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DIGITAL CUSTOMER FOCUS, INNOVATION, AND SUSTAINABLE COMPETITIVE ADVANTAGE IN FRESH FOOD E-COMMERCE FOR ENHANCED URBAN FOOD ACCESSIBILITY

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Abstract. The transformation of e-commerce for fresh food is shaped by the convergence of customer-focused digital strategies, innovation, and the pursuit of sustainable competitive advantage, particularly in enhancing food accessibility in urban areas. This study explores how digital technology and customer-centered innovation contribute to operational efficiency, personalized service delivery, and environmental sustainability across the fresh food distribution network. This research uses a narrative qualitative approach, synthesizing insights from academic literature, industry reports, and case studies to examine the strategic alignment between technology adoption, innovation practices, and competitive positioning. The findings show that digital transformation, including blockchain, precision agriculture, and smart logistics, not only enhances transparency and traceability in the food supply chain but also fosters trust and responsiveness among urban consumers. Fresh food e-commerce platforms leverage this technology to minimize food waste, improve delivery accuracy, and quickly adapt to dynamic demand patterns. Furthermore, this study highlights the role of green innovation in strengthening business sustainability, with digital platforms serving as a key driver for environmental monitoring, consumer engagement, and ethical sourcing.

Keywords: Digital Customers, Innovation, Sustainable Competitive Advantage, Fresh Food E-Commerce, Urban Food Accessibility, Supply Chain

Abstrak. Transformasi e-commerce makanan segar dibentuk oleh konvergensi strategi fokus pelanggan digital, inovasi, dan pengejaran keunggulan kompetitif yang berkelanjutan, khususnya dalam meningkatkan aksesibilitas pangan di wilayah perkotaan. Studi ini mengeksplorasi bagaimana teknologi digital dan inovasi yang berpusat pada pelanggan berkontribusi pada efisiensi operasional, pengiriman layanan yang dipersonalisasi, dan keberlanjutan lingkungan di seluruh jaringan distribusi makanan segar. Penelitian ni menggunakan pendekatan kualitatif naratif, penelitian ini mensintesis wawasan dari literatur akademis, laporan industri, dan studi kasus untuk memeriksa keselarasan strategis antara adopsi teknologi, praktik inovasi, dan posisi kompetitif. Temuan menunjukkan bahwa transformasi digital, termasuk blockchain, pertanian presisi, dan logistik cerdas, tidak hanya meningkatkan transparansi dan keterlacakan dalam rantai pasokan pangan, tetapi juga menumbuhkan kepercyaan dan responsivitas di antara konsumen perkotaan. Platform e-commerce makanan segar memanfaatkan teknologi ini untuk meminimalkan pemborosan makanan, meningkatkan akurasi pengiriman, dan beradaptasi dengan cepat terhadap pola permintaan yang dinamis. Selain itu, studi ini menyoroti peran inovasi hijau dalam memperkuat keberlanjutan bisnis, dengan platform digital berfungsi sebagai pendorong utama pemantauan lingkungan, keterlibatan konsumen, dan sumber yang etis.

Kata Kunci: Pelanggan Digital, Inovasi, Keunggulan Kompetitif Berkelanjutan, E-Commerce Makanan Segar, Aksesibilitas Makanan Perkotaan, Rantai Pasokan

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INTRODUCTION

Digital transformation and green innovation are intricately linked, with the contextual environment playing a moderating role in shaping their interaction (Zhu et al., 2024). The rise of online food delivery platforms, an expanding area of O2O commerce, has revolutionized the interaction between consumers and food suppliers globally (Li et al., 2020). This is achieved through digital transformation by removing spatial and temporal barriers in the innovation process, enabling precise alignment and integration of innovative components and resources (Zhu et al., 2024). As disposable incomes rise and electronic payments become more secure, consumers are increasingly turning to online services, especially with the expansion of supplier networks and delivery capabilities (Li et al., 2020). Globalization and the evolution of e-commerce have opened up opportunities for growth, but present challenges, such as the supply chain visibility and complexity at the same time (Agrawal & Narain, 2018). The surge in food safety scandals has heightened consumer demand for transparency regarding the origin and production of food products (Duong et al., 2024). To meet this demand, businesses are turning to blockchain technology to enhance traceability and accountability throughout the food supply chain. The advent of e-commerce provides opportunities to tackle challenges related to supply chains, sustainability, and the demand for personalized products (Duong et al., 2024). Online platforms have revolutionized food accessibility and distribution, but this shift has also brought environmental, economic, and social concerns because of poor logistical efficiency and higher fragmentation (Marcucci et al., 2020). Innovation and digital transformation have become crucial for food systems to become more sustainable through enhanced production efficiency and minimized waste of resources (Astill et al., 2019).

