Commercium : Journal of Business and Management
E-ISSN : 3031- 9889
Volume. 2, Issue 1, January 2024
Page No: 59-70

Digital Tools, Sectoral Dynamics, and Learning Intensity: An Empirical Analysis of KM Adoption Across Industries

Widaningsih[1], Putri Ayu Lestari[2]
[1]Universitas Garut, Indonesia
[2]Universitas Sahid, Indonesia
Correspondent: widaningsih@uniga.ac.id[1]

Received : December 25, 2023
Accepted : February 25, 2024
Published : February 28, 2024

Citation: Widaningsih., Lestari, P.A. (2024). The Trust Gap in Online Marketplaces: Policy and Platform Dynamics in the European Union's Digital Economy. Commercium : Journal of Business and Management, 2(1), 59-70.

ABSTRACT: This study examines how the adoption of knowledge management (KM) systems influences organizational learning (OL) outcomes across sectors. In the era of digital transformation, platforms such as Learning Management Systems (LMS), Electronic Performance Support Systems (EPSS), and collaboration tools like Microsoft Teams play a pivotal role in knowledge strategies. The study aims to assess whether the use of these systems is associated with learning intensity, measured by training hours and per-employee spending. A cross sectional analysis was conducted using secondary data from LinkedIn Learning, ATD, Microsoft, and international databases such as OECD and the European Commission. Independent variables included LMS and EPSS/KMS adoption rates, and Microsoft Teams' user metrics. Dependent variables captured organizational learning outcomes across sectors, including healthcare, manufacturing, and services. Results indicate a positive association between the adoption of LMS and collaboration tools with increased learning intensity. Organizations with high LMS usage and digital collaboration capabilities reported greater training hours and learning investments. EPSS/KMS usage remains limited but represents untapped potential for performance aligned learning. Sectoral differences were notable, with manufacturing leading in training hours, while healthcare focused on compliance learning. Organizational size also influenced outcomes, with larger firms better equipped to support structured learning systems. The findings contribute to understanding how KM systems influence organizational learning performance and highlight the need for context specific KM strategies. Despite some limitations in data scope and causality, the study emphasizes the strategic importance of aligning KM tools with learning goals to foster adaptive, knowledge driven organizations.
Keywords: Knowledge Management Systems, Organizational Learning, Learning Management Systems, Digital Collaboration, EPSS, Sectoral Analysis, Learning Intensity.

INTRODUCTION

The integration of digital technologies has transformed how organizations create, store, and disseminate knowledge. Knowledge Management Systems (KMS) are now central to

competitiveness, enabling firms to manage knowledge assets more effectively in dynamic environments. This trend intensified during the COVID-19 pandemic, when remote work increased reliance on virtualization tools and digital platforms as enablers of communication and knowledge flow (Budrytė & Vainauskienė, 2023; Deng et al., 2022). As organizations increasingly recognize the value of leveraging technology to support knowledge sharing and learning, the development of robust KM infrastructure has emerged as a strategic imperative.

A notable evolution within the broader KM landscape is the transformation of Learning Management Systems (LMS). Historically employed for the delivery of structured training modules, modern LMS platforms have incorporated social learning tools, peer to peer interaction capabilities, and analytics dashboards that facilitate personalized learning and performance tracking. This shift reflects a broader understanding of learning as a continuous, collaborative process embedded in everyday work practices rather than a series of discrete training events (Bettoni & Obeng, 2020; Saini et al., 2019). As such, LMS platforms are now positioned as catalysts of organizational adaptability, fostering cultures of continuous improvement and lifelong learning (Chedid et al., 2019; Suryadi et al., 2022).

Parallel to these developments, digital transformation frameworks have emerged to align KM strategies with broader organizational objectives. Among these, the Knowledge Management Infrastructure Framework provides an essential reference for designing holistic systems that incorporate people, technology, and processes (Aviv et al., 2021). These models emphasize that technological investment alone is insufficient; success in knowledge management depends on aligning infrastructure with organizational culture and strategic goals. The integration of such frameworks is especially critical as organizations navigate the complexities of hybrid work environments and evolving skill requirements. Literature suggests that organizational learning thrives where systems support not only the transmission of explicit knowledge but also the social and contextual dimensions of learning (Deng et al., 2022).

