

Digital Employee Experience Affecting Customer-Supplier Relationship Management and Environmental Performance of Electronics Companies in Thailand

Orawee Sriboonlue¹

¹Department of Management
Faculty of Business Administration, Kasetsart University
Bangkok, Thailand
E-mail: orawee.sr@ku.th

Abstract — The research aimed at studying the effects of digital employee experience (DEX) on customer-supplier relationship management (CSRSM) and environmental performance (EP) of electronics companies located in the Bangkok Metropolitan Region in Thailand by using 400 employees as the samples of this research. The questionnaires were used for data collection with the purposive sampling method. Data analysis consisted of descriptive statistics including frequency, percentage, mean, and standard deviation and inferential statistics used were Pearson's Product Moment Correlation Coefficient and Partial Least Squares-Structural Equation Modeling (PLS-SEM). The findings indicated that digital employee experience (DEX) had the strongest positive effect on customer-supplier relationship management (CSRSM) and environmental performance (EP), and customer-supplier relationship management (CSRSM) mediated the effect of digital employee experience (DEX) on environmental performance (EP) at a significance level of 0.001. Besides, customer-supplier relationship management (CSRSM) had positive and significant effect on environmental performance (EP) at a significance level of 0.001.

Keywords –*Digital Employee Experience (DEX), Customer-Supplier Relationship Management (CSRSM), Environmental Performance (EP), Electronics Companies*

I. INTRODUCTION

In the current era, environmental issues, including climate change, arise from increased air and water pollution and the use of hazardous materials by businesses, driving all sectors to prioritize environmental conservation and green management [1,2]. The manufacturing industry notably contributes to environmental problems, such as climate change, resource depletion, and the generation of water and air pollutants [3]. Furthermore, the importance of Corporate Social Responsibility (CSR) has increased, necessitating ethical business activities that prioritize environmental, social, and economic issues in business activities and strategies [3,4]. Consequently, environmental operations have become indispensable for current business operations, aligning with the BCG Model, which emphasizes the development of three economies

simultaneously: Bioeconomy, Circular Economy, and Green Economy [5].

In recent years, the rapid evolution of information technology in the digital age has significantly impacted business operations and management. Organizations must integrate digital transformation with organizational management to adapt to changes effectively [6,7,8]. Many businesses have adjusted digital technologies to fit into their operational contexts, promoting employee participation and various organizational processes. Previous research has explored digital transformation by applying digital technologies across all aspects of an organization to enhance competitiveness and support organizational adaptation to increasingly fierce competition contexts [8,9,10,11,12].

Integrating digital technology into business organizations necessitates considering the Digital Employee Experience (DEX). Digital technology has significantly altered employee workflows, work environments, and workstyles. Collaborative platforms and communication tools have become integral for information exchange and data analysis, impacting employee efficiency, participation, and overall digital experience. Changes in employees' digital experiences influence internal organizational functions and external relationships, such as Customer-Supplier Relationship Management (CSRSM). Digital technology enhances communication and develops sustainable relationships, shaping company operations, performance, and environmental impacts [13,14,15].

Electronics companies facing major transformations, including global connectivity and increased environmental sustainability concerns, consider both DEX and environmental sustainability as crucial aspects of their operations. Hence, studying the impact of employees' digital experiences on CSRSM and environmental performance is essential for electronics companies in Thailand. Presently, there is a lack of literature discussing the relationship between DEX, CSRSM, and environmental performance clearly, which is critical for sustainable business practices and addressing digital workplace challenges effectively [16].

Customer-Supplier Relationship Management (CSRM) is a critical aspect of current business ecosystems, where changes or disruptions between companies, customers, and suppliers directly impact operational efficiency, product and service quality, and overall business success. Despite its importance, the clear relationship between DEX and CSRM remains underexplored in current literature reviews. Therefore, researcher aimed to study the impact of employees' digital experiences on managing customer-supplier relationships and environmental performance in Thai electronics companies. The findings are expected to benefit electronics industry operators and aid in developing sustainable management strategies to address future technological challenges.

II. OBJECTIVES

The research aimed to study the effect of employee digital experience on customer-supplier relationship management and environmental performance of electronics companies in Thailand.

III. CONCEPTUAL FRAMEWORK

The conceptual framework had been drawn as follows:

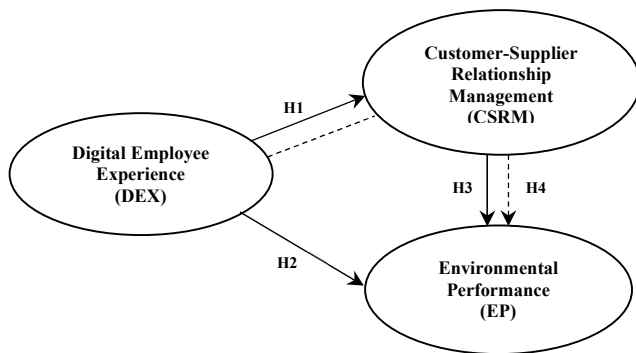


Figure 1. Conceptual Model

IV. HYPOTHESES

The hypotheses (H) had been written as follows:

H1: Digital employee experience (DEX) has a positive effect on Customer-Supplier Relationship Management (CSRM).