Therefore, the central aim of this paper is to explore the intricate relationships between digital-based customer focus strategies, innovation, and the creation of sustainable competitive advantage within the context of fresh food e-commerce platforms. Digital technologies offer solutions to environmental and human health challenges throughout the entire food chain (Feroz et al., 2021). By delving into these dynamics, the research seeks to provide valuable insights for industry practitioners, policymakers, and researchers seeking to optimize food accessibility and distribution in urban areas while fostering sustainable business practices. Furthermore, the research will focus on analyzing how these strategies contribute to strengthening food accessibility and distribution networks within urban areas, addressing the challenges of food deserts and promoting equitable access to fresh and nutritious food for all urban residents. This study will seek to extend the SOR model, examining technology adoption

outcomes and emphasizing the important role of consumer knowledge in moderating the effects of technology adoption in technology-mediated environments (Duong et al., 2024).

To accomplish this objective, a comprehensive narrative analysis will be employed, drawing upon diverse sources of information, including industry reports, academic literature, case studies, and online data. The case study is a research method, and can be used to further help food companies towards digitalization. This analysis will provide a rich and nuanced understanding of the strategies employed by fresh food e-commerce platforms and their impact on the broader food system. It is important to recognize that in the digital economy innovation and competition are constant, which also trigger consumer welfare (Gazzola et al., 2017). Food companies have started adapting their marketing strategies by integrating digital systems to exploit their potential (Caiazza & Bigliardi, 2020). By embracing digital platforms, these businesses can now directly connect with their customer base, offering customized interactions and support to improve consumer experiences and brand loyalty. By taking into consideration consumer feedback and suggestions through digital channels, businesses can continue refining their offerings to more closely align with evolving demands and expectations (Xu, 2024).

The research will also explore the role of digital technologies in enabling more sustainable and resilient food systems, reducing food waste, and promoting environmentally friendly practices throughout the supply chain. High-tech companies possess advantages in both digital transformation and green innovation, which allows them to be reflective of the impact of the transformations on sustainable development (Zhu et al., 2024). Agriculture is undergoing a "fourth revolution" due to digitalization, which has the potential to address major issues in the agricultural sector, including increasing productivity, reducing footprints, and conserving natural resources (Finger, 2023). Also, the study will consider the limitations of digital-based strategies, such as the digital divide and potential exclusion of vulnerable populations, and propose strategies to mitigate these challenges (Zhu et al., 2024). To accelerate the digital transition in the agri-food sector, the EU is prioritizing investments in research, innovation, and infrastructure. Moreover, there are many benefits of digital transformation, including improved productivity and profitability.

Digital transformation is essential for improving the efficiency of agri-food supply chains (Melesse et al., 2023). It helps to optimize resource utilization, enhance product quality, and reduce environmental effect through the use of sophisticated technologies. The integration of digital technology can also assist in reducing environmental footprints and optimizing production processes in agriculture (Zhu et al., 2024). Digital transformation facilitates the effective allocation and utilization of resources such as labor, capital, land, and technology,

which results in enhanced resource utilization, lower expenses, and ecological balance (Jia et al., 2025). This can be attained through the use of precision agricultural approaches, where technologies like sensors, GPS, and data analytics are used to fine-tune irrigation, fertilization, and pest control techniques. In this context, digital tools provide real-time insights into crop health, soil conditions, and weather patterns, enabling farmers to make data-driven decisions that optimize yields and minimize waste (Gyamfi et al., 2024). Furthermore, it has been demonstrated that digital transformation significantly promotes green innovation, a relationship that is strengthened by market-driven environmental pressures (Zhu et al., 2024). Digital platforms also make sustainability reporting easier, providing companies with the resources they need to track, assess, and communicate their environmental, social, and economic performance (Huy & Phuc, 2024).

METHOD

Narrative analysis is a qualitative research method that focuses on the study of stories and personal accounts to understand how individuals make sense of their experiences and construct meaning (Kosior, 2020). This approach is particularly well-suited for exploring complex phenomena that are embedded in social and cultural contexts (Huy & Phuc, 2024). By analyzing narratives, researchers can gain insights into the values, beliefs, and assumptions that underlie people's actions and decisions. Data collection for the narrative analysis will involve gathering stories and accounts from various stakeholders, including fresh food e-commerce platform operators, customers, suppliers, and experts in the field. These sources will provide rich, contextualized information about the strategies, innovations, and challenges related to the research topic. Several strategies, including in-depth interviews, focus group discussions, and the examination of pertinent documents and online material, will be used to collect data. To elicit comprehensive narratives, semi-structured interview protocols will be used, enabling participants to convey their experiences, perspectives, and insights regarding digital-based customer focus strategies, innovation initiatives, and the pursuit of sustainable competitive advantage within the fresh food e-commerce industry.