In this context, digital collaboration tools such as Microsoft Teams play a vital role. These platforms facilitate knowledge exchange through integrated communication channels, shared workspaces, and real time document collaboration. Their use fosters transparency and cross functional teamwork, particularly within distributed teams (Khumalo & Mearns, 2019; Wahl & Kitchel, 2016). Microsoft Teams, for instance, has grown to 320 million monthly active users by late 2023, signaling its widespread adoption as a knowledge sharing and engagement platform. These tools are not only enhancing operational efficiency but also embedding knowledge sharing into the fabric of daily organizational activity (Yuan et al., 2016; Zhang, 2017).

At the macro level, organizations face the imperative of reskilling and upskilling their workforce in response to technological change and shifting labor market demands. Upskilling initiatives have become essential as firms confront the challenges of Industry 4.0 and the digital economy. Research shows that targeted training programs aligned with organizational objectives lead to stronger employee engagement and higher adaptability (Csizmadia et al., 2023). Moreover, global disruptions such as the COVID 19 pandemic have further highlighted the need for continuous professional development, prompting organizations to accelerate their training efforts (Blagov & Anand, 2022). Consequently, investment in learning both in terms of time and financial resources

has become a marker of organizational commitment to long term sustainability and performance (Chedid et al., 2019).

Despite these advancements, there remain significant gaps in the empirical literature linking KM practices, organizational learning, and performance outcomes. While frameworks and conceptual models abound, few studies have rigorously examined how specific KM tools such as LMS, EPSS, and collaboration platforms affect measurable learning outputs across various sectors (Yuan et al., 2016). The complexity of operationalizing organizational learning, coupled with the contextual variability in technology use, presents methodological challenges. Furthermore, existing studies often neglect the influence of organizational culture, leadership, and sector specific dynamics on the success of KM initiatives (Bettoni & Obeng, 2021). There is a pressing need for refined empirical approaches that can unravel the causal pathways between KM adoption and learning outcomes in diverse organizational settings (Mustapha et al., 2023).

This study addresses these gaps by investigating the relationship between KM system adoption and organizational learning intensity defined as the volume of training hours and investment per employee across sectors. Drawing on secondary data from global sources including LinkedIn Learning, Microsoft, ATD, OECD, and the European Commission, this study examines the extent to which KM infrastructure (LMS, EPSS/KMS, and collaboration platforms) is associated with variations in learning outcomes. By integrating macro level trends in adult learning participation with micro level data on organizational training practices, the study provides a cross sectoral perspective on the interplay between KM technologies and learning performance.

The novelty of this study lies in its operationalization of KM infrastructure using concrete adoption indicators such as LMS penetration, EPSS/KMS usage rates, and active user counts for collaboration platforms and its linkage with empirical data on training investment. By focusing on sectoral differences, the analysis identifies contextual enablers and constraints that shape the effectiveness of KM systems in driving learning. In doing so, the study contributes to both academic theory and practical strategy, offering a diagnostic framework for aligning KM and OL initiatives to enhance organizational capability.

In sum, this research responds to the evolving landscape of knowledge and learning in the digital age. As organizations strive to remain agile and competitive, the strategic deployment of KM systems becomes not only a technological choice but a foundational element of learning ecosystems. Through a data driven, cross sectoral lens, this study aims to clarify how KM system adoption relates to organizational learning outcomes, ultimately informing policy and practice in knowledge intensive industries.

METHOD

Assessing the relationship between knowledge management systems (KMS) adoption and organizational learning (OL) outcomes requires a robust methodological approach. This chapter outlines the research design, data sources, operational definitions, analytical techniques, and

contextual considerations relevant to the current study. The aim is to provide a systematic and replicable framework to examine how KM infrastructure particularly LMS, EPSS/KMS, and collaboration platforms influences learning outcomes across different sectors.

This study employs a cross sectional, comparative design utilizing secondary data drawn from industry leading reports and international databases. The analytical approach is exploratory and quantitative, aimed at identifying patterns of association between KM system adoption and OL intensity across organizational sectors. Descriptive statistics and correlation analysis form the basis of the empirical inquiry, with the goal of revealing sector specific dynamics and usage trends.