H2: Digital employee experience (DEX) has a positive effect on environmental performance (EP).

H3: Customer-Supplier Relationship Management (CSRM) has a positive effect on environmental performance (EP).

H4: Digital employee experience (DEX) has a positive effect on environmental performance (EP) through Customer-Supplier Relationship Management (CSRM).

V. LITERATURE REVIEWS

A. Digital Employee Experience (DEX)

The evolution of Human Resource (HR) approaches within organizations has occurred over time. Morgan [17]

explains that these approaches can be divided into four stages. The first stage, called Usefulness, emphasizes the importance of utility and beneficial aspects as crucial components of work. In the second stage, known as Productivity, the focus shifts towards achieving high productivity levels resulting from employees' job performance. Moving into the third stage, Participation, organizations concentrate on beneficial methods for employees and attempt to identify their motivations for work, aiming to replace coercive power with a sense of involvement. This leads to the fourth stage, employee experience (EX), which quietly revolutionizes organizations worldwide. In this stage, organizations strive to define the kind of workplace that employees desire. This revolution shifts the employer's actions from perceiving employees merely as organizational assets to recognizing them as individuals. Employers become more aware of the necessity to understand their employees by identifying the best ways they work and designing appropriate problem-solving approaches tailored to their needs, rather than enforcing tasks and working within certain organizational frameworks [13].

Raia [18] explains that employee experience begins with individuals seeking job vacancies within an organization, envisioning themselves within the workforce and expecting experiences that meet their needs. However, rapid technological advancements increase expectations for digital experiences, necessitating organizational investments to enhance employee digital experiences, thus improving operational efficiency [19].

Schnellbacher & Heidenreich [20] found that physical space, human experiences, and digital boundaries are crucial dimensions for employee experiences. The digital dimension significantly impacts the employee-company relationship [21]. Culture plays a vital role in employee participation in the digital age [22], and digital transformation can revolutionize HR processes through digital platforms [23].

Digital Employee Experience (DEX) comprises tools, technology, communication, collaboration, innovation, and integration, as emphasized by Morgan [17]. Gheidar & ShamiZanjani [24] define DEX as how employees perceive their interactions within the digital workplace, encompassing their direct and indirect engagements with various aspects such as their career, colleagues, managers, customers, organizational strategy, systems, culture, brand, and competitors, and it is shaped by both organizational factors and individual characteristics. Meanwhile, Thoughtfarmer Group [25] defines DEX as total digital interactions between employees and organizations using digital technology at work. Shivakumar [26] categorizes factors determining DEX into 8 main categories. Organizations must recognize employees as internal customers and nurture them to ensure digitally executed tasks for a satisfactory work environment.

DEX can bring significant business benefits by accommodating changing employee lifestyles [27]. The digital workplace shapes traditional employee experiences [16]. Key factors in developing DEX include technological

support and infrastructure [28,29]. Shivakumar [26] explains that DEX encompasses collaboration, technology adoption, flexibility, infrastructure, culture, and work practices. Overall, DEX focuses on employee responses to digital devices and digital workspaces, affecting individual and organizational performance, especially in digital environments [30].

B. Customer-Supplier Relationship Management (CSRM)

Customer-Supplier Relationship Management (CSRM) is a strategic approach to managing the interactions and collaborations between a company and its suppliers or customers, with a focus on enhancing mutual benefits and long-term value creation. The concept is that CSRM integrates principles from Customer Relationship Management (CRM) focusing on understanding and meeting the needs of customers to build loyalty and satisfaction, and Supplier Relationship Management (SRM) emphasizing optimizing supplier performance and fostering strategic partnerships [31,32]. By effectively managing the relationships with customers and suppliers, organizations can streamline their supply chain processes, improve product quality, reduce costs, and enhance overall competitiveness in the market.

Nazari-Shirkouhi, Keramati, & Rezaie [33] argue that CRM not only helps organizations retain current customers but also stimulates customers to provide feedback and suggestions for product and service improvement [34]. CRM enhances organizations' understanding of customer needs and fosters innovation and competitive advantage [34,35,36]. It consists of activities aimed at building long-term, mutually beneficial relationships with customers [37].

Conversely, Nazari-Shirkouhi et al. [33] state that SRM involves disciplined management of suppliers to reduce costs, share organizational and supplier experiences, and extract relevant insights from the relationship [38]. SRM focuses on maximizing value in the organization-supplier relationship by integrating various management tools for responsive interaction [39]. It is a category within supply chain management that significantly enhances organizational competitiveness through business process utilization and product development facilitation [40].