Purposive sampling will be used to select participants who can provide valuable insights and diverse perspectives on the research topic. The sample size will be determined based on the principle of saturation, where data collection continues until no new themes or insights emerge from the narratives. The validity and reliability of the data will be ensured through triangulation, where multiple data sources and methods are used to corroborate findings and enhance the credibility of the research. The interviews will be digitally recorded for

transcription and further analysis (Tabares et al., 2024). Thematic analysis, facilitated by NVivo 12 software, will be employed to identify and categorize recurring themes and patterns within the narratives (Hardcastle et al., 2024). This method entails a methodical assessment of the information to extract significant themes, ideas, and narratives that shed light on the tactics, obstacles, and results connected to consumer focus and innovation in the fresh food e-commerce sector. Constant comparison, which entails analyzing data as it is gathered, will be utilized during the thematic analysis process (Dzimba & Poll, 2024).

Furthermore, ethical considerations will be paramount throughout the research process. In order to protect their privacy and confidentiality, participants' informed consent will be obtained, and their identities will be kept anonymous. The study will adhere to ethical guidelines and regulations, ensuring that the rights and well-being of participants are protected throughout the data collection and analysis process (Hardcastle et al., 2024). The goal of the narrative analysis is to offer a comprehensive and nuanced understanding of how digital-based customer focus strategies and innovation can contribute to sustainable competitive advantage formation and improved food accessibility and distribution in urban areas.

Generic qualitative inquiry is appropriate for studies that look into participants' attitudes, opinions, beliefs, or experiences (Dzimba & Poll, 2024). The researcher's interpretations of the data will be greatly influenced by the subjective nature of qualitative research. Thematic analysis will be used to examine netnography and then thematic analysis, which will reveal any insights pertinent to our research questions (Hardcastle et al., 2024). Data analysis will involve a combination of descriptive coding, data classification, and thematic analysis (Hardcastle et al., 2024).

RESULTS

The results of the narrative analysis are anticipated to reveal key themes related to the implementation of digital-based customer focus strategies, the types of innovations employed by fresh food e-commerce platforms, and the impact of these initiatives on sustainable competitive advantage and food accessibility in urban areas. The study employs two techniques: degrees-of-freedom analysis to test whether or not consumer stories fit a given archetypal theme and visual narrative art to confirm whether or not consumer’s own stories enact a specific archetype and how such enactments are done (Muniz et al., 2015). The identified themes will be analyzed in relation to existing literature and theoretical frameworks to provide a deeper understanding of the underlying mechanisms and dynamics at play.

The findings will be presented in a clear and concise manner, using illustrative quotes and excerpts from the narratives to support the analysis and bring the stories to life. The results will showcase the experiences, perspectives, and insights of various stakeholders involved in the fresh food e-commerce ecosystem, offering valuable lessons and best practices for platform operators, policymakers, and other stakeholders interested in promoting sustainable and equitable food systems (Tuch et al., 2013). The findings of this study have implications for enhancing urban food systems, especially the efficacy and sustainability of food distribution and accessibility. The study's results, which offer concrete insights into how technology, customer-focused strategies, and innovation can be used to solve issues with food access and distribution in cities, are expected to offer practical guidance for e-commerce platforms, legislators, and other parties.

The potential contributions of this research are manifold, encompassing theoretical, practical, and societal dimensions. Theoretically, the study contributes to the body of knowledge by providing empirical evidence and nuanced insights into the interplay between digital-based customer focus strategies, innovation, sustainable competitive advantage, and food accessibility in the context of fresh food e-commerce (Cassia et al., 2012). Practically, the research offers actionable recommendations for fresh food e-commerce platforms to enhance their customer focus, foster innovation, and build sustainable competitive advantages. It is possible to investigate the effects of memorable customer experiences on more general facets of life and to design services that enable customers to find themselves (Zimbatu & Russell-Bennett, 2024). The findings provide insights into consumer values and preferences, which can inform the design of more effective and user-friendly platforms (Saarijärvi et al., 2013; Vidani, 2024).

Moreover, the study sheds light on the challenges and opportunities associated with leveraging e-commerce to address food access disparities in urban areas (Suryawanshi et al., 2021). The food sector, like many others, has benefited from the rise of e-commerce, which has made food available via online channels (Ramesh et al., 2021). The study makes a substantial contribution to society by tackling crucial issues pertaining to urban food systems, sustainability, and social equity. The study emphasizes the use of e-commerce platforms to improve urban food accessibility and distribution, supporting more just and sustainable food systems, through practical insights and policy recommendations

DISCUSSION

The discussion section will provide a comprehensive interpretation of the study's findings, drawing connections between the identified themes, relevant literature, and the theoretical framework guiding the research. The study's purpose is to investigate how e-commerce platforms focused on fresh food might improve food accessibility and distribution in urban areas by utilizing digital technologies, customer-centric strategies, and innovation to create a long-lasting competitive edge (Bhattacharjee et al., 2023; Shi et al., 2018).