Data were compiled from multiple sources including LinkedIn Learning (2023), ATD, TecHR, Microsoft's quarterly and annual reports, and publicly available data from the OECD and European Commission. These sources provide sectoral indicators on KM system adoption (e.g., LMS, EPSS/KMS, Microsoft Teams usage) and OL metrics (e.g., average training hours per employee, training expenditure per learner). The sample covers diverse sectors such as manufacturing, services, and healthcare, and includes both small and large enterprises to capture variability in digital maturity.

Following Gupta et al. (2022), KMS adoption is measured through multiple indicators: (1) percentage of organizations using LMS; (2) percentage using EPSS/KMS; and (3) monthly active users (MAU) of Microsoft Teams as a proxy for collaboration infrastructure. These metrics collectively reflect an organization's investment in digital knowledge infrastructure. Adoption rates are disaggregated by sector and organization size for comparative purposes.

OL outcomes are operationalized using two primary indicators: (1) average annual training hours per employee; and (2) average annual expenditure per learner. These are established proxies for learning intensity and investment, consistent with practices in empirical OL research (Kim & Park, 2020). The metrics are standardized across sectors to facilitate valid comparisons.

Additional variables include sector type (manufacturing, services, health), enterprise size (small, medium, large), and geographic scope (primarily U.S. with global references). These factors are used to identify heterogeneity in KM and OL adoption patterns.

The study applies descriptive statistics to outline KM system usage and learning outcomes. Correlation analysis is conducted to assess the strength and direction of relationships between KM adoption variables and OL indicators. Where applicable, regression modeling may be used to control for sectoral differences.

ROI is considered as a secondary metric to assess perceived or reported value of KM system investment (Nakash & Bouhnik, 2021). In addition, user adoption rates, frequency of knowledge contributions, and satisfaction ratings as suggested by Gupta et al. (2022) are acknowledged as useful qualitative indicators for future research.

2.5 Frameworks for Measuring OL and KMS Effectiveness

To ensure conceptual alignment, the study draws upon established frameworks such as the Knowledge Management Infrastructure Framework (Aviv et al., 2021) and multidimensional learning assessments (Kim & Park, 2020). These provide a theoretical grounding for interpreting KMS as enablers of both explicit and tacit knowledge flows.

Operationalizing OL remains complex due to its abstract nature. Thus, learning outcomes are interpreted within structured domains: (a) knowledge sharing frequency; (b) engagement in collaborative activities; and (c) perceived training effectiveness. While these elements are not directly observable in the current dataset, they offer a conceptual backdrop for interpreting the numerical indicators used.

Although this study primarily employs quantitative data, it acknowledges the value of qualitative methodologies in assessing OL processes. For example, user perceptions, organizational culture, and leadership styles recognized as key mediators of KM success are typically better captured through interviews and case studies (Tsai & Hung, 2016). Such approaches are recommended for future studies aiming to triangulate findings.

As the study is based on secondary data, limitations include the absence of primary user feedback and inability to directly control data quality. Differences in data collection periods and geographic representativeness may also affect the generalizability of findings. However, the use of established, reputable data sources mitigates some of these concerns.

The research involves no human subjects or proprietary datasets, and therefore raises no direct ethical concerns. All sources are cited and data usage complies with public data access guidelines.

The methodology employed in this study provides a structured yet flexible framework for examining the relationship between KM adoption and OL intensity. By combining quantitative indicators from diverse sectors with established theoretical models, the research aims to generate insights that are both analytically sound and practically relevant. The multi layered approach spanning system adoption rates, learning investments, and sectoral dynamics ensures a holistic understanding of how KM systems influence learning outcomes in contemporary organizations.

RESULT AND DISCUSSION

This chapter presents the empirical findings related to the adoption of knowledge management systems (KMS) and their association with organizational learning (OL) intensity across sectors. The results are organized into three sections: (1) KM system adoption patterns, (2) learning intensity by sector, and (3) correlation trends between KM usage and OL outcomes. These findings are supported by secondary data from LinkedIn Learning, Microsoft, ATD, OECD, and European Commission reports, and are interpreted using frameworks from recent literature.

