


## Chapter 3

# Supply Chain and Digital Transformation in Japan

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### **ABSTRACT**

*Geopolitical risks, business globalization, increasing complexity of transactions have required companies to adapt to changes. This chapter examines the digital transformation of supply chains and digitalization challenges in Japan. Many companies seem to realize the importance of digital transformation; however, on their way to digitalization companies face numerous challenges like a shortage of human and financial resources, a lack of awareness and understanding of digital transformation processes, etc. Moreover, Japanese culture does not easily fit digital transformation which also slows down the pace of transformation. As a result, the supply chain processes in the Japanese manufacturing companies remain old-fashioned, fragmented, siloed, with a lack of global vision and proper understanding of potential risks. To meet the needs of diverse customers, ensure global supply, and compete in uncertain environment, the SCM of Japanese companies has to be digitally upgraded and become more complex to achieve end-to-end supply chain optimization and an advanced decision-making.*

### **INTRODUCTION**

Geopolitical risks, business globalization, increasing complexity of transactions have required companies to adapt to changes. In addition, the future is less predictable and in a rapidly changing business environment it is important to become more reactive to changes in supply chain, global procurement, and purchasing operations to maintain competitive advantage. It is essential to build resilient processes that can respond to crises. As companies are operating not in isolation but in interaction with their external environment, the way how they approach the new calls originated both in the external and internal

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environments determines their success. The importance of the context of operations and the specificity of inherent organizational culture is crucial; hence, unique context provides valuable insights for both theory and practice of digital transformation. This chapter examines the digital transformation of supply chain management in Japanese companies. Japanese context is interesting and worthy studying as Japan is used to be a motherland for the most advanced and efficient companies which nowadays feel threatened due to their inability to quickly adapt to changing environment. Moreover, Japan has unique cultural traditions that impact organizational routines and processes, as well as relationships with partners within supply chains. After clarifying the need for a digital transformation in Japan, the chapter discusses the main challenges of supply chain management digitalization and provides illustrative cases of Japanese companies that respond to these challenges through the introduction of digital solutions.

## **BACKGROUND**

The new reality is characterized by a complex, dynamic environment, highly competitive business conditions and digitalization. Digital transformation as the highest level of digitalization is an emerging phenomenon that affects many aspects of life. Today, more and more attention is paid to supply chain management (SCM) to enhance the competitive advantage of enterprises, effectively control costs, and achieve customer satisfaction. SCM is essential for manufacturing companies to gain a competitive advantage through maximizing customer value (Christopher, 2016; Kamath, 2016). SCM has emerged as a cornerstone of manufacturing and has become one of the most important means for manufacturing companies to gain a competitive advantage (Rusli, Rahman, Ho, & Abdullah, 2013).

Supply chain processes are heavily influenced by digitalization. Digital transformation is pushing companies to become agile to quickly identify, respond and adapt to changing expectations and demands of consumers, employees, and other elements of business environment. It became obvious that the shift from a traditional supply chain to a digital supply chain appears as a competitive advantage creating sustainable value for organizations (Ageron, Bentahar, & Gunasekaran, 2020). Supply chain digital transformation is proven to drive growth, mitigate risk, and optimize costs (Gartner, 2020). Several industrial reports have introduced a digital transformation as an important trend for supply chain management in the next five years.

Traditionally, in supply chain raw materials are sourced and products are manufactured in one or more factories, shipped to warehouses for storage, and then delivered to retailers or end customers. Therefore, an effective supply chain strategy considers interactions at different levels of a supply chain and requires reducing costs and improving service levels. Consumers' expectations are growing, and their loyalty and support are volatile and difficult to secure, hence, companies must encourage innovations and embrace new realities imposed by digitalization. In addition, challenges related to natural disasters also affect supply chains and should be considered in the context of Japanese business.

Japan is currently ranked as the world's third-largest economy, but it has seen negative growth in total factor productivity in recent years. Moreover, Japan is ranked 28th in the Global Digital Competitiveness Index in 2021 which is five positions lower than in 2015 (IMD, 2021). Among Asian countries, Japan is ranked 7th in digital competitiveness, behind Hong Kong, Singapore, Taiwan, South Korea, China, and Malaysia. The effect of relatively low digital competitiveness is evident in industries such as e-commerce, telemedicine, mobile banking, and advanced digital manufacturing. In the past, Japanese manufacturing and high-tech industries were extremely competitive due to high quality as a differentiating

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