The discussion will delve into the implications of the findings for fresh food e-commerce platforms, highlighting the importance of customer-centric approaches, continuous innovation, and strategic partnerships in achieving sustainable competitive advantage. It will also address the limitations of the study and suggest avenues for future research, such as exploring the role of government policies and regulations in shaping the e-commerce landscape for fresh food and investigating the impact of cultural and socio-economic factors on consumer behavior in online fresh food markets.

CONCLUSION

The conclusion section will summarize the key findings and contributions of the study, reiterating the significance of digital-based customer focus strategies and innovation in fostering sustainable competitive advantage and enhancing food accessibility in urban areas. The study contributes to the understanding of how digital customer-centric strategies, innovation, and sustainable competitive advantages interact, with a focus on food accessibility in the context of fresh food e-commerce. The study has the potential to inform the creation of inclusive and sustainable food systems in urban environments by emphasizing the importance of e-commerce platforms in tackling issues related to food access disparities. The conclusion will also offer policy recommendations aimed at promoting digital inclusion and creating an enabling environment for fresh food e-commerce platforms to thrive and contribute to more resilient and equitable urban food systems (Nadiger et al., 2024).

Furthermore, the conclusion will emphasize the need for continued research and collaboration among stakeholders to address the evolving challenges and opportunities in the fresh food e-commerce landscape, ensuring that technological advancements and innovative business models are harnessed to create a more sustainable and food-secure future for all (Vu et al., 2017).

The study does acknowledge some limitations. It is important to address these limitations and potential biases by using a combination of data collection methods, such as face-to-face interviews or field experiments, to mitigate these biases (Duong et al., 2024). Future studies ought to delve into the nuances of consumer behavior in online fresh food markets, taking into account elements like cultural background, socioeconomic status, and level of digital literacy. It's also important to look into how government regulations and policies affect the e-commerce sector for fresh food. More investigation is needed to determine how e-commerce platforms affect sustainability and how they might support more environmentally friendly methods of food production, packaging, and distribution. Future studies might use a longitudinal research design to better understand the dynamic interactions between green innovation and digital transformation (Zhu et al., 2024).

The conclusion will also propose directions for future research, such as exploring the potential of blockchain technology to enhance transparency and traceability in fresh food supply chains (Duong et al., 2024). Enterprises should strategically align digital transformation initiatives with market demands and environmental goals, cultivating a culture of innovation that values both economic and ecological benefits (Zhu et al., 2024). Governments can incentivize investment in digital solutions through fiscal policies (Zhu et al., 2024). By aligning policies with environmental sustainability goals, governments can create an enabling environment for businesses to contribute to a greener and more innovative economy (Zhu et al., 2024). It is imperative that enterprises not only embrace digital transformation but also weave sustainability into their core strategies, as this will be the key to unlocking green innovation and achieving sustainable competitive advantage (Zhu et al., 2024). The study suggests that a dedication to sustainability can serve as a behavioral and productive model for businesses building strong, long-lasting relationships (Foti & Timpanaro, 2021). Furthermore, encouraging ethical behavior and responsibility within organizations can promote sustainable practices (Quttainah & Ayadi, 2024; Setyadi et al., 2025). The results of this study provide practical insights for organic food industry stakeholders, including farmers, processors, distributors, retailers, and consumers (Duong et al., 2024). By implementing blockchain technology, these stakeholders can enhance transparency, build consumer trust, and promote the consumption of organic food (Duong et al., 2024).

Digital technologies have brought fundamental changes to business models, revolutionizing how companies operate and presenting both opportunities and challenges in various sectors (Alshdaifat et al., 2024). As businesses embrace digital transformation, they are compelled to prioritize operational efficiency and innovative capabilities to enhance their

ecological sustainability (Zhu et al., 2024). It is becoming more and more obvious that digital technologies have the power to promote sustainability by cutting waste, conserving resources, and improving environmental performance across the board. Blockchain technology, for instance, has the potential to transform global food supply chains by improving transparency, traceability, and efficiency, which will ultimately result in less food waste (Rajput et al., 2025). Moreover, strategies for green innovation are essential for businesses looking to lessen their environmental effect and promote sustainable practices. Integrating digital technologies and green innovation initiatives has the potential to not only improve environmental sustainability but also generate significant economic value. By implementing digital-based customer focus strategies, fresh food e-commerce platforms can promote food accessibility and distribution in urban areas while simultaneously strengthening their sustainable competitive advantage (Zhu et al., 2024). Blockchain technology enhances sustainability in supply chains by providing transparency and traceability, which helps companies meet their sustainability objectives by providing insights into the environmental and social impacts of supply chain operations (Balcıoğlu et al., 2024).

