Chapter 8
Empowered Purchasing Through Digitalization

Xiao Wen Lu
Normandy University, France

Jomana Mahfod-Leroux
University of Orleans, France

Atour Taghipour
Normandy University, France

ABSTRACT

Digitalization consists of the modification of processes using digital tools. Digitalization is a powerful way for regaining strong short-term to long-term competitiveness. The digital supply chain was born from the fourth industrial revolution. The evolution of the supply chain now involves the automation of processes and the expansion of information. Among the advantages of digitization, the authors note an accurate forecasting and planning, effective communication of internal function and external actors of the supply chains, and assuring the security. Fast digital transformation is reforming supply chains and changing the present models inside companies. In this case, purchasing as one of the important functions of supply chain is in the way of the transformation, by adapting new digital solutions such as blockchain, data analytics, robotics, internet of goods, and smart contracts. This chapter aims to explore the possibilities of these technologies in intelligent purchasing and the main obstacles against their adaption.

DOI: 10.4018/978-1-6684-6247-8.ch008

1 INTRODUCTION

Supply chain management is evolving to answer to the new challenges and discover the possibilities for company's competitiveness. We can observe huge advancements in digital transformations among companies, however the literature of supply chain management suffers from the lack of agreed definition for digitalization (Parida et al., 2019). According to these authors, digitalization is the use of digital technologies to transform the business models and give new advantages and creating new values in artificial ecosystems. In this case, purchasing is one of the main functions in companies, as well as in supply chains, that needs new transformation by adapting new digital enablers such as blockchain, big data analytics, optimization, and collaborative robots. The focus of enabled purchasing is to be integrated with other functions and at the same time assuring the security if information sharing by using innovative models (Taghipour, 2009). So, purchasing considered as a part of the value chain can be changed by digital transformation solutions and by adapting one of the two existing solutions of using the internet or by using advanced technologies (Srai et al., 2019).

2 DIGITAL PURCHASING

Digital purchasing contributes to the competitiveness of the enterprises by improving the productivity of the supply chains as efficient as possible. Digitalization can connect the actors of the supply chains to enable the collaboration in each process. This can contribute to the value-adding process in the supply chains. As an example, robotization can improve the purchasing time and optimize the resources (Merimi and Taghipour, 2021; Taghipour, 2021).

The digitalization of the process can improve the decision-making in different processes. However, not giving attention to digital transformation can result in deficiency (Taghipour and Frayret, 2010).

To optimize the operations the digital transformation must consider the supply chain as a whole system. That means, considering all suppliers and buyers in a supply chain. That helps the supply chain to attain the optimal solution, for all actors of the supply chain. In this case, the information sharing plays the most important role (Ren et al., 2016). That needs a central platform that enables the exchange of information. This platform assures the security of the information exchange, speed of computing, optimal cost, deployment, etc. This is possible through the digitalization and an attention needs to give to the selection of a reliable digital tool provided by a reliable provider.