

# Implementation of E-Procurement and Its Impact on Supply Chain Management Performance

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ARTICLE INFO		ABSTRACT
<b>Keyword:</b> E-Procurement; Supply Chain Management; Supply Chain Performance;		Technological advancements, along with quick market changes, force businesspeople to be more inventive in order to retain the continuity of their operations. Many organizations have turned to e-procurement as an integrated supply chain support function to meet strategic business goals since the beginning of Industry 4.0. E-procurement and Supply Chain Innovation have increased a company's ability to respond to market changes and improve the performance of its supply chain. The goal of this research is to find out how e-procurement deployment affects supply chain performance. The descriptive qualitative method was employed in this study. According to the findings of the investigation, the implementation of e-procurement has a beneficial impact on supply chain performance.

## 1. Introduction

Industry 4.0 has begun to have an impact on every organization that is interconnected in the value chain networks, making it critical for businesses to adopt and prioritize the adoption of digital technology. Inter-firm ties are critical in today's interconnected corporate environment. The relationship between two businesses is critical to the performance of the supply chain's whole value generating network (Walter *et al.*, 2001).

In terms of data flow, processing, and analysis, digital technologies have connected firms like never before, erasing corporate boundaries (Veile *et al.*, 2021). Digital technologies interconnected networks have altered the buyer-supplier relationship and opened up new options for collaboration (Ghadge *et al.*, 2020).

In today's competitive business environment, supply chain management must be optimized. The main part of the supply chain in the procurement section, is the purchase of goods and services within the organization (Puschmann & Alt, 2005). Procurement is a crucial and expensive business activity for every organization because traditional procurement is an activity that spends more time for non-value added. In traditional procurement, it is possible to make purchases that are not in accordance with the plan at a higher price (Arora & Namulo, 2017).

Not surprisingly, in the twenty-first century, internet-based technology gave rise to e-procurement, which aims to professionally assist supply chain management in connecting the necessary components, increasing the speed of information transfer, and reducing processes that do not provide added value (Pearcy *et al.*, 2008) all of which are required to achieve supply chain management efficiency as a competitive advantage of company operations (Angeles & Nath, 2005). E-procurement systems have grown in popularity in recent years as a result of their favorable impact on individual and organizational productivity and efficiency (Tokas *et al.*, 2014).

E-procurement services based on Software-as-a-Service or SaaS, provide online supply management solutions. E-procurement technologies (EPTs) have been widely used to decrease manual procurement procedures since they can significantly improve a company's transaction processing capabilities (Ramkumar, 2016). Implementing e-procurement technologies can provide value to businesses by leveraging IT-enabled resources for supply chain management (Dong *et al.*, 2009). E-procurement necessitates understanding the impact of information technology on the accomplishment of competency on a practical level for supply chain management (Dong *et al.*, 2009).

In this study, we look at how e-procurement affects supply chain performance through partner relationships, information sharing, and supply chain integration.

## **2. Research Method**

This study used qualitative research method with literature review. Qualitative research methods use descriptive procedures to generate meaning and understanding of the phenomenon being studied. This paper was written using the literature review method, in which the author collects and studies journals and other written sources. The journal consists of journals regarding e-procurement and supply chain obtained from various platforms on the internet, such as Google Scholar, Science Direct, and ResearchGate.

## **3. Result & Discussion**

Croom and Johnson (2003) define supply chain performance as an evaluation of supply chain management that includes both tangible (e.g., cost) and intangible (e.g., capacity utilisation) characteristics. E-procurement is an electronic procurement technique. The larger application context of an e-procurement system is referred to as e-business. E-business is the use of digital technology to conduct commercial activities over the internet (or extranet) (Amit & Zott, 2001). E-procurement is a priority among the many e-business applications for two reasons:

- 1) E-procurement technologies can increase operational procedure efficiency and supply chain transparency (Puschmann and Alt, 2005). As a result, when analysing supply chain performance, an e-procurement system may be argued to be more significant than other e-business applications.
- 2) In today's economic situation, boosting supply chain performance requires a value creation attitude (Wiengarten *et al.*, 2010). E-procurement systems' functional qualities are expected to help firms increase the efficiency of value creation processes in the supply chain.