Vanichchinchai and Igel [41] suggest that Supply Chain Management (SCM) emphasizes external integration with customers and suppliers, often believed to enhance operational performance [42,43]. Strong relationships are crucial for SCM effectiveness and performance [44,45]. Moreover, shared planning and data sharing significantly impact operational performance [46]. Trust in relationship exchanges and mutual cooperation improve supply chain operations [47]. The quality of supplier relationships positively affects knowledge sharing and innovation performance [48], particularly in the food supply chain [49].

C. Environmental Performance

Organizational performance comprises three dimensions: Economic performance, social performance, and environmental performance [50,51,52]. Nawrocka and

Parker [53] define environmental performance (EP) as the overall use of performance indicators to assess resource utilization, waste disposal, pollution emissions, and water usage and carbon dioxide emissions. Industrial production significantly impacts the environment and contributes to environmental problems such as climate change, resource depletion, water and air pollution. Promoting environmental performance is thus a critical global challenge [3,54].

Previous research has discussed various aspects of environmental performance, including the impact of recycling hazardous waste [55], efficient raw material usage to reduce environmental pollution [56], reduction of greenhouse gas emissions, wastewater, solid waste, hazardous substance consumption [57], decreasing environmental accidents frequency, and improving environmental situations within companies [57]. Environmental performance (EP) data inform decision-making in production processes, waste reduction, and disposal. Moreover, it serves as an indicator for natural resource usage, air and water quality, energy consumption, waste management, and land use [50].

VI. RESEARCH METHODOLOGY

Regarding sample and data collection, the research population consisted of employees working in electronics companies located in the Bangkok Metropolitan Region, including Bangkok, Samut Prakan, Nonthaburi, Pathum Thani, Nakhon Pathom, and Samut Sakhon; however, the exact population size was unknown. To estimate the total research population, the overall population for electronics companies in the Bangkok Metropolitan Region was used to determine the population size. Employing the basis of sampling formula given by Cochran [58] for infinite sample size determination with a confidence level of 95% and a margin of error of $\pm 5\%$ eventually yielded a total of 385 participants. Since this research employs structural equation modeling, it is essential that the sample size is at least 400, following the recommendations of Yuan & Bentler [59] and Savalei & Bentler [60]. Therefore, additional samples were collected to meet this criterion, resulting in a total sample size of 400 employees working in electronics companies located in the Bangkok Metropolitan Region. Samples were selected using a non-probability sampling with purposive sampling technique.

The research methodology employed in this research was quantitative research, utilizing the survey method. Data collection was conducted using questionnaires which were distributed to the electronics companies located in industrial estate in the Bangkok Metropolitan Region. The questionnaires comprised 4 sections. Section 1 of the questionnaire contained closed-ended questions focusing on capturing respondents' basic information including gender, age, education, and job position, and working experience. Sections 2 to 4 consisted of 5-point Likert scale items, measuring variables such as digital employee experience (DEX), customer-supplier relationship

management (CSRM), and environmental performance (EP). The scale ranged from 1, indicating “strongly disagree,” to 5, indicating “strongly agree.”

Descriptive statistics used in quantitative data analysis included frequency, percentage, mean, and standard deviation. Due to hypothesis testing, inferential statistics used were Pearson’s Product Moment Correlation Coefficient and Partial Least Squares-Structural Equation Modeling (PLS-SEM).

VII. RESULTS

A. Respondents’ Profiles and Studied Variables

- Respondents’ profiles

The research results showed that most of the respondents were female (201 persons or 50.2%), aged more than 50 years old (124 persons or 31.0%), graduated from a Bachelor’s degree (236 persons or 59.0%), worked as operational staff (152 persons or 38.0%) and head of department/division (152 persons or 68.0%), and worked for more than 5 years (272 persons or 34.5%) respectively.

- Digital employee experience (DEX), Customer-Supplier Relationship Management (CSRM), and Environmental Performance (EP)

The research results further revealed that most of the respondents had agreements toward DEX at the strongly agree level with the mean of 4.24, comprising average means of DEX1 – DEX7 with the range from 4.20 - 4.29. Besides, most of the respondents had agreements toward CSRM at the strongly agree level with the mean of 4.27, comprising average means of CSRM1 – CSRM5 with the range from 4.21 - 4.38. Finally, the respondents had agreements toward EP at the strongly agree level with the mean of 4.23, comprising average means of EP1 – EP5 with the range from 4.19 - 4.31.