KM System Adoption Patterns

Adoption of digital tools for knowledge and learning varies by sector and organization size. Learning Management Systems (LMS) are the most widely adopted, with an overall rate of 89%.

Usage is highest among medium to large enterprises (96%) and lower among small enterprises (81%) (LinkedIn Learning, 2023). Their scalability and effectiveness in delivering structured training explain their widespread adoption, consistent with trends in both education and corporate settings (Yang et al., 2023).

Electronic Performance Support Systems (EPSS) and broader KMS, although recognized for their potential to support real time knowledge sharing, have a lower adoption rate at 18%. EPSS have gained popularity particularly in manufacturing environments where they enhance workflow efficiency (Chhetri et al., 2018). KMS adoption, meanwhile, is prominent in knowledge intensive sectors such as healthcare and IT, where managing intellectual capital is critical (Chhetri et al., 2018).

Collaboration platforms like Microsoft Teams show exceptionally high uptake, with over 320 million monthly active users by October 2023. These tools are widely adopted due to their ability to integrate communication, document sharing, and team collaboration features. Their adoption is influenced by organizational culture, leadership support, and the perceived benefits of enhanced connectivity and productivity (Tabassum et al., 2023; TSIMBA, 2017).

Sectoral variation is apparent. Healthcare organizations emphasize KMS due to their need for seamless, secure knowledge flow among practitioners (Martins et al., 2018). Manufacturing sectors prioritize EPSS and LMS to ensure compliance and operational readiness (Madhavan et al., 2023). Financial services deploy KMS with analytics and business intelligence capabilities to maintain strategic agility (Ganguli et al., 2022). These differences underscore that KMS adoption is shaped by both organizational size and sector specific imperatives (Staff et al., 2023).

Learning Intensity Across Sectors

Training investment also varies significantly by sector. The global average of training hours is 57 per employee annually, with training expenditure averaging $954 (LinkedIn Learning, 2023). However, small manufacturing organizations report the highest training intensity, reaching 94 hours per employee per year, highlighting the importance of operational and safety related learning.

In the healthcare sector, training is heavily influenced by compliance requirements and the need for ongoing skill renewal. This sector exhibits high training expenditures despite fewer training hours compared to manufacturing, due to investment in specialized and accredited programs (Eltorki et al., 2022). Technology sectors also demonstrate substantial investments, reflecting the need for constant upskilling to stay ahead of innovation curves (Yang et al., 2023).

Conversely, the service industry focuses training efforts on customer service, communication skills, and product knowledge, which while essential, typically require fewer hours than technical or safety training (Ferreira & Esteves, 2016). Benchmarks differ accordingly: healthcare uses compliance hours and simulations; manufacturing relies on safety and process metrics; and services prioritize customer satisfaction training (Erlangga et al., 2023).

Enterprise size further explains OL variance. Large organizations often support formal training programs with extensive infrastructure and dedicated personnel, whereas small and medium sized enterprises (SMEs) adopt leaner models of learning, relying on peer training, workshops, or

external providers (Burlea & Mihai, 2019). Despite resource constraints, SMEs demonstrate agility in implementing targeted learning that meets evolving operational needs (Staff et al., 2023).

Correlation Trends

The analysis reveals a positive association between KM system adoption and organizational learning outcomes. Organizations with higher LMS usage tend to report increased training hours, particularly in sectors where formalized training is embedded into routine operations. Microsoft Teams adoption correlates with increased informal learning opportunities and collaborative knowledge exchange, especially in hybrid or remote work settings.

EPSS/KMS, though less commonly adopted, are linked to improved real time knowledge application and workflow efficiency, contributing to learning intensity indirectly through productivity gains (Chhetri et al., 2018). These findings align with broader literature suggesting that KM infrastructure supports OL by facilitating access to and sharing of relevant knowledge (Osterman, 2021).

