiri et al., 2024). These limitations limit their capacity to apply modern workforce development techniques that rely on precise data and predictive insight. However, studies imply that artificial intelligence could help level the playing field (Kasiri et al., 2024). According to Cohran, (2025) on generative artificial intelligence and small enterprise development, nearly 50% of small firms that utilize generative artificial intelligence reported improvements in employee performance, with a sizable proportion indicating that the technology helped compensate for skill shortages and labor gaps. Workforce development is a critical consideration for firms seeking to deploy artificial intelligence efficiently (Chowdhury et al., 2024). A global assessment of training supply for both artificial intelligence and ecologically friendly transitions emphasize the crucial need for governments, institutions, and enterprises to provide easily accessible training programs. For developing firms in the United States, this highlights

the need to form partnerships with governmental institutions and nonprofit training providers to ensure that employees may upskill without putting the organization under financial constraint (Shan & Wang, 2024). Recent labor market studies in the United States indicate that technical skills and human-centered qualities are becoming increasingly important (Poteralska et al., 2024). Shiohira (2021) demonstrates that artificial intelligence generates a need for digital literacy resilience and collaboration abilities, rather than narrowly defined technical duties. According to Kshetri et al. (2024), there is an increase in roles requiring generative artificial intelligence skills in content development, marketing, product design, and service delivery. This indicates that artificial intelligence is becoming more integrated across organizational functions, creating opportunities for innovation and competitive advantage. According to Schönberger (2023), many corporations, particularly small and medium-sized businesses, struggle to integrate artificial intelligence due to staff skill gaps. Schönberger (2023) also cautions that without targeted training, artificial intelligence's productivity potential may remain unutilized. These findings imply that rising firms must nurture adaptive workforces capable of collaborating with artificial intelligence, offering human judgment and innovation while maintaining competitiveness in an AI-shaped market.

CONCEPTUAL REVIEW

The concept of a skills gap refers to the mismatch between employees' skills and the competencies that companies require. This gap has intensified in the United States as artificial intelligence and digital technology have altered routine tasks, increasing the demand for data literacy, analytical thinking, adaptability, and teamwork (Martinez, 2025). Workforce development is the deliberate process of providing employees with the necessary competencies, which is increasingly data-driven. Presently, organizations employ analytics and AI-powered tools to detect training needs, monitor market trends, and design focused competence development programs (Aldoseri et al., 2024). Data-driven development enables emerging firms to anticipate future skill requirements and respond more effectively to technology changes. The adoption of artificial intelligence further alters these dynamics by modifying the types of tasks employees undertake, placing higher value on human reasoning, creativity, and collaboration (Rastogi & Pandita, 2025). Organizational competitiveness depends on the ability to respond to these changes to retain a skilled and adaptable staff (Mandlik et al., 2025). These ideas form the basis of this study and demonstrate why data-driven workforce strategies are critical for emerging US organizations.

THEORETICAL REVIEW

Several theories contribute to the knowledge of how organizations respond to skill shortages and technological development. According to Human Capital Theory, employee knowledge and skills serve as economic assets that boost organizational output (Ositadimma et al., 2025). This theory contends that strategic investment in training and development boosts competitiveness, especially as technology advances rapidly. The Resource-Based View emphasizes how distinctive internal capabilities, such as workforce skills, result in long-term benefits (Kero & Bogale, 2023). From this viewpoint, data-driven workforce development becomes a deliberate strategy for creating scarce and valued internal resources. Finally, the Skill Biased Technological Change theory sheds light on how advanced technologies such as artificial intelligence enhance the demand for highly skilled labor while decreasing reliance on routine tasks (Akinwale et al., 2025). These ideas explain why rising firms in the United States must improve employee skills to remain competitive in an environment shaped by artificial intelligence and digital transformation.