B. Validity and Reliability

The researcher had experts in related fields inspected the accurateness and consistency of contents and questions and recommended the improvement and revision. Cronbach’s alpha and composite reliability were investigated to measure construct reliability as shown in Table I

Table I. Factor Loading, Cronbach’s Alpha Coefficient (CA), Composite Reliability (CR) and Average variance extracted (AVE) for Measurement Model

Latent Variable	Indicators	Loads	CA	CR	AVE
Digital employee experience (DEX)	DEX1	0.806	0.909	0.909	0.646
	DEX2	0.814			
	DEX3	0.792			
	DEX4	0.800			
	DEX5	0.806			
	DEX6	0.797			
	DEX7	0.811			

Latent Variable	Indicators	Loads	CA	CR	AVE
Customer-Supplier Relationship Management (CSRM)	CSRM1	0.858	0.880	0.882	0.677
	CSRM2	0.794			
	CSRM3	0.763			
	CSRM4	0.837			
	CSRM5	0.857			
Environmental Performance (EP)	EP1	0.871	0.915	0.917	0.748
	EP2	0.818			
	EP3	0.859			
	EP4	0.916			
	EP5	0.857			

In Table I, in terms of composite reliability, all factor loading values ranged from 0.882 to 0.915, which were more than the recommended value of 0.50; hence, the constructs in the research model are acceptable [61]. The Cronbach’s alpha coefficient of each construct ranged from 0.880 to 0.915, meaning that all constructs are acceptable according to the recommended threshold value of 0.70 [62]. The value of AVE was in the range of 0.646 to 0.748, which exceeded the minimum threshold value of 0.50, confirming convergent validity.

Table II. Discriminant Validity

Variables	DEX	CSRM	EP
DEX	0.804		
CSRM	0.821	0.865	
EP	0.832	0.770	0.823

Note: The value in main diagonal were square roots of AVE.

In Table II, the discriminant validity was tested, and the square roots of AVEs were more than the 0.7 minimum threshold, and all values were more than the correlations among the latent constructs (0.770-0.832); thus, it is valid.

C. Analysis of Structural Model and Hypothesis Testing

From the structural model in this research, the direct effects indicated that R² of the dependent variable, or EP was 0.699 indicating that 69.9% of firm performance variance was explained by independent variables. For the indirect effects, R² of the mediating variable as CSRM was 0.693.

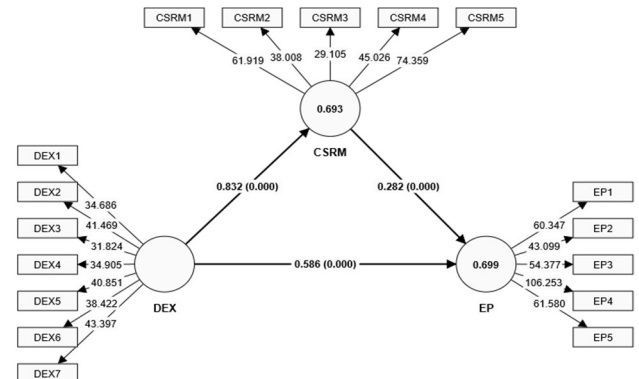


Table III. Structural Model

Hypothesis	β	T statistics	P-Values	Results
H1: DEX→CSRM	0.831	40.296	0.000***	Supported
H2: DEX→EP	0.586	9.782	0.000***	Supported
H3: CSRM→EP	0.282	4.584	0.000***	Supported
H4: DEX→CSRM→EP	0.235	4.607	0.000***	Supported

Note: * $p < .05$; ** $p < .01$; *** $p < .001$ (two-tailed test); β refers to standardized estimate

The results of structural model showed that DEX had the strongest positive effect on CSRM ($\beta = 0.831$, $p < 0.001$) and EP ($\beta = 0.586$, $p < 0.001$), so H1 and H2 were supported. The results also revealed that CSRM had positive and significant effect on EP ($\beta = 0.282$, $p < 0.001$), so H3 was supported. Finally, the results also revealed that DEX had positive and significant effect on EP through CSRM ($\beta = 0.235$, $p < 0.001$), so H4 was supported.

D. Total Effect, Direct Effect, Indirect Effect, and Model Fit

The research revealed that DEX had positive direct effects on CSRM and EP with standardized estimates as of 0.831 and 0.586, respectively. Moreover, CSRM had a positive direct effect on EP with standardized estimates as of 0.282. Finally, DEX had a positive indirect effect on EP with standardized estimates as of 0.235.

The only approximate model fit criterion currently implemented for PLS path modeling is the standardized root mean square residual (SRMR) [63,64]. A value of 0 for SRMR would indicate a perfect fit, and generally, an SRMR value less than 0.06 indicates an acceptable fit [65]. Another useful approximate model fit criterion could be the Bentler-Bonett index or normed fit index (NFI) [66]. For factor models, NFI values above 0.90 are considered acceptable [67]. Therefore, the model in this research paper, with SRMR equal to 0.049 and NFI equal to 0.910, demonstrated a satisfactory fit.

