

How Digital Transformation is Reshaping Supply Chains: from Networks to Ecosystems

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Abstract

Although there has been a growing interest in the literature on supply chain ecosystems, there is still a lack of comprehensive understanding regarding ecosystems. There are gaps in knowledge, particularly in relation to the transformation of supply chains into ecosystems or their integration into existing ecosystems. While many academics advocate for supply chain networks to adopt an ecosystemic structure in order to increase their resilience and sustainability, there is a dearth of literature describing the precise procedures that enable the conversion of supply chains into ecosystems. The existing research indicates that a significant proportion, exceeding two-thirds of supply chain networks, encounter difficulties in transitioning into ecosystems. Notwithstanding the potential advantages that supply chain networks could reap from transitioning into ecosystems, a gap in understanding persists regarding the process of such a transformation. There is a limited amount of literature available regarding the optimal integration of information technology within supply chains as well as the appropriate levels at which such integration should occur within business processes and decision-making. This study adopts a grounded theory perspective to investigate the manner in which supply chain networks within the healthcare supply chain in Ghana expand their networks into ecosystems. The research focus has been directed towards the healthcare supply chain in Ghana due to the current efforts towards digitization and platformization. These efforts aim to enhance the ecosystemic orientation of supply chain networks within the sector. The primary aim of this investigation is to examine the mechanisms through which supply chain networks evolve into supply chain ecosystems through digital transformation and integrative capabilities. The author employs a qualitative approach and a case study design to utilize snowball sampling in order to ascertain the supply chain network of selected healthcare facilities in Ghana. The present study employs social network analysis and thematic analysis techniques to analyze the transcribed interviews to explore the transformation processes across supply chain networks and how they integrate technology.

Keywords

Supply chain networks, Ecosystems, Digital transformation, Integrative capabilities, Digital platforms

Biographies

Evans Amoah is a Doctoral Student in the Department of Supply Chain and Information Systems, School of Business, Kwame Nkrumah University of Science and Technology. Evans is particularly interested in research in digital technologies and transformation, healthcare supply chains, information systems and supply chain ecosystems.

Francis Andoh-Baidoo is a Ghanaian-American academic who has taught university information systems for 17 years. At UTRGV, he teaches business intelligence, business analytics, systems analysis and design, project management, and introduction to information systems. He chaired and participated in doctoral dissertations at UTRGV and other US and Ghanaian universities. Professor Andoh-Baidoo also researches information systems. He studies corporate analytics, security and privacy, and ICT for development. He has published his research in top publications and received various prizes, including the Carnegie African Diaspora Fellowship in 2018 and 2020. Professor Andoh-Baidoo promotes worldwide information systems collaboration. He is an associate editor of Information Technology for Development and on the editorial boards of numerous other professional magazines. The African Information Systems Association's board includes him. Professor Andoh-Baidoo is a distinguished information systems scholar. His research and teaching have advanced the discipline and prepared future information systems professionals. He also promotes worldwide collaboration in the sector, connecting information systems scholars and practitioners in Africa and elsewhere.

David Asamoah is an Associate Professor in the Department of Supply Chain and Information Systems, Kwame Nkrumah University of Science and Technology. David does research in Organizational Studies and Supply Chain Management for Development. His most recent publication is 'Inter-organizational systems use and supply chain performance: Mediating role of supply chain management capabilities'.

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