EMPIRICAL REVIEW

Recent empirical studies provide insight into how firms in the United States are addressing skill shortages and the incorporation of artificial intelligence. Research continuously indicates that technological advancements have increased the demand for personnel with digital, analytical, and collaborative skills (Gouda, 2020). According to studies evaluating labor trends across many industries, employers are struggling to source employees with advanced digital skills, prompting a renewed focus on employee training and reskilling initiatives (Onifade et al., 2022). Emerging firms and small and medium-sized businesses face these issues more acutely since they have limited resources to invest in continuous learning programs (Marolt et al., 2024). Evidence also indicates that firms that employ data-driven workforce initiatives achieve successful results (Johnson et al., 2021). Empirical reviews of talent analytics reveal that firms that utilize data to inform hiring, training, and performance management can identify skill shortages and devise effective learning interventions (Pala, 2024). Research also shows that artificial intelligence-powered technologies, such as automated talent evaluations and predictive models, assist firms in anticipating workforce demands and making informed development decisions (Vishwanath et al., 2023). According to research on

Journal DOI: 10.36713/epra1013 | SJIF Impact Factor (2026): 8.748 ISSN: 2347-4378
EPRA International Journal of Economics, Business and Management Studies (EBMS)
Volume: 13 | Issue: 2 | February 2026 -Peer-Reviewed Journal

artificial intelligence adoption among small and medium-sized businesses, companies that integrate AI into their processes report increased efficiency, innovation, and staff capabilities (Bhalerao et al., 2022). The claim that data-driven workforce development is crucial for negotiating the shifting skill environment in the US is generally supported by empirical research (Talukder, 2025). The study emphasizes the need for strategic learning investments, contemporary analytics tools, and adaptable organizational strategies in developing a competitive workforce.

CONCEPTUAL FRAMEWORK

This study proposes a conceptual framework illustrating how the increasing adoption of artificial intelligence (AI) in emerging U.S. firms heightens the demand for new digital, analytical, and adaptive skills, which many employees are unable to meet. This mismatch creates visible and persistent skill gaps that hinder organizational performance and competitiveness.



Conceptual Framework for Addressing Skill Shortages in Emerging U.S. Organizationes

(The framework presented here integrates key constructs and findings from prior research studies utilized in this study.)

Data-driven workforce development provides a solution by utilizing analytics and labor market information to detect gaps in competencies and direct focused training. When firms use accurate data to design training programs, employees develop stronger digital and analytical skills and become more versatile in their roles. Firms become more innovative, efficient, and competitive in a changing economy as employee capability increases. The paradigm follows a clear process in which artificial intelligence adoption generates new needs, skill gaps emerge, data-driven training fills these gaps, employee competence improves, and organizational competitiveness rises.

GROWING ADOPTION OF ARTIFICIAL INTELLIGENCE IN U.S ORGANISATIONS

The evidence evaluated in this paper demonstrates that the application of artificial intelligence has progressed beyond experimentation and is now increasingly incorporated in ordinary organizational procedures across US enterprises. Emerging firms, particularly, are implementing AI technologies into decision support, consumer engagement, content generation, and operational efficiency (Magableh et al., 2024). While the spread of AI presents potential for efficiency and innovation, it also changes the skill set demanded of individuals, frequently at a rate that outpaces workforce readiness. The findings reveal that the primary challenge facing emerging firms is not a complete absence of skills but a misalignment between existing competencies and those demanded by AI-enabled work environments (Li, 2024). Employees are increasingly expected to interpret data outputs, exercise contextual judgment, and collaborate with intelligent systems rather than perform narrowly defined routine tasks (Leavitt et al., 2025). This confirms the assumptions of skill-biased technological change theory, which posits that advanced technologies elevate the value of higher-order cognitive and adaptive skills while rendering certain routine competencies less relevant (Boob-Engel, 2025).