VIII. DISCUSSION, LIMITATION AND RECOMMENDATION

A. Discussion of the Study

The research results revealed a positive effect of digital employee experience (DEX) on customer-supplier relationship management (CSRM), which is consistent with Abhari et al. [68] and Ning & Yao [69]. The results indicate that DEX could improve communication, collaboration, and efficiency within an organization. Providing employees with easy-to-use digital tools and resources increases the likelihood of their active engagement and productive collaboration with customers and suppliers [19]. This results in enhanced decision-making, optimized procedures, and ultimately, heightened customer satisfaction [13]. Moreover, a favorable DEX may enhance staff morale and efficiency, so directly influencing their interactions with customers and suppliers. When employees experience a sense of empowerment and get support from their business via the use of digital technology, they are more inclined to

surpass expectations in delivering exceptional service and cultivating robust connections with stakeholders [18, 46].

Furthermore, the research results showed that DEX had a positive effect on environmental performance (EP), which is consistent with Ning & Yao [69], Yahya & Jaaffar [70], and Li, Dai, & Cui [71]. Organizations may reduce their dependence on paper and minimize paper usage and waste creation by using digital systems for document management, communication, and collaboration [18]. Consequently, this aids in preserving natural resources, decreasing energy use, and minimizing the release of greenhouse gases linked to the manufacture and disposal of paper. Moreover, DEX facilitates telecommuting and flexible work arrangements, hence resulting in a reduction in employee travel to the workplace and the need for physical office space [62]. As a consequence, there is a decrease in carbon emissions from transportation and a reduction in energy usage for office buildings, eventually leading to a more environmentally friendly work environment [30].

Meanwhile, the research results revealed a positive effect of CSRM on EP, which is consistent with Ning & Yao [69] and Andalib Ardakani et al. [72]. Collaboration between customers and suppliers in establishing environmental objectives and standards enables them to collectively execute programs, effectively decreasing waste, energy use, and carbon emissions. This relationship fosters ingenuity and facilitates the exchange of optimal methodologies, resulting in enhanced productivity and environmentally-friendly manufacturing procedures [47]. Furthermore, CSRM may further aid in the identification and reduction of environmental hazards within the supply chain. Through continuous engagement with suppliers and performing audits, firms may guarantee compliance with environmental requirements at every stage of the manufacturing process. By adopting a proactive strategy, the occurrence of possible environmental issues is minimized and compliance with rules is guaranteed.

Lastly, the research results pinpointed that DEX had a positive effect on EP through CSRM, which is consistent with Ning & Yao (2023). Providing employees with digital tools and resources which encourage cooperation and communication enhances their capacity to interact with customers and suppliers in a manner that supports sustainability and minimizes environmental harm [19]. By using digital platforms and technologies, employees may optimize communication with customers and suppliers, resulting in enhanced resource and material management that is both efficient and effective [30, 47]. By leveraging these technologies, companies could then improve transparency within their supply chains, monitor environmental data, and identify opportunities for enhancing sustainability processes.

B. Limitation of the Study

This research was limited to the quantitative research by using questionnaire as a data collection instrument, and the scope and area of the research only focused on the electronics companies in the Bangkok Metropolitan

Region. besides, the variables used for this research were digital employee experience (DEX), customer-supplier relationship management (CSRSM), and environmental performance (EP) excluding all other variables.

C. Recommendation of the Study

- *For Practitioners*

The research results revealed a strong positive impact of digital employee experience (DEX) on both customer-supplier relationship management (CSRSM) and environmental performance (EP). Therefore, prioritize investments in enhancing employees' digital experience, which includes providing user-friendly digital tools, offering digital skills training programs, and fostering a supportive digital work environment. Additionally, provide ongoing training and development opportunities for employees to improve their customer relationship management abilities and understanding of environmental sustainability practices may increase the overall firm performance.

The firm can also strengthen customer-supplier relationships by fostering collaboration with suppliers, working with them to focus on sustainability goals, implementing eco-friendly practices, selecting sustainable materials, and providing training and resources to help suppliers improve their digital capabilities and environmental practices.

- *For Future Studies*

Further study can use qualitative research techniques to interview top management executives and employees regarding other variables related to firm performance, environmental sustainability practices in electronics companies and its adoption such as waste reduction, energy efficiency, and green supply chain management domestically and internationally. In addition, examining the relationship between the adoption of digital technologies and the overall business performance assessing the impact on productivity, cost efficiency, and competitiveness in global marketplaces shall be considered. The further study can also extend to other cultures to obtain the different attitudes on how cultural factors, such as cultural values, communication styles, and work practices influence the digital employee experience in electronics companies as well as its the adoption and effectiveness of digital tools and platforms. Finally, a study on the effects of digital employee experience on employee engagement levels, such as remote work satisfaction, use of digital tools for collaboration, and overall job satisfaction might be considered.