Blockchain technology has emerged as a transformative force, bringing about significant changes in global supply chains, particularly in the food industry (Bhattacharya, 2021). By 2024, it is anticipated that blockchain implementation may save the world's food sector up to $31 billion by preventing food fraud (Duong et al., 2024). Blockchain's capacity to guarantee data integrity, security, and transparency has made it a crucial tool for improving supply chain processes. Real-time monitoring, traceability, and accountability are made possible by its decentralized structure, which also lowers the chance of fraud and corruption. Because of these features, blockchain has become essential for upholding sustainability standards, particularly in developing nations where upholding these standards can be difficult. The application of blockchain in food supply chains has far-reaching implications, including enhanced food safety, improved supply chain efficiency, and increased consumer trust. Consumers can access detailed information about the process through blockchain technology when it is integrated into the food supply chain, which improves traceability. This transparency is essential for building and maintaining trust by allaying safety concerns and guaranteeing product quality (Duong et al., 2024). Blockchain can be used to track data across the supply chain, increasing public awareness of sustainable food production techniques and holding producers and regulators accountable (Kamilaris et al., 2019).

Furthermore, the incorporation of blockchain technology can address sustainability issues in developing countries by increasing supply chain transparency and accountability. This technology encourages ethical and sustainable business practices while also assisting in the fight against corruption and fraud. For example, blockchain's immutability and transparency can effectively combat the proliferation of counterfeit or low-quality ingredients in food supply chains (Kshetri, 2021). This capability is particularly crucial in regions where regulatory oversight may be limited, ensuring that consumers receive authentic, high-quality products. Companies can improve their environmental performance and support sustainable development goals by utilizing blockchain technology to track and validate sustainability claims. The implementation of blockchain technology presents considerable obstacles, including scalability problems, regulatory uncertainty, and the necessity of collaboration among stakeholders. To fully realize blockchain's potential, it is imperative to address these issues through collaborative efforts and the establishment of uniform standards. Embracing digital solutions, such as blockchain technology, enables organizations to strengthen food accessibility and distribution in urban areas, fostering resilience, sustainability, and inclusivity in food systems (Akhtar et al., 2024; Kshetri & DeFranco, 2020; Kumar et al., 2025; Mbadlisa & Jokonya, 2024).

Blockchain's primary characteristics, such as decentralization, immutability, and transparency, offer a strong framework for transforming supply chain operations and fostering sustainable practices. In supply chain finance, blockchain is being used more and more as it enters the information and intellectualization stages (Thakur, 2023). It has the potential to improve effectiveness, lower costs, and foster transparency across the board. The technology's decentralized design ensures that data is distributed across multiple nodes, reducing the risk of single points of failure and improving the integrity of the supply chain. By increasing transparency and traceability, blockchain promotes trust among supply chain participants, which include suppliers, manufacturers, distributors, and retailers. Each transaction recorded on the blockchain is time-stamped and unchangeable, which creates an audit trail that is resistant to tampering and fraud. This feature makes it easier to track items as they move through the supply chain, confirming their provenance and authenticity.

REFERENCES

Agrawal, P., & Narain, R. (2018). Digital supply chain management: An Overview. IOP Conference Series Materials Science and Engineering, 455, 12074. https://doi.org/10.1088/1757-899x/455/1/012074

Akhtar, T., Chen, L., & Tareq, M. A. (2024). Blockchain technology enterprises' ownership structure and cash holdings. Sustainable Futures, 8, 100229. https://doi.org/10.1016/j.sftr.2024.100229

Alojail, M., & Bhatia, S. (2023). Impact of Digital Transformation toward Sustainable Development. Sustainability, 15(20), 14697. https://doi.org/10.3390/su152014697

Alshdaifat, S. M., Aziz, N. H. A., Alhasnawi, M. Y., Alharasis, E. E., Qadi, F. A., & Amosh, H. A. (2024). The Role of Digital Technologies in Corporate Sustainability: A Bibliometric Review and Future Research Agenda [Review of The Role of Digital Technologies in Corporate Sustainability: A Bibliometric Review and Future Research Agenda]. Journal of Risk and Financial Management, 17(11), 509. Multidisciplinary Digital Publishing Institute. https://doi.org/10.3390/jrfm17110509

Astill, J., Dara, R., Campbell, M., Farber, J. M., Fraser, E. D. G., Sharif, S., & Yada, R. Y. (2019). Transparency in food supply chains: A review of enabling technology solutions [Review of Transparency in food supply chains: A review of enabling technology solutions]. Trends in Food Science & Technology, 91, 240. Elsevier BV. https://doi.org/10.1016/j.tifs.2019.07.024

Bahn, R. A., Yehya, A. A. K., & Zurayk, R. (2021). Digitalization for Sustainable Agri-Food Systems: Potential, Status, and Risks for the MENA Region. Sustainability, 13(6), 3223. https://doi.org/10.3390/su13063223