These transformations provide substantial managerial and strategic challenges to growing enterprises with limited resources. Unlike large firms, smaller organizations may lack formal training infrastructures and significant human resource analytics capabilities. As a result, AI adoption may inadvertently exacerbate talent shortages, diminish short-term productivity, and create employee insecurity (Boob-Engel, 2025). This finding is consistent with human capital theory, which holds that technical investments offer limited benefits unless accompanied by equal investments in skill development. Crucially, the evidence indicates that data-driven workforce development acts as a moderating mechanism in this process. Firms that systematically collect and analyze workforce data, such as skill inventories, training outcomes, and labor market trends, are better positioned to identify gaps, prioritize reskilling, and align learning initiatives with strategic objectives (Li, 2024). Rather than relying on generalized or reactive training responses, these firms apply targeted interventions that address specific competency deficits linked to AI adoption. This strategic use of data supports the resource-based view by enabling organizations to develop valuable, rare, and difficult-to-imitate internal capabilities grounded in human expertise (Magableh et al., 2024).

The results also indicate that data-driven initiatives improve employee adaptation and organizational resilience (Li, 2024). Employees benefit from more logical role transitions and clearer learning paths when skill development decisions are based on data rather than intuition (Magableh et al., 2024). This decreases resistance to technological change and promotes a culture of continual improvement, which is especially crucial in contexts where AI capabilities advance quickly. Over time, such adaptability fosters innovation, enhances operational performance, and strengthens rising enterprises' competitive position in the US labor market.

Overall, the discussion highlights that artificial intelligence, while a source of disruption, does not inherently disadvantage emerging organizations. Instead, outcomes depend largely on whether firms complement technological adoption with deliberate, data-informed workforce strategies. By integrating human judgment with analytical insight, emerging U.S. organizations can translate AI-driven change into sustainable performance advantages rather than skill-related bottlenecks.

ETHICAL CONSIDERATIONS

This study followed ethical criteria appropriate for qualitative research based solely on secondary data. All materials used, including peer-reviewed academic research, government labor statistics, policy documents, and industry reports, are publicly available and sourced from reliable and traceable sources. Because the research does not involve primary data collection or direct interaction with human participants, informed permission, anonymity, and confidentiality are not relevant. Ethical rigor was maintained through strict adherence to principles of academic integrity and transparency. All sources were accurately cited, and original authorship was fully acknowledged to prevent plagiarism or misrepresentation of prior work. The study deliberately avoided selective citation practices by integrating findings across multiple types of sources, thereby reducing the risk of bias and ensuring balanced representation of competing perspectives on artificial intelligence and workforce development.

Ethical responsibility is reflected in the study's interpretive stance. Rather than portraying artificial intelligence as uniformly beneficial or detrimental, the analysis acknowledges both its enabling potential and its capacity to exacerbate existing inequalities in skills of access and organizational capability. By presenting findings cautiously and situating conclusions within the limits of secondary data, the study avoids overstated claims and contributes responsibly to scholarly and policy-oriented debates on workforce development in an AI-driven economy.

RECOMMENDATION

The study's findings emphasize the need for rising firms in the United States to implement deliberate and data-driven initiatives to increase workforce capability. Organizations should start by investing in data-driven skills evaluations that will help them pinpoint their most crucial skill gaps with precision. A good awareness of these gaps serves as a basis for creating effective development activities. Once the areas of need have been identified, businesses should develop targeted training programs that focus on the specific competencies required for effective AI deployment. Such programs should prioritize digital literacy, data interpretation, and problem-solving as these abilities are regularly identified as critical gaps in the literature. It is also critical to strengthen ties with educational institutions, training facilities, and professional associations. These alliances can increase access to specialized learning materials and ensure that employees receive training that meets current industry requirements. Firms should also foster a culture of continuous learning by encouraging staff to stay updated on new digital tools and organizational requirements. Incorporating learning into regular work practices can aid in workforce readiness in a rapidly changing environment. This study also recommends the need for emerging firms to establish robust support networks for their personnel amid technological shifts. Introducing artificial intelligence into the workplace can be challenging, so there should be an avenue for employees to benefit from coaching, encouragement, and mentoring as they adjust to new technologies. Given that many emerging businesses operate with limited budgets, they should deploy training resources tactically, prioritizing the areas that have the biggest effect on performance and long-term competitiveness. Finally, firms should build procedures for monitoring and evaluating the efficacy of their workforce development initiatives. Regular assessment ensures that training activities remain relevant and allow for continual progress.