REFERENCES

- [1] Melay, I., O'Dwyer, M., Kraus, S., & Gast, J. (2017). Green entrepreneurship in SMEs: A configuration approach. *International Journal of Entrepreneurial Venturing*, 9(1), 1-17.
- [2] Vallaster, C., Kraus, S., Kailer, N., & Baldwin, B. (2018). Responsible entrepreneurship: Outlining the contingencies. *International Journal of Entrepreneurial Behavior & Research*, 25(3), 538-553.
- [3] Kraus, S., Rehman, S. U., & García, F. J. S. (2020). Corporate social responsibility and environmental performance: The mediating role of environmental strategy and green innovation. *Technological Forecasting and Social Change*, 160, 120262.
- [4] Hernández, J. P. S. I., Yañez-Araque, B., & Moreno-García, J. (2020). Moderating effect of firm size on the influence of corporate social responsibility in the economic performance of micro-, small- and medium-sized enterprises. *Technological Forecasting and Social Change*, 151, 119774.
- [5] Mahanakorn Partners Group. (2021). *The Bio-Circular-Green Economic Model*. Retrieved 29 December 2023, from <https://mahanakornpartners.com/the-bio-circular-green-economic-model/>.
- [6] Schwarzmüller, T., Brosi, P., Duman, D., & Welpel, I. M. (2018). How does the digital transformation affect organizations? Key themes of change in work design and leadership. *Management Revue*, 29(2), 114-138.
- [7] Appio, F. P., Frattini, F., Petruzzelli, A. M., & Neirotti, P. (2021). Digital transformation and innovation management: A synthesis of existing research and an agenda for future studies. *Journal of Product Innovation Management*, 38(1), 4-20.
- [8] Perkin, N., & Abraham, P. (2021). *Building the agile business through digital transformation*. Kogan Page Publishers.
- [9] Konopik, J., Jahn, C., Schuster, T., Hoßbach, N., & Pflaum, A. (2022). Mastering the digital transformation through organizational capabilities: A conceptual framework. *Digital Business*, 2(2), 100019.
- [10] Hussain, Z. (2021). Paradigm of technological convergence and digital transformation: The challenges of CH sectors in the global COVID-19 pandemic and commencing resilience-based structure for the post-COVID-19 era. *Digital Applications in Archaeology and Cultural Heritage*, 21, e00182.
- [11] Leão, P., & da Silva, M. M. (2021). Impacts of digital transformation on firms' competitive advantages: A systematic literature review. *Strategic Change*, 30(5), 421-441.
- [12] Brunetti, F., Matt, D. T., Bonfanti, A., De Longhi, A., Pedrini, G., & Orzes, G. (2020). Digital transformation challenges: Strategies emerging from a multi-stakeholder approach. *The TQM Journal*, 32(4), 697-724.
- [13] Nelson, E. & Doman, H. O. (2017). *Employee experience (how to build an ex-centric organization)*. KennedyFitch, Zurich. Retrieved 29 December 2023, from <http://www.kennedyfitch.com/KFwebsite-new/wp-content/uploads/Employee-Experience-How-to-Build-an-EX-Centric-Organization.pdf>.
- [14] APQC (2020). *Engagement and the employee experience: Survey highlights*. Retrieved 29 December 2023 from <https://www.apqc.org/resource-library/resource-listing/engagement-employee-experience-survey-highlights>.
- [15] Sudrajat, D., Larasati, A., Farmania, A., Andri Yulius Caesar, L., & Moeke, D. (2021, July). Does digital employee experience matters for employee service orientation, ambidexterity, and agility?. In *Proceedings of the 2021 12th International Conference on E-business, Management and Economics* (pp. 672-677).
- [16] Attaran, M., Attaran, S., & Kirkland, D. (2019). The need for digital workplace: Increasing workforce productivity in the information age. *International Journal of Enterprise Information Systems (IJEIS)*, 15(1), 1-23.
- [17] Morgan, J. (2017). *The employee experience advantage: How to win the war for talent by giving employees the workspaces they want, the tools they need, and a culture they can celebrate*. John Wiley & Sons.
- [18] Raia, M. (2017). Providing a better digital experience for employees. *Strategic HR Review*, 16(2), 71-75.
- [19] Ludike, J. (2018). Digital employee experience engagement paradox: Futureproofing retention practice. *Psychology of Retention: Theory, Research and Practice*, 55-73.

