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Challenges Facing Electronic Supply Chains in the New E-Commerce Landscape

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ABSTRACT

As organizations are all moving into the e-commerce platform to gain market shares, they realize that electronic supply chain management (e-SCM) powered by enterprise resource planning systems (ERPs) are the new norms and no business organization can operate without both in the new world of e-commerce. Because business via the internet requires different fulfillment approaches, traditional drivers of regular supply chains are no longer adequate for explaining how e-SCM performance is driven. Little attention has been devoted to e-SCM dynamic with ERP and the challenges they pose to organizations. In the e-commerce environment, e-SCM is among the most important factors to organizational success. Effective e-SCM can enhance competitiveness and increase market share leading a higher profitability. Nevertheless, the new e-SCM professionals and other actors must understand the factors that undergird e-SCM performance, their drivers, and the necessity of fully functional ERPs for an effective e-SCM.

KEYWORDS

E-Commerce, E-Logistics, E-Logistics Professionals, E-SCM, E-SCM Professionals, Electronic Supply Chain Management, Electronic Supply Chains, ERP Systems, Information Systems, Internet of Things

INTRODUCTION

That 440 of the 500 *Fortune* firms have closed their doors must be a wakeup call for all of us. Yes, only 60 of the Fortune 500 companies in 1955's *Fortune* ranking are still in operation today. "In other words, fewer than 12 percent of the *Fortune 500* companies included in 1955 were still on the list 62 years later in 2017, and 88 percent of the companies from 1955 have gone bankrupt" (Perry, 2017). That nearly nine out of ten of 1955's Fortune 500 companies are gone is disturbing and calls for a deeper analysis of what business schools teach their graduates and how they contribute to business success or failure. This represents an 88 percent failure rate. The probability that an organization in business today will still be in business in twenty years is only 12 percent. Businesses around the world experience many challenges to acquire raw materials, parts, subassemblies, and the other necessary inputs to their production systems. Organizations must work to ensure they excel or simply survive in this extremely competitive environment. As businesses move into the e-commerce platform to gain market shares, they realize that electronic supply chain management (e-SCM), powered by enterprise resource planning systems (ERPs), is the new norm and no business organization can operate without both e-SCM and ERPs in the new world of e-commerce. Because business via the internet requires

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different fulfillment approaches, traditional drivers of regular supply chains are no longer adequate for explaining how e-SCM performance is driven. The task of e-SCM professionals is, therefore, more complicated than ever. This situation often leads to unsatisfied customers, which can force companies to close their doors. Therefore, understanding the dynamics of e-SCM performance drivers and their integration with ERPs, along with their accompanying challenges, becomes a necessity. Little attention has been devoted to e-SCM dynamics with ERPs and the challenges they pose to organizations. This article discusses the new e-SCM challenges facing organizations as they attempt to enter the e-commerce platform. In the e-commerce environment, e-SCM is one of the most important factors to organizational success. Effective e-SCM can enhance competitiveness and increase market share, leading to higher profitability. Nevertheless, the new e-SCM professionals and other key players must understand the factors that undergird e-SCM performance, their drivers, and the necessity of fully functional ERPs for an effective e-SCM.

Although Lardner's Law, also known as the Law of Squares, states that any reduction in transportation costs will be directly proportional to the increase in the market area where the product can be sold, most business leaders do not understand to what extent supply chain management matters. The rationale has often been that if you want to increase profit, you have to master finance principles and apply them. Business leaders tend to forget that transportation is the largest logistics cost. Today's reality is hard to accept: Our ordinary solutions to business problems are not effective. Business organizations are facing extraordinary challenges that necessitate extraordinary solutions. As businesses become globally sensitive entities, supply chain management becomes the most important matter because all companies along the supply chain are important to business success or failure (Gruchmann, Böhm, Krumme, Funcke, Hauser, & Melkonyan, 2019). In addition, we observed graduates who chose to ignore operations management principles and models and decided to run operations using their best guesses. This situation often results in high operating costs, making strategic operations reviews the new norm.

Have you ever wondered why today's richest person in the world is Jeff Bezos, Amazon's CEO, and not a banker? The speed at which Jeff Bezos became the richest person loudly speaks to the power of supply chain management. Organizations are becoming supply chain dependent, so companies that do not have mastery of their supply chain dimension will disappear from the business landscape (Essila, 2018). Analysis shows that the 440 companies from Fortune's 1955 list that failed and disappeared all had weak supply chain management in common. Their leaders neglected the supply chain dimension. The current closing of many retailers indicates the necessity of adapting to the new norm. A supply chain is now the important factor for business success or failure (Ali & Haseeb, 2019). First, it is important to understand how the business operations management field has evolved over time. Information technology (IT) has changed the way businesses conduct their operations (Hanafizadeh, Ghandchi, & Asgarimehr, 2017). Today's IT is at the heart of every business operation. An IT breakdown usually leads to work stoppage. Here are two examples: (1) IT breakdowns often paralyze airport operations, leading to flight cancellations and angry passengers, and (2) a dysfunctional check-in or checkout system creates infinite waiting lines and hinders the company's reputation. Consequently, e-commerce has forced businesses to redesign their operations dramatically (Sambasivan, Mohamed, & Nandan, 2009). E-commerce offers a new venue for revenue generation that sometimes surpasses that of the traditional brick-and-mortar business. E-commerce offers consumers more buying options than does traditional business. Buyers can instantly compare prices, product attributes, and delivery parameters. As a result, customers have become increasingly demanding as they raise their expectations when buying from the internet. On the other hand, e-commerce requires the use of the internet, creating a new SCM challenge. Therefore, e-SCM is becoming an integral part of traditional supply chain management (Gunasekaran, Patel, & Tirtiroglu, 2001; Sambasivan et al., 2009). Consequently, businesses are becoming supply chain-sensitive organizations. With business via the internet requiring different fulfillment approaches, traditional drivers of regular supply chains are no longer adequate for explaining how and to what extent e-SC performance is driven (Sambasivan

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