DISCUSSION

This study investigated how data-driven workforce development may help growing firms in the United States manage skill gaps caused by the deployment of artificial intelligence. By combining recent academic research, government

labor data, and industry publications, the findings provide a detailed view of how technology innovation is changing workforce expectations and exposing structural weaknesses in smaller and expanding businesses. The discussion contextualizes these findings within existing theory and emphasizes their significance for corporate strategy, worker adaptation, and long-term competitiveness.

CONCLUSION

The study indicates that artificial intelligence usage is expanding across numerous sectors in the United States, changing work roles and increasing the demand for digital and analytical skills. Emerging firms face substantial challenges due to the absence of structured training systems and limited resources. As artificial intelligence tools become more integrated into daily operations, skill gaps become more obvious, thus affecting productivity and organizational growth. The findings also show that data-driven workforce development is one of the most effective approaches to addressing skill shortages. Organizations that use data analytics to assess skill gaps, track employee progress, and build training programs tend to achieve better outcomes than those that rely on traditional training approaches. Data-driven strategies help to ensure that learning initiatives are aligned with actual job requirements, allowing people to adjust more quickly to technological change. This study also suggests that improving staff capability is critical to increasing organizational competitiveness. Organizations benefit from employees learning essential digital skills and developing operational efficiency in using artificial intelligence tools. As a result, the study lends support to the conceptual framework that asserts that the deployment of artificial intelligence generates new demands, resulting in skill shortages. Data-driven workforce development fills these gaps, improving employee competence and eventually contributing to competitiveness.

REFERENCES

1. *Afzal, M. N. I., Shohan, A. H. N., Siddiqui, S., & Tasnim, N. (2023). Application of artificial intelligence in human resource management: A review. Journal of Human Resource Management, 26(1), 1–12.*
2. *Aithal, R. K., Choudhary, V., Maurya, H., Pradhan, D., & Sarkar, D. N. (2023). Factors influencing technology adoption amongst small retailers: Insights from thematic analysis. International Journal of Retail & Distribution Management, 51(1), 81–102. https://doi.org/10.1108/IJRDM-01-2022-0031*
3. *Akinwale, O. E., Kuye, O. L., & Doddanavar, I. (2025). Scourge of replacing contemporary work environment with artificial intelligence (AI-dark-side): The role of capacity development in quality of work-life and organisational performance. Journal of Systems and Information Technology, 27(1), 116-145.*
4. *Aldoseri, A., Al-Khalifa, K. N., & Hamouda, A. M. (2024). AI-powered innovation in digital transformation: Key pillars and industry impact. Sustainability, 16(5), 1790.*
5. *Bal, R., & Gill, I. S. (2020). Policy approaches to artificial intelligence–based technologies in China, the European Union, and the United States. AI & Society, 35(2), 375–389.*
6. *Bhalerao, K., Kumar, A., Kumar, A., & Pujari, P. (2022). A study of barriers and benefits of artificial intelligence adoption in small and medium enterprises. Academy of Marketing Studies Journal, 26(1), 1–6.*
7. *Bobitan, N., Dumitrescu, D., Popa, A. F., Sahlian, D. N., & Turlea, I. C. (2024). Shaping tomorrow: Anticipating skills requirements based on the integration of artificial intelligence in business organizations – A foresight analysis using the scenario method. Electronics, 13(11), Article 2198. https://doi.org/10.3390/electronics13112198*
8. *Boob-Engel, K. E. (2025). The Role of Artificial Intelligence in Organizational Decision-Making.*
9. *Chowdhury, S., Budhwar, P., & Wood, G. (2024). Generative artificial intelligence in business: Towards a strategic human resource management framework. British Journal of Management, 35(4), 1680–1691. https://doi.org/10.1111/1467-8551.12763*
10. *Cohran, A. (2025). The impact of integrating generative artificial intelligence into organizational processes on individual performance (Doctoral dissertation, Benedictine University).*
11. *Cramarenco, R. E., Burcă-Voicu, M. I., & Dabija, D. C. (2023). The impact of artificial intelligence on employees' skills and well-being in global labor markets: A systematic review. Oeconomia Copernicana, 14(3), 731–767. https://doi.org/10.24136/oc.2023.021*
12. *Dăniloia, D. F., & Turturean, E. (2024). Knowledge workers and the rise of artificial intelligence: Navigating new challenges. SEA: Practical Application of Science, 12(35), 45–53.*
13. *Gouda, H. (2020). Exploring the relevant skills needed for digital-age employees. European Journal of Business and Management, 12(2), 58–67.*
14. *Jaiswal, A., Arun, C. J., & Varma, A. (2023). Rebooting employees: Upskilling for artificial intelligence in multinational corporations. In A. Varma & R. Budhwar (Eds.), Artificial intelligence and international HRM (pp. 114–143). Routledge.*