- [20] Schnellbacher, B., & Heidenreich, S. (2020). The role of individual ambidexterity for organizational performance: Examining effects of ambidextrous knowledge seeking and offering. *The Journal of Technology Transfer*, 45(5), 1535-1561.
- [21] Itam, U., & Ghosh, N. (2020). Employee experience management: A new paradigm shift in HR thinking. *International Journal of Human Capital and Information Technology Professionals (IJHCITP)*, 11(2), 39-49.
- [22] Singh, Y., & Atwal, H. (2019). Digital culture—a hurdle or a catalyst in employee engagement. *International Journal of Management Studies*, 6(1/8), 54-60.
- [23] Halid, H., Yusoff, Y. M., & Somu, H. (2020, May). The relationship between digital human resource management and organizational performance. In *First ASEAN Business, Environment, and Technology Symposium (ABEATS 2019)* (pp. 96-99). Atlantis Press.
- [24] Gheidar, Y., & ShamiZanjani, M. (2020a). The pattern of factors affecting the formation of digital employee experience. *Journal of Human Resource Management*, 10(3), 23-50.
- [25] Thoughtfarmer Group. (2019). *What is the digital employee experience?* Retrieved 4 January 2024, from <https://www.thoughtfarmer.com/blog/what-is-the-digital-employee-experience/>.
- [26] Shivakumar, S. K. (2019). *Build a next-generation digital workplace: Transform legacy intranets to employee experience platforms*. Apress.
- [27] Robertson, J. (2018). *Digital employee experience is where the action will be*. Retrieved 4 January 2024, from <https://www.cmswire.com/digital-workplace/digital-employee-experience-is-where-the-action-will-be/>.
- [28] Gheidar, Y., & ShamiZanjani, M. (2020b). Conceptualizing the digital employee experience. *Strategic HR Review*, 19(3), 131-135.
- [29] CGI. (2016). *Digital Employee Experience*. CGI Group.
- [30] Digital Adoption Team. (2019). *The digital employee experience: The complete guide*. Retrieved 4 January 2024, from <https://www.digital-adoption.com/digital-employee-experience/>.
- [31] Monczka, R. M., Handfield, R. B., Giunipero, L. C., & Patterson, J. L. (2021). *Purchasing & supply chain management*. Cengage Learning.
- [32] Buttle, F., & Maklan, S. (2019). *Customer relationship management: Concepts and technologies*. Routledge.
- [33] Nazari-Shirkouhi, S., Keramati, A., & Rezaie, K. (2015). Investigating the effects of customer relationship management and supplier relationship management on new product development. *Technical Gazette*, 22(1), 191-200.
- [34] Ramani, G., & Kumar, V. (2008). Interaction orientation and firm performance. *Journal of Marketing*, 72(1), 27-45.
- [35] Ernst, H., Hoyer, W. D., Krafft, M., & Krieger, K. (2011). Customer relationship management and company performance-The mediating role of new product performance. *Journal of the Academy of Marketing Science*, 39(2), 290-306.
- [36] Sahay, B. S., & Ranjan, J. (2008). Real time business intelligence in supply chain analytics. *Information Management & Computer Security*, 16(1), 28-48.
- [37] Reinartz, W., Krafft, M., & Hoyer, W. D. (2004). The customer relationship management process: Its measurement and impact on performance. *Journal of Marketing Research*, 41(3), 293-305.
- [38] Herrmann, J. W., & Hodgson, B. (2001, October). SRM: Leveraging the supply base for competitive advantage. In *Proceedings of the SMTA International Conference* (Vol. 1, pp. 1-10).
- [39] Park, J., Shin, K., Chang, T. W., & Park, J. (2010). An integrative framework for supplier relationship management. *Industrial Management & Data Systems*, 110(4), 495-515.
- [40] Groves, G., & Valsamakis, V. (1998). Supplier-customer relationships and company performance. *The International Journal of Logistics Management*, 9(2), 51-64.
- [41] Vanichchinchai, A. (2021). The linkages among supplier relationship, customer relationship and supply performance. *Journal of Business & Industrial Marketing*, 36(8), 1520-1533.
- [42] Feng, T., Li, T., Sun, L., & Wang, D. (2013). External involvement and operational performance: The mediating role of internal integration. *Chinese Management Studies*, 7(3), 488-507.
- [43] Han, J., Lu, H., Trienekens, J. H., & Omta, S. W. F. (2013). The impact of supply chain integration on firm performance in the pork processing industry in China. *Chinese Management Studies*, 7(2), 230-252.
- [44] Liker, J. K., & Choi, T. Y. (2004). Building deep supplier relationships. *Harvard Business Review*, 82(12), 104-113.
- [45] Huang, M. C., Yen, G. F., & Liu, T. C. (2014). Reexamining supply chain integration and the supplier's performance relationships under uncertainty. *Supply Chain Management: An International Journal*, 19(1), 64-78.
- [46] Petersen, K. J., Ragatz, G. L., & Monczka, R. M. (2005). An examination of collaborative planning effectiveness and supply chain performance. *Journal of Supply Chain Management*, 41(2), 14-25.
- [47] Gulati, R., & Sytch, M. (2007). Dependence asymmetry and joint dependence in interorganizational relationships: Effects of embeddedness on a manufacturer's performance in procurement relationships. *Administrative Science Quarterly*, 52(1), 32-69.
- [48] Li, G. (2021). The impact of supply chain relationship quality on knowledge sharing and innovation performance: Evidence from Chinese manufacturing industry. *Journal of Business & Industrial Marketing*, 36(5), 834-848.
- [49] Mesic, Ž., Molnar, A., & Cerjak, M. (2018). Assessment of traditional food supply chain performance using triadic approach: The role of relationships quality. *Supply Chain Management: An International Journal*, 23(5), 396-411.
- [50] Ong, T. S., Magsi, H. B., & Burgess, T. F. (2019). Organisational culture, environmental management control systems, environmental performance of Pakistani manufacturing industry. *International Journal of Productivity and Performance Management*, 68(7), 1293-1322.
- [51] Wittstruck, D., & Teuteberg, F. (2012). Understanding the success factors of sustainable supply chain management: Empirical evidence from the electronics and electronics industry. *Corporate Social Responsibility and Environmental Management*, 19(3), 141-158.
- [52] Laosirihongthong, T., Adebajo, D., & Choon Tan, K. (2013). Green supply chain management practices and performance. *Industrial Management & Data Systems*, 113(8), 1088-1109.
- [53] Nawrocka, D., & Parker, T. (2009). Finding the connection: Environmental management systems and environmental performance. *Journal of Cleaner Production*, 17(6), 601-607.
- [54] Zailani, S., Jeyaraman, K., Vengadasan, G., & Premkumar, R. (2012). Sustainable supply chain management (SSCM) in Malaysia: A survey. *International Journal of Production Economics*, 140(1), 330-340.
- [55] Al-Tuwaijri, S. A., Christensen, T. E., & Hughes, K. (2004). The relations among environmental disclosure, environmental performance, and economic performance: A simultaneous equations approach. *Accounting, Organizations and Society*, 29(5-6), 447-471.
- [56] Henri, J. F., & Jourmeault, M. (2010). Eco-control: The influence of management control systems on environmental and economic performance. *Accounting, Organizations and Society*, 35(1), 63-80.
- [57] Zhu, Q., Sarkis, J., & Lai, K. H. (2007). Green supply chain management: Pressures, practices and performance within the Chinese automobile industry. *Journal of Cleaner Production*, 15, 1041-1052.
- [58] Cochran, W. G. (1953). *Sampling techniques*. New York: John Wiley & Sons, Inc.
- [59] Yuan, K. H., Bentler, P. M. (2000). Three likelihood-based methods for mean and covariance structure analysis with nonnormal missing data. *Sociological Methodology*, 30(1), 165-200.