E-procurement is defined as a four-function electronic procurement system in this study: e-design, e-sourcing, e-negotiation, and e-evaluation (Chang *et al.*, 2012). E-design is the process of establishing purchasing requirements on an electronic procurement system; e sourcing is the process by which an enterprise selects its suppliers via an electronic procurement system; e

negotiation is the contract agreement conducted through technology; and e-evaluation is the stage at which extensive information about suppliers is gathered for further evaluations and transactions. According to Chang *et al* (2012), e-procurement can play a strategic role in supply chain management and contribute to supply chain performance. The method through which e-procurement enhances supply chain performance, on the other hand, is largely unclear. The following are the justifications: Because e-procurement is an electronic (technology-based) system, the consequences of e-procurement can be derived from supply chain management technical applications (Presutti, 2003). Previous study has indicated that relational exchange strategies, information-rich strategies, and joint-learning strategies may be the primary methods employed in supply chains via technological functions. As a result, it is reasonable to expect that data sharing, information enrichment, and joint-learning will be three essential strategies that businesses can utilise in e-procurement systems to improve supply chain performance.

Walters (2008) underlines the need of committed continuous partnerships between enterprises in relational exchange strategy. The information enrichment strategy focuses on the gathering, dissemination, and exploitation of information. Walters (2008) promotes knowledge collaboration and mutual competency development in the joint-learning strategy. Partner partnerships are mutually committed supply chain relationships between organisations and their partners (e.g., suppliers, same tier manufacturers, and channel members). The flow of high-quality information between a company and its supply chain partners (e.g., suppliers, same-tier manufacturers, and channel members) is referred to as information sharing. The coordination and integration of supply chain processes between a company and its supply chain partners (e.g., suppliers, same-tier manufacturers, and channel members) is characterised as supply chain integration. It is vital to note that the functional portion of supply chain integration in this study is the integration of supply chain functional activities (Chang *et al*, 2012).

### **Strategic Positioning of e-procurement**

Companies are increasingly likely to have integrated an e-procurement plan into their supply chain management strategy. The function of the procurement professional looks to be shifting as e-procurement has become a more strategic activity within firms. This is reflected in the increased need for employee development and training to improve business analysis skills in areas such as strategic sourcing and supplier analysis. E-procurement refers to initiatives to alter how procurement functions such as spending and budgeting, hiring employees, purchasing products and services, and controlling technological and organizational activity are carried out. It also has the potential to change supplier-customer relationships. While e-procurement is a global term, its design may include a variety of assumptions and requirements relating to, for example, technology, objectives, information, staffing and skills, and institutional contexts. As a result, implementing it may not be as simple as transferring a design from one context to another. More research is needed to understand how IS-enabled procurement innovation strategies are built and implemented in practice.

The reach and depth of e-procurement implementations have grown. More firms have developed enterprise-wide systems that cover a broader variety of e-procurement tasks and activities. Invoicing and payments, for example, are included in the top five e-procurement activities, which is consistent with the shift towards more fully operational systems and the development of broader e-commerce capabilities. The growth of integration and alignment difficulties across the organization is consistent with, and maybe a result of, the growing reach and scope of e-procurement initiatives. Integration of software and catalogues, as well as organizational culture alignment with e-procurement, provide substantial hurdles to firms that

currently procure online. Understanding enterprise level risks associated with inter-organizational systems, such as reliance on third parties to maintain service levels, minimize system interruptions, and ensure business continuity, is one example. There are other dangers related with the security and availability of procurement information, as well as data protection and privacy concerns. This is especially important when third-party application service providers manage the organization's e-procurement data and services and are based in a different region or territory with different relevant regulations.

### **E-procurement on Managerial implication**

Inter-organizational information management has greatly improved. This corresponds to the greater integration and breadth of e-procurement activities. Coordination of inter-organizational information, on the other hand, remains a significant difficulty. It shows that e-procurement usage has a positive impact on procurement practices, therefore, facilitates the development of operational tasks in the procurement area (Quesada *et al.*, 2010). Managers should seriously consider the usage of e-procurement as a means for continuously improving their information gathering, supplier contact, contracting, and intelligence and analysis practices (Quesada *et al.*, 2010). Practitioners currently interested in adopting e-procurement can see the positive impact it has on procurement practices, which in turn, presents a positively significant impact on procurement performance (Quesada *et al.*, 2010). Therefore, organizations that are implementing e-procurement are achieving short-term benefits in procurement practices; however, it is expected that the adoption of e-procurement will have a positive impact at the strategic level. Firms with procurement managers investing resources to seriously pursue better procurement practices achieve higher levels of procurement performance than firms with lower levels of commitment into their procurement practices. Better procurement practices will positively affect the outcomes of the procurement function (Quesada *et al.*, 2010).

Since e-procurement is at the input end of the supply chain, it is worth developing an understanding on the part of practitioners of other aspects of supply chain (e.g. the mid end of supply chain) when discussing the impact of e-procurement on supply chain performance. Chang (2012) propose that partner relationships, information sharing and supply chain integration are the relevant factors and suggest that supply chain integration is the most important one. Based on our findings, four managerial implications are proposed as follows: First, an enterprise's know-how