Organizations measure the effectiveness of their learning investments using multiple ROI methodologies, including pre and post training assessments, productivity tracking, and cost benefit analysis (Mattson, 2021). Some employ longitudinal data to understand how training interventions influence business outcomes over time(Heimerl et al., 2020; Leeuwen et al., 2021). These approaches strengthen the empirical basis for assessing KM's contribution to OL outcomes.

Mediating variables further explain the KM–OL relationship. Cultural openness to knowledge sharing, leadership advocacy for learning, and employee motivation are key factors that shape how KM technologies influence OL (Ganguli et al., 2022; TSIMBA, 2017). In environments where leadership actively supports learning, KM tools are more effectively integrated and utilized.

Finally, external conditions such as regulatory requirements and sectoral risk profiles influence training investments. Highly regulated industries (e.g., healthcare, finance) invest in training to ensure compliance and avoid penalties (Martins et al., 2018). High risk sectors such as construction and manufacturing allocate resources toward safety training to minimize liability and protect employee well being(Torre et al., 2020).

In conclusion, the results provide compelling evidence of a relationship between the adoption of KM technologies and the intensity of organizational learning. Sector specific strategies, enterprise size, and external mandates all shape this dynamic, underscoring the need for context aware KM and OL frameworks.

The findings of this study support a positive association between knowledge management (KM) system adoption and organizational learning (OL) outcomes, particularly in terms of training hours and investment. These outcomes reflect an ongoing shift in how organizations conceptualize the role of KM infrastructure not merely as a repository of information, but as a strategic enabler of learning and performance. This section discusses the implications of these results, the theoretical and practical barriers to KM system adoption, and the potential of collaboration tools to enhance informal learning. It also outlines sector specific strategies for KM–OL integration, while noting gaps in empirical substantiation.

The positive association between LMS and collaboration platforms with higher OL intensity supports the idea that KM infrastructure enhances access to knowledge and enables structured training. This finding aligns with the Knowledge-Based View (KBV), which frames knowledge as a critical organizational asset that requires active management to sustain competitive advantage. However, there is still limited empirical evidence directly linking KBV with tools such as LMS, EPSS/KMS, or Microsoft Teams, indicating an important gap for future research. Although the KBV offers a useful lens for interpreting the results, specific empirical studies linking KBV directly with the tools investigated here (LMS, EPSS/KMS, Microsoft Teams) are currently lacking.

Similarly, the Dynamic Capabilities Framework offers a theoretical bridge between KM infrastructure and OL by positing that organizations must cultivate learning mechanisms to adapt to environmental changes. While this perspective aligns with the observed sectoral differences in KM system usage, citations explicitly demonstrating this linkage in the context of LMS or EPSS/KMS adoption could not be located.

Barriers to the adoption of EPSS and KMS remain substantial despite their theoretical value. One primary challenge is resistance to change, often rooted in employee reluctance to alter established work routines. Studies suggest that such resistance can significantly delay or derail digital transformation initiatives (Zapata-Cantú et al., 2023). Additionally, organizations often lack the necessary infrastructure or face integration challenges with existing systems, making adoption costly or technically complex. The absence of strong leadership support further complicates implementation, particularly when digital initiatives are not prioritized at the executive level (Zolg et al., 2021). These findings underscore the necessity of strategic leadership and comprehensive change management in driving successful KM adoption.

Data privacy and security concerns also inhibit widespread EPSS/KMS implementation, particularly in sectors handling sensitive data such as healthcare and finance. Although these concerns are widely acknowledged in industry discussions, direct empirical references remain to be verified for the present study.

In contrast, collaboration tools such as Microsoft Teams demonstrate widespread adoption and significant impact on informal and peer based learning. These tools provide real time communication, file sharing, and project management functionalities that foster a dynamic learning environment, particularly in hybrid and remote work settings. While the broader literature generally affirms the contribution of such tools to knowledge sharing and organizational connectivity, specific studies documenting their impact on measurable OL outcomes are limited.

Informal learning mechanisms enabled by collaboration platforms are especially relevant in environments where spontaneous problem solving and just in time knowledge are valued. These tools reduce hierarchical barriers and support open, rapid information flow, which in turn promotes a culture of continuous learning. Their integration into daily workflows ensures that learning becomes a contextual and ongoing activity rather than a formal, episodic event.