15. *Johnson, M., Jain, R., Brennan-Tonetta, P., Swartz, E., Silver, D., Paolini, J., & Hill, C. (2021). Impact of big data and artificial intelligence on industry: Developing a workforce roadmap for a data-driven economy. Global Journal of Flexible Systems Management, 22(3), 197–217. https://doi.org/10.1007/s40171-021-00265-8*
16. *Kasiri, N., Cirino, C., & Narimanian, C. (2024). Patterns of business analytics adoption in U.S. SMEs: A qualitative approach. Small Business Institute Journal, 20(1), 26–36.*
17. *Kero, C. A., & Bogale, A. T. (2023). A Systematic Review of Resource-Based View and Dynamic Capabilities of Firms and Future Research Avenues. International Journal of Sustainable Development & Planning, 18(10).*
18. *Kshetri, N., Dwivedi, Y. K., Davenport, T. H., & Panteli, N. (2024). Generative artificial intelligence in marketing: Applications, opportunities, challenges, and research agenda. International Journal of Information Management, 75, Article 102716. https://doi.org/10.1016/j.ijinfomgt.2023.102716*
19. *Leavitt, K., Barnes, C. M., & Shapiro, D. L. (2025). The role of human managers within algorithmic performance management systems: a process model of employee trust in managers through reflexivity. Academy of Management Review, 50(4), 745-767.*
20. *Li, L. (2024). Reskilling and upskilling the future-ready workforce for industry 4.0 and beyond. Information Systems Frontiers, 26(5), 1697-1712.*
21. *Mandlik, D., Rautrao, R. R., & Nille, N. (2025). Adaptability as a Key Competency. Flexibility and Emerging Perspectives in Digital Supply Chain Management, 223.*
22. *Magableh, I. K., Mahrouq, M. H., Ta'Amnha, M. A., & Riyadh, H. A. (2024). The role of marketing artificial intelligence in enhancing sustainable financial performance of medium-sized enterprises through customer engagement and data-driven decision-making. Sustainability, 16(24), 11279.*
23. *Li, L. (2024). Reskilling and upskilling the future-ready workforce for industry 4.0 and beyond. Information Systems Frontiers, 26(5), 1697-1712.*
24. *Martinez, J. A. (2025). Are Critical Thinking and Problem-Solving Skills Enough to Help Prepare Students to Meet the Modern Workforce Demands With Artificial Intelligence?. In AI Integration Into Andragogical Education (pp. 137-154). IGI Global Scientific Publishing.*
25. *Marolt, M., Lenart, G., Kljajić Borštnar, M., & Pucihar, A. (2024). Exploring the digital transformation journey among micro, small-, and medium-sized enterprises. Systems, 13(1), Article 1. https://doi.org/10.3390/systems13010001*
26. *Morandini, S., Fraboni, F., De Angelis, M., Puzzo, G., Giusino, D., & Pietrantoni, L. (2023). The impact of artificial intelligence on workers' skills: Upskilling and reskilling in organizations. Informing Science: The International Journal of an Emerging Transdiscipline, 26, 39–68. https://doi.org/10.28945/5128*
27. *Naeem, M., Ozuem, W., Howell, K., & Ranfagni, S. (2023). A step-by-step process of thematic analysis to develop a conceptual model in qualitative research. International Journal of Qualitative Methods, 22, 1–12. https://doi.org/10.1177/16094069231205789*