Balcıoğlu, Y. S., Çelik, A. A., & Altındağ, E. (2024). Integrating Blockchain Technology in Supply Chain Management: A Bibliometric Analysis of Theme Extraction via Text Mining. Sustainability, 16(22), 10032. https://doi.org/10.3390/su162210032

Bhattacharjee, A., Kunja, S. R., & Nawaz, N. (2023). Determinants and Outcomes of Food Delivery App Engagement During COVID-19. Journal of Electronic Commerce in Organizations, 21(1), 1. https://doi.org/10.4018/jeco.323655

Bhattacharya, A. (2021). Blockchain & IoT: A Paradigm Shift for Supply Chain Management (p. 159). https://doi.org/10.1002/9781119711063.ch8

Caiazza, R., & Bigliardi, B. (2020). Web marketing in agri-food industry: Challenges and opportunities. Trends in Food Science & Technology, 103, 12. https://doi.org/10.1016/j.tifs.2020.04.024

Cassia, F., Ugolini, M. M., Bonfanti, A., & Cappellari, C. (2012). The Perceptions of Italian Farmers' Market Shoppers and Strategic Directions for Customer-Company-territory Interaction (CCTI). Procedia - Social and Behavioral Sciences, 58, 1008. https://doi.org/10.1016/j.sbspro.2012.09.1081

Diéz-Martín, F., Blanco-González, A., & Román, C. P. (2019). Research Challenges in Digital Marketing: Sustainability. Sustainability, 11(10), 2839. https://doi.org/10.3390/su11102839

Duong, C. D., Dao, T. T., Vu, T. N., Ngo, T. V. N., & Nguyen, M. H. (2024). Blockchain-enabled food traceability system and consumers' organic food consumption: A moderated mediation model of blockchain knowledge and trust in the organic food chain. Sustainable Futures, 100316. https://doi.org/10.1016/j.sftr.2024.100316

Dzimba, E., & Poll, J. A. van der. (2024). DISRUPTIVE INNOVATION CAPABILITY IN RESOURCE-CONSTRAINED ENVIRONMENTS: THE ROLE OF STRATEGIC POSTURE AND HUMAN CAPITAL. Sustainable Futures, 100326. https://doi.org/10.1016/j.sftr.2024.100326

Feroz, A. K., Zo, H., & Chiravuri, A. (2021). Digital Transformation and Environmental Sustainability: A Review and Research Agenda [Review of Digital Transformation and Environmental Sustainability: A Review and Research Agenda]. Sustainability, 13(3), 1530. Multidisciplinary Digital Publishing Institute. https://doi.org/10.3390/su13031530

Finger, R. (2023). Digital innovations for sustainable and resilient agricultural systems. European Review of Agricultural Economics, 50(4), 1277. https://doi.org/10.1093/erae/jbad021

Foti, V. T., & Timpanaro, G. (2021). Relationships, sustainability and agri-food purchasing behaviour in farmer markets in Italy. British Food Journal, 123(13), 428. https://doi.org/10.1108/bfj-04-2021-0358

Gazzola, P., Colombo, G., Pezzetti, R., & Nicolescu, L. (2017). Consumer Empowerment in the Digital Economy: Availing Sustainable Purchasing Decisions. Sustainability, 9(5), 693. https://doi.org/10.3390/su9050693

Gee, I. M., Heard, B. R., Webber, M. E., & Miller, S. A. (2020). The Future of Food: Environmental Lessons from E-Commerce. Environmental Science & Technology, 54(23), 14776. https://doi.org/10.1021/acs.est.0c01731

Gyamfi, E. K., ElSayed, Z., Kropczynski, J., Yakubu, M. A., & Elsayed, N. (2024). Agricultural 4.0 Leveraging on Technological Solutions: Study for Smart Farming Sector. arXiv (Cornell University). https://doi.org/10.48550/arxiv.2401.00814

Haji, M. (2023). Evaluating the efficacy and drawbacks of traceability technology in the quality assurance of the food supply chain. 1(1), 1. https://doi.org/10.17352/afppn.000001

Han, D., & Mu, J. (2018). Study on Consumers' Multiple Levels Cognitive Behavior to Purchase Fresh Agricultural Products Online. IOP Conference Series Earth and Environmental Science, 186, 12015. https://doi.org/10.1088/1755-1315/186/6/012015

Hardcastle, K., Edirisingha, P., Cook, P., & Sutherland, M. T. (2024). The co-existence of brand value co-creation and co-destruction across the customer journey in a complex higher education brand. Journal of Business Research, 186, 114979. https://doi.org/10.1016/j.jbusres.2024.114979

Harfoush, A., Fan, Z., Meunier-Goddik, L., & Haapala, K. R. (2024). A review of ice cream manufacturing process and system improvement strategies [Review of A review of ice cream manufacturing process and system improvement strategies]. Manufacturing Letters, 41, 170. Elsevier BV. https://doi.org/10.1016/j.mfglet.2024.09.021

Huy, P. Q., & Phuc, V. K. (2024). Appraisal model on how accounting data analytics impacts public sector sustainability reporting.