Sectoral differences in KM–OL strategies reflect the distinct operational imperatives of different industries. For example, healthcare organizations tend to prioritize clinical decision support systems and continuous professional development, using KM tools to improve care quality and compliance. Manufacturing sectors focus on knowledge capture related to safety, operations, and

lean practices, using EPSS to streamline training and reduce errors. In financial services, KM platforms are often aligned with compliance and market intelligence needs, facilitating rapid knowledge dissemination in a fast paced regulatory environment. While these strategic alignments are plausible and logically inferred from the data, direct empirical validation from sector specific literature is presently lacking.

These findings collectively highlight a growing recognition among organizations of the importance of aligning KM infrastructure with OL objectives. Yet they also underscore the need for further empirical research to substantiate the theoretical claims surrounding KM–OL linkages and to examine how contextual factors such as leadership, culture, and industry regulation moderate these relationships.

In conclusion, the discussion affirms the centrality of KM systems in fostering organizational learning. The widespread adoption of LMS and collaboration tools illustrates a movement toward embedding learning into the fabric of daily work. Conversely, the relatively low uptake of EPSS and KMS points to missed opportunities that could be mitigated through improved infrastructure, leadership support, and change readiness. While this study contributes to understanding the KM–OL dynamic across sectors, it also calls attention to unresolved gaps in the literature that require rigorous, context sensitive exploration.

CONCLUSION

This study analyzed how the adoption of knowledge management (KM) systems specifically Learning Management Systems (LMS), Electronic Performance Support Systems (EPSS), and digital collaboration tools relates to organizational learning (OL) outcomes across sectors. The results indicate that organizations with more advanced KM infrastructures tend to achieve higher learning intensity, reflected in increased training hours and investment per employee. While LMS and collaboration platforms are widely adopted and strongly associated with structured and informal learning, EPSS and broader KMS remain underutilized despite their potential to support performance-oriented knowledge application.

Sectoral variations further illustrate how industry context shapes KM–OL dynamics. Manufacturing organizations report the highest training hours, healthcare emphasizes compliance-driven learning, and service industries prioritize customer engagement and soft skills. Organizational size also plays a decisive role, with larger enterprises more capable of supporting comprehensive learning systems, while smaller firms rely on targeted and flexible approaches.

The findings contribute empirically to the linkage between KM adoption and OL performance while also underscoring the moderating role of leadership, culture, and sectoral conditions. Practically, organizations are encouraged to invest not only in technology but also in supportive environments that foster knowledge sharing. Future research should employ longitudinal and mixed-method designs to validate causality and deepen understanding of how KM infrastructures evolve as enablers of adaptive, knowledge-driven enterprises.

REFERENCE

Aviv, I., Hadar, I., & Levy, M. (2021). Knowledge Management Infrastructure Framework for Enhancing Knowledge-Intensive Business Processes. Sustainability, 13(20), 11387. https://doi.org/10.3390/su132011387

Bettoni, M., & Obeng, E. (2020). Alive by Meeting: A Solution to the Paradox of Meetings Based on the Pyramid of New Collaboration. Electronic Journal of Knowledge Management, 18(2). https://doi.org/10.34190/ejkm.18.02.006

Budrytė, M., & Vainauskienė, V. (2023). Virtual Communities of Practice as a Knowledge Sharing Tool: Recommendations for International Business. Management of Organizations Systematic Research, 89(1), 15–30. https://doi.org/10.2478/mosr-2023-0002

Burlea, A. Ş., & Mihai, L. (2019). An Integrated Framework on the Sustainability of SMEs. Sustainability, 11(21), 6026. https://doi.org/10.3390/su11216026

Chedid, M., Ana Maria de Andrade Caldeira, Alvelos, H., & Teixeira, L. (2019). Knowledge-Sharing and Collaborative Behaviour: An Empirical Study on a Portuguese Higher Education Institution. Journal of Information Science, 46(5), 630–647. https://doi.org/10.1177/0165551519860464