- [60] Savalei, V., & Bentler, P. M. (2005). A statistically justified pairwise ML method for incomplete nonnormal data: A comparison with direct ML and pairwise ADF. *Structural Equation Modeling*, 12(2), 183-214.
- [61] Bagozzi, R. P., & Yi, Y. (2012). Specification, evaluation, and interpretation of structural equation models. *Journal of the Academy of Marketing Science*, 40(1), 8-34.
- [62] Fornell, C., & Larcker, D. F. (1981). Structural equation models with unobservable variables and measurement error: Algebra and statistics. *Journal of Marketing Research*, 18(3), 382-388.
- [63] Hu, L. T., & Bentler, P. M. (1998). Fit indices in covariance structure modeling: Sensitivity to underparameterized model misspecification. *Psychological Methods*, 3(4), 424-453.
- [64] Hu, L. T., & Bentler, P. M. (1999). Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. *Structural Equation Modeling: A Multidisciplinary Journal*, 6(1), 1-55.
- [65] Henseler, J., Dijkstra, T. K., Sarstedt, M., Ringle, C. M., Diamantopoulos, A., Straub, D. W., ... & Calantone, R. J. (2014). Common beliefs and reality about PLS: Comments on Rönkkö and Evermann (2013). *Organizational Research Methods*, 17(2), 182-209.
- [66] Bentler, P. M., & Bonett, D. G. (1980). Significance tests and goodness of fit in the analysis of covariance structures. *Psychological Bulletin*, 88(3), 588-606.
- [67] Byrne, B. M. (2013). *Structural equation modeling with EQS: Basic concepts, applications, and programming*. Routledge.
- [68] Abhari, K., Ly, J., Sanavi, A., & Wright, M. (2021). 'Employees First': The relationship between employee experience management systems and customer experience management. In *AMCIS 2021 Proceedings* (Vol. 18, pp. 1-10).
- [69] Ning, L., & Yao, D. (2023). The impact of digital transformation on supply chain capabilities and supply chain competitive performance. *Sustainability*, 15(13), 10107.
- [70] Yahya, N. A., & Jaaffar, A. H. (2019). Employee's experience and perceived environmental performance of Malaysian chemical related industry. *International Journal of Engineering and Advanced Technology (IJEAT)*, 9(1), 3539-3542.
- [71] Li, Y., Dai, J., & Cui, L. (2020). The impact of digital technologies on economic and environmental performance in the context of industry 4.0: A moderated mediation model. *International Journal of Production Economics*, 229, 107777.
- [72] Andalib Ardakani, D., Soltanmohammadi, A., & Seuring, S. (2023). The impact of customer and supplier collaboration on green supply chain performance. *Benchmarking: An International Journal*, 30(7), 2248-2274.