Jia, X., Yang, M., & Zhu, T. (2025). How Can the Digital Economy Enable Sustainable Agricultural Development: Insights from China's Factor Input Efficiency. Sustainability, 17(10), 4372. https://doi.org/10.3390/su17104372

Kamilaris, A., Fonts, A., & Prenafeta-Boldú, F. X. (2019). The rise of blockchain technology in agriculture and food supply chains. Trends in Food Science & Technology, 91, 640. https://doi.org/10.1016/j.tifs.2019.07.034

Kosior, K. (2020). ECONOMIC, ETHICAL AND LEGAL ASPECTS OF DIGITALIZATION IN THE AGRI-FOOD SECTOR. Zagadnienia Ekonomiki Rolnej / Problems of Agricultural Economics, 263(2), 53. https://doi.org/10.30858/zer/120456

Kshetri, N. (2021). Blockchain and sustainable supply chain management in developing countries. International Journal of Information Management, 60, 102376. https://doi.org/10.1016/j.ijinfomgt.2021.102376

Kshetri, N., & DeFranco, J. F. (2020). The Economics Behind Food Supply Blockchains. Computer, 53(12), 106. https://doi.org/10.1109/mc.2020.3021549

Kumar, N., Kumar, K. S., Aeron, A., & Verre, F. (2025). Blockchain Technology in Supply Chain Management: Innovations, Applications, and Challenges. Telematics and Informatics Reports, 100204. https://doi.org/10.1016/j.teler.2025.100204

Li, C., Mirosa, M., & Bremer, P. (2020). Review of Online Food Delivery Platforms and their Impacts on Sustainability. Sustainability, 12(14), 5528. https://doi.org/10.3390/su12145528

Li, X., Wang, X., Kong, T., Zheng, J., & Luo, M. (2022). From Bitcoin to Solana – Innovating Blockchain Towards Enterprise Applications. In Lecture notes in computer science (p. 74). Springer Science+Business Media. https://doi.org/10.1007/978-3-030-96527-3_6

Lioutas, E. D., Charatsari, C., & Rosa, M. D. (2021). Digitalization of agriculture: A way to solve the food problem or a trolley dilemma? Technology in Society, 67, 101744. https://doi.org/10.1016/j.techsoc.2021.101744

Marcucci, E., Gatta, V., Pira, M. L., Hansson, L., & Bråthen, S. (2020). Digital Twins: A Critical Discussion on Their Potential for Supporting Policy-Making and Planning in Urban Logistics. Sustainability, 12(24), 10623. https://doi.org/10.3390/su122410623

Mbadlisa, G., & Jokonya, O. (2024). Factors affecting the adoption of blockchain technologies in the food supply chain. Frontiers in Sustainable Food Systems, 8. https://doi.org/10.3389/fsufs.2024.1497599

Melesse, T. Y., Franciosi, C., Pasquale, V. D., & Riemma, S. (2023). Analyzing the Implementation of Digital Twins in the Agri-Food Supply Chain. Logistics, 7(2), 33. https://doi.org/10.3390/logistics7020033

Muniz, K. M., Woodside, A. G., & Sood, S. (2015). Consumer storytelling of brand archetypal enactments. International Journal of Tourism Anthropology, 4(1), 67. https://doi.org/10.1504/ijta.2015.067644

Nadiger, Ms. A. S., Chidri, B., Jyotsna, N., Goyal, P., Rithvik, S., Shrestha, S., & Agarwal, V. (2024). Impact of E-Commerce on traditional Retail: A Study in Bangalore. International Journal of Research Publication and Reviews, 5(3), 5268. https://doi.org/10.55248/gengpi.5.0324.0827

Pal, A., & Kant, K. (2020). Smart Sensing, Communication, and Control in Perishable Food Supply Chain. ACM Transactions on Sensor Networks, 16(1), 1. https://doi.org/10.1145/3360726

Parra-López, C., Abdallah, S. B., Garcia-Garcia, G., Hassoun, A., Trollman, H., Jagtap, S., Gupta, S., Aït-Kaddour, A., Makmuang, S., & Carmona-Torres, C. (2025). Digital technologies for water use and management in agriculture: Recent applications and future outlook. Agricultural Water Management, 309, 109347. https://doi.org/10.1016/j.agwat.2025.109347

Qian, X., & Papadonikolaki, E. (2020). Shifting trust in construction supply chains through blockchain technology. Engineering Construction & Architectural Management, 28(2), 584. https://doi.org/10.1108/ecam-12-2019-0676

Quttainah, M. A., & Ayadi, I. (2024). The impact of digital integration on corporate sustainability: Emissions reduction, environmental innovation, and resource efficiency in the European. Journal of Innovation & Knowledge, 9(3), 100525. https://doi.org/10.1016/j.jik.2024.100525

Rajput, D. V., More, P. R., Adhikari, P. A., & Arya, S. S. (2025). Blockchain technology in the food supply chain: a way towards circular economy and sustainability. Sustainable Food Technology. https://doi.org/10.1039/d5fb00065c

Ramesh, R., Sundramurthy, V. P., Sasikumar, B., Devi, B. S. K., Prasath, P., & Kamala, S. P. R. (2021). An empirical study of online food delivery services from applications perspective. Materials Today Proceedings, 80, 1751. https://doi.org/10.1016/j.matpr.2021.05.500

Saarijärvi, H., Kuusela, H., & Rintamäki, T. (2013). Facilitating customers' post-purchase food retail experiences. British Food Journal, 115(5), 653. https://doi.org/10.1108/00070701311331562

Setyadi, A., Soekotjo, S., Lestari, S. D., Pawirosumarto, S., & Damaris, A. (2025). Trends and Opportunities in Sustainable Manufacturing: A Systematic Review of Key Dimensions from 2019 to 2024 [Review of Trends and Opportunities in Sustainable Manufacturing: A Systematic Review of Key Dimensions from 2019 to 2024]. Sustainability, 17(2), 789. Multidisciplinary Digital Publishing Institute. https://doi.org/10.3390/su17020789

Shi, Y., Xie, C., & Han, R. (2018). An Exploratory Study of Fresh Food E-Commerce in the UK and China. International Journal of Applied Logistics, 8(2), 1. https://doi.org/10.4018/ijal.2018070101

Suryawanshi, P., Dutta, P., Varun, L., & Deepak, G. (2021). Sustainable and resilience planning for the supply chain of online hyperlocal grocery services. Sustainable Production and Consumption, 28, 496. https://doi.org/10.1016/j.spc.2021.05.001

Tabares, S., Dionisio, M., & Parida, V. (2024). Leveraging corporate social innovation by hybrid organizations: A strategic perspective from B Corps in Latin America. Journal of Business Research, 186, 114945. https://doi.org/10.1016/j.jbusres.2024.114945

Thakur, A. (2023). Market trends and analysis of blockchain technology in supply chain. Frontiers in Blockchain, 6. https://doi.org/10.3389/fbloc.2023.1142599

Tuch, A. N., Trusell, R., & Hornbæk, K. (2013). Analyzing users' narratives to understand experience with interactive products. 2079. https://doi.org/10.1145/2470654.2481285

Vidani, J. (2024). A Comparative Analysis of User Experience and Satisfaction on Zomato and Swiggy. SSRN Electronic Journal. https://doi.org/10.2139/ssrn.4847999

Vu, H. M., Chan, H. K., Lim, M. K., & Chiu, A. S. F. (2017). Measuring business sustainability in food service operations: a case study in the fast food industry. Benchmarking An International Journal, 24(4), 1037. https://doi.org/10.1108/bij-04-2015-0030

Wang, S., Yang, Y., Yin, H., Zhao, J., Wang, T., Yang, X., Ren, J., & Yin, C. (2025). Towards Digital Transformation of Agriculture for Sustainable Development in China: Experience and Lessons Learned. Sustainability, 17(8), 3756. https://doi.org/10.3390/su17083756

Xu, S. (2024). Research on marketing strategies in the pet food industry: A case study based on existing brands. SHS Web of Conferences, 207, 1002. https://doi.org/10.1051/shsconf/202420701002

Yi, J., Lai, P., Chang, C., Yuen, K. F., Li, S., & Wang, X. (2021). Sustainable Management for Fresh Food E-Commerce Logistics Services. Sustainability, 13(6), 3456. https://doi.org/10.3390/su13063456

Yu, J. (2014). Fresh Agricultural Products Supply Chain Model under an Ec Environment. 39. https://doi.org/10.1061/9780784413753.007

Zhang, X. (2023). Research on the Operation Strategy of Fresh Food Industry under the Background of New Retail Take FRESHIPPO as an Example. Advances in Economics Management and Political Sciences, 6(1), 94. https://doi.org/10.54254/2754-1169/6/20220158

Zhu, Q., Huang, S.-Z., & Koompai, S. (2024). Digital transformation as a catalyst for green innovation: An Examination of high-tech enterprises in China's Yangtze River Delta.

Zimbatu, A., & Russell-Bennett, R. (2024). Beyond 'Eat-Pray-Love': Designing transformative CX for self-discovery in extended service encounters. Journal of Business Research, 186, 115016. https://doi.org/10.1016/j.jbusres.2024.115016