Chhetri, P., Gekara, V., Manzoni, A., & Montague, A. (2018). Productivity Benefits of Employer-Sponsored Training. Education + Training, 60(9), 1009–1025. https://doi.org/10.1108/et-02-2017-0029

Csizmadia, T., Obermayer, N., Bogdány, E., Purnhauser, P., & Banász, Z. (2023). Examining Industry 4.0 Through the Lens of Human Resource and Knowledge Management: Implications for SMEs. Management & Marketing, 18(1), 1–19. https://doi.org/10.2478/mmcks-2023-0001

Deng, H., Duan, S. X., & Wibowo, S. (2022). Digital Technology Driven Knowledge Sharing for Job Performance. Journal of Knowledge Management, 27(2), 404–425. https://doi.org/10.1108/jkm-08-2021-0637

Eltorki, Y., Abdallah, O., Riaz, S., Mahmoud, S., Saad, M., Ez-Eldeen, N., Ashraf, A., Al-Hamoud, E., Al-Khuzaei, N., & Ghuloum, S. (2022). Burnout Among Pharmacy Professionals in Qatar: A Cross-Sectional Study. Plos One, 17(5), e0267438. https://doi.org/10.1371/journal.pone.0267438

Erlangga, D., Powell-Jackson, T., Balabanova, D., & Hanson, K. (2023). Determinants of Government Spending on Primary Healthcare: A Global Data Analysis. BMJ Global Health, 8(11), e012562. https://doi.org/10.1136/bmjgh-2023-012562

Ferreira, A. I., & Esteves, J. D. (2016). Perceptions of Time at Work. Personnel Review, 45(1), 29–50. https://doi.org/10.1108/pr-02-2014-0033

Ganguli, I., Rivara, F. P., & Inouye, S. K. (2022). Gender Differences in Electronic Health Record Work—Amplifying the Gender Pay and Time Gap in Medicine. Jama Network Open, 5(3), e223940. https://doi.org/10.1001/jamanetworkopen.2022.3940

Gupta, C., Fernández-Crehuet, J. M., & Gupta, V. (2022). Measuring Impact of Cloud Computing and Knowledge Management in Software Development and Innovation. Systems, 10(5), 151. https://doi.org/10.3390/systems10050151

Heimerl, P., Haid, M., Benedikt, L., & Scholl-Grissemann, U. (2020). Factors Influencing Job Satisfaction in Hospitality Industry. Sage Open, 10(4). https://doi.org/10.1177/2158244020982998

Khumalo, S., & Mearns, M. (2019). SharePoint as Enabler for Collaboration and Efficient Project Knowledge Sharing. Sa Journal of Information Management, 21(1). https://doi.org/10.4102/sajim.v21i1.1044

Kim, E., & Park, S. (2020). Transformational Leadership, Knowledge Sharing, Organizational Climate and Learning: An Empirical Study. Leadership & Organization Development Journal, 41(6), 761–775. https://doi.org/10.1108/lodj-12-2018-0455

Leeuwen, L. M. v., Goderie, T., Wier, M. F. v., Lissenberg-Witte, B. I., Lemke, U., & Kramer, S. E. (2021). Uptake of Hearing Aids and Hearing Assistive Technology in a Working Population: Longitudinal Analyses of the Netherlands Longitudinal Study on Hearing. Ear & Hearing, 42(4), 793–802. https://doi.org/10.1097/aud.0000000000000983

Madhavan, V., Venugopalan, M., Gupta, B., & Sisodia, G. S. (2023). Addressing Agency Problem in Employee Training: The Role of Goal Congruence. Sustainability, 15(4), 3745. https://doi.org/10.3390/su15043745

Martins, L., Paiva, J. R., Alexandre Coutinho Teixeira de Freitas, Miguel, L. B., & Maia, F. C. (2018). Prevalence of Pain and Psychological Distress in High-Performance Swimmers: Job Stress and Associated Factors – A Cross-Sectional Study. Revista De Educação Física / Journal of Physical Education, 87(4). https://doi.org/10.37310/ref.v87i4.809

Mattson, J. W. (2021). Relationships Between Density and Per Capita Municipal Spending in the United States. Urban Science, 5(3), 69. https://doi.org/10.3390/urbansci5030069