28. *Olarenwaju, A. (2023). Impact of artificial intelligence on small and medium-sized businesses in California, United States. Quest Journals: Journal of Research in Business and Management, 11(6), 1–10.*
29. *Omowole, B. M., Olufemi-Philips, A. Q., Ofadile, O. C., Eyo-Udo, N. L., & Ewim, S. E. (2024). Barriers and drivers of digital transformation in SMEs: A conceptual analysis. International Journal of Frontline Research in Multidisciplinary Studies, 5(2), 19–36.*
30. *Onifade, O., Sharma, A., Adekunle, B. I., Ogeawuchi, J. C., & Abayomi, A. A. (2022). Digital upskilling for the future workforce: Evaluating the impact of AI and automation on employment trends. International Journal of Multidisciplinary Research and Growth Evaluation, 3(3), 680–685.*
31. *Ositadimma, O. I., Obiezekwem, C. J., Soba, U. J., & Njoagwu, F. C. (2025). Human capital development and employee productivity: Highlighting the potentials for growth and improvement. Arabian Journal of Business and Management Review (Kuwait Chapter), 14(2), 65-72.*
32. *Pala, S. K. (2024). Use and applications of data analytics in human resource management and talent acquisition. International Journal of Enhanced Research in Management & Computer Applications, 13(1), 45–53.*
33. *Poteralska, M., & Perek-Białas, J. (2024). The importance of employee skills in a technologically transforming labor market: An employer perspective. Human Resource Management Journal, 157(2), 30–54.*
34. *Rafner, J., Dellermann, D., Hjorth, A., Verasztó, D., Kampf, C., Mackay, W., & Sherson, J. (2022). Deskilling, upskilling, and reskilling: A case for hybrid intelligence. Morals & Machines, 1(2), 24–39.*
35. *Raihan, A. (2024). A review of the digitalization of small and medium enterprises toward sustainability. Global Sustainability Research, 3(2), 1–16.*
36. *Rastogi, S., & Pandita, D. (2025). From code to collaboration: influence of artificial intelligence on workforce dynamics. International Journal of Organization Theory & Behavior.*
37. *Rathore, B. (2023). Digital transformation 4.0: Integration of artificial intelligence and the metaverse in marketing. Eduzone: International Peer-Reviewed Multidisciplinary Journal, 12(1), 42–48.*

38. *Shan, Z., & Wang, Y. (2024). Strategic talent development in the knowledge economy: a comparative analysis of global practices. Journal of the Knowledge Economy, 15(4), 19570-19596.*
39. *Schönberger, M. (2023). Artificial intelligence for small and medium-sized enterprises: Identifying key applications and challenges. Journal of Business Management, 21(1), 55–68.*
40. *Shiohira, K. (2021). Understanding the impact of artificial intelligence on skills development. UNESCO-UNEVOC International Centre for Technical and Vocational Education and Training.*
41. *Talukder, K. A. (2025). The impact of data-driven decision support systems on governance and policy implementation in U.S. institutions. ASRC Procedia: Global Perspectives in Science and Scholarship, 1(1), 994–1030.*
42. *Vishwanath, B., & Vaddepalli, S. (2023). The future of work: Implications of artificial intelligence for HR practices. Tuijin Jishu/Journal of Propulsion Technology, 44(3), 1711–1724.*