

Association for Information Systems

AIS Electronic Library (AISeL)

SAIS 2023 Proceedings

Southern (SAIS)

7-1-2023

Small Business Supply Chain Information Systems: A Review of the Literature on Digitization in the Context of the Covid19 Pandemic

Audrey Osborne

Atiya Avery

Follow this and additional works at: <https://aisel.aisnet.org/sais2023>

Recommended Citation

Osborne, Audrey and Avery, Atiya, "Small Business Supply Chain Information Systems: A Review of the Literature on Digitization in the Context of the Covid19 Pandemic" (2023). *SAIS 2023 Proceedings*. 38. <https://aisel.aisnet.org/sais2023/38>

This material is brought to you by the Southern (SAIS) at AIS Electronic Library (AISeL). It has been accepted for inclusion in SAIS 2023 Proceedings by an authorized administrator of AIS Electronic Library (AISeL). For more information, please contact elibrary@aisnet.org.

SMALL BUSINESS SUPPLY CHAIN INFORMATION SYSTEMS: A REVIEW OF THE LITERATURE ON DIGITIZATION IN THE CONTEXT OF THE COVID-19 PANDEMIC

Audrey Osborne
Auburn University
aco0020@auburn.edu

Atiya Avery
Auburn University
atiya.avery@auburn.edu

ABSTRACT

Organizations are still seeking to understand the implications of the COVID-19 pandemic as society enters a new normal and reflects on the lessons learned. The COVID-19 pandemic spun the supply chain into disarray, forcing businesses across a variety of industries to engage in the digital transformation of their supply chains in real-time to further their survival. In this research in progress, we conduct a systematic literature review to better understand, through existing research, the evolution of the digitization of the supply chain information systems for small businesses before, during, and after the COVID-19 pandemic. We also examine the literature for evidence that the COVID-19 pandemic played a role in accelerating the digitization of small business supply chain information systems. We later discuss the implications of our mixed results and the next steps for the project.

Keywords

Supply chain, digital transformation, small business, business continuity

EXTENDED ABSTRACT

Small businesses are essential to the American economy. They provide jobs, increase the nation's GDP, and are known to give back to local communities. These same businesses have been some of the most widely affected entities by the COVID-19 pandemic. Small businesses are still seeking to understand the implications of the COVID-19 pandemic as society enters a new normal and reflects on the lessons learned. One of the lasting implications of the COVID-19 pandemic stems from the disruptions in the global supply chain impacting the way that employees do their work and customers interact with the product and services that they consume. As a result of the COVID-19 pandemic, small businesses across a variety of industries were forced to engage in the digital transformation of their supply chains in real-time to further their survival. A supply chain information system can be defined as an information system that facilitates the connections and flows among one or more partners, producers, wholesalers, retailers, or customers. In this research in progress, we conduct a systematic literature review to better understand, through existing research, the evolution in the digitization of supply chain information systems for small businesses amid the COVID-19 pandemic context. From the literature review framework, we derive distinct, salient themes from existing research surrounding small business digitization in the periods before, during, and after the COVID-19 pandemic. Before the COVID-19 pandemic, academic research themes focused on small and medium enterprises' digital readiness. Academic research themes during the COVID-19 pandemic discussed small business rebound through the pandemic, challenges and opportunities of digitization, as well as considerations for the use of emerging technologies surrounding the internet of things (IoT), artificial intelligence (AI), and Industry 4.0. During the period post-COVID-19 pandemic, themes focused on the industry 5.0 movement, digital enterprise management, using digitization to work through the lasting supply chain disruptions, remote work, and sustainability through digital transformation. We also examine the literature for evidence that the COVID-19 pandemic played a role in accelerating the digitization of small business supply chain information systems and missing themes such as supply chain cybersecurity risk management.

REFERENCES

1. Almeida, F., Duarte Santos, J., & Augusto Monteiro, J. (2020). The Challenges and Opportunities in the Digitalization of Companies in a Post-COVID-19 World. *IEEE Engineering Management Review, Engineering Management Review, IEEE, IEEE Eng. Manag. Rev.*, 48(3), 97–103. <https://doi.org/10.1109/EMR.2020.3013206>
2. Deepu, T. S., & Ravi, V. (2022). Modelling of interrelationships amongst enterprise and inter-enterprise information system barriers affecting digitalization in electronics supply chain. *Business Process Management Journal*, 28(1), 178–207. <https://doi.org/10.1108/BPMJ-12-2020-0554>

3. Oliveira, L., Fleury, A., & Fleury, M. T. (2021). Digital power: Value chain upgrading in an age of digitization. *International Business Review*, 30(6). <https://doi.org/10.1016/j.ibusrev.2021.101850>
4. Qrunfleh, S., & Tarafdar, M. (2014). Supply chain information systems strategy: Impacts on supply chain performance and firm performance. *International journal of production economics*, 147, 340-350.
5. Themistocleous, M., Irani, Z., & Love, P. E. (2004). Evaluating the integration of supply chain information systems: A case study. *European Journal of Operational Research*, 159(2), 393-405.
6. Zamani, S. Z. (2022). Small and Medium Enterprises (SMEs) facing an evolving technological era: a systematic literature review on the adoption of technologies in SMEs. *European Journal of Innovation Management*, 25(6), 735–757. <https://doi.org/10.1108/EJIM-07-2021-0360>