Nakash, M., & Bouhnik, D. (2021). Can Return on Investment in Knowledge Management Initiatives in Organizations Be Measured? Aslib Journal of Information Management, 74(3), 417–431. https://doi.org/10.1108/ajim-09-2021-0268

Osterman, P. (2021). How American Adults Obtain Work Skills: Results of a New National Survey. Ilr Review, 75(3), 578–607. https://doi.org/10.1177/00197939211018191

S. M. F. D. Syed Mustapha, Evangelista, E., & Marir, F. (2023). Towards Designing a Knowledge Sharing System for Higher Learning Institutions in the UAE Based on the Social Feature Framework. Sustainability, 15(22), 15990. https://doi.org/10.3390/su152215990

Saini, M., Arif, M., & Kulonda, D. J. (2019). Challenges to Transferring and Sharing of Tacit Knowledge Within a Construction Supply Chain. Construction Innovation, 19(1), 15–33. https://doi.org/10.1108/ci-03-2018-0015

Staff, J., Freelin, B. N., & Mortimer, J. T. (2023). Consequences of Adolescent Employment for Young Adult Development. 293–306. https://doi.org/10.1037/0000298-018

Suryadi, N., Anggraeni, R., Ariyanto, D., & Islam, M. F. (2022). The Effect of the COVID-19 Pandemic on Consumer Behaviors: A Study on Gen-Z in Indonesia. International Journal of Research in Business and Social Science (2147-4478), 10(8), 313–318. https://doi.org/10.20525/ijrbs.v10i8.1490

Tabassum, S., Alam, S., Akter, Most. S., & Ahmad, S. (2023). Factors Influencing Employee Satisfaction in Workplace. Ijeast, 8(1), 61–67. https://doi.org/10.33564/ijeast.2023.v07i12.010

Torre, C., Tommasetti, A., & Maione, G. (2020). Technology Usage, Intellectual Capital, Firm Performance and Employee Satisfaction: The Accountants' Idea. The TQM Journal, 33(3), 545–567. https://doi.org/10.1108/tqm-04-2020-0070

Tsai, J. C., & Hung, S. (2016). Determinants of Knowledge Management System Adoption in Health Care. Journal of Organizational Computing and Electronic Commerce, 26(3), 244–266. https://doi.org/10.1080/10919392.2016.1194062

TSIMBA, J. C. (2017). Human Resource Factors Influencing Competence of Education Workforce in Public Institutions in Kinango Sub County. Strategicjournals.Com, 4(3). https://doi.org/10.61426/sjbcm.v4i3.529

Wahl, L., & Kitchel, A. (2016). Internet Based Collaboration Tools. International Journal of E-Collaboration, 12(1), 27–43. https://doi.org/10.4018/ijec.2016010103

Yang, H., Chen, W., Li, X., Yang, M., Luan, L., & Zhang, X. (2023). Prevalence, Risk Factors, and Severity of Suicidal Ideation Among Chinese Adolescents: A Cross-Sectional Study. https://doi.org/10.21203/rs.3.rs-3239115/v1

Yuan, X., Olfman, L., & Yi, J. (2016). How Do Institution-Based Trust and Interpersonal Trust Affect Interdepartmental Knowledge Sharing? Information Resources Management Journal, 29(1), 15–38. https://doi.org/10.4018/irmj.2016010102

Zapata-Cantú, L., Ibarra, G., & Blancher, P.-H. (2023). Engaging New Ways of Work: The relevance of Flexibility and Digital Tools in a Post-Covid-19 Era. Journal of Organizational Effectiveness People and Performance, 11(1), 1–17. https://doi.org/10.1108/joepp-04-2022-0079

Zhang, X. (2017). Knowledge Management System Use and Job Performance: A Multilevel Contingency Model. Mis Quarterly, 41(3), 811–840. https://doi.org/10.25300/misq/2017/41.3.07

Zolg, S., Heiden, B., & Herbig, B. (2021). Digitally Connected Work and Its Consequences for Strain – A Systematic Review. Journal of Occupational Medicine and Toxicology, 16(1). https://doi.org/10.1186/s12995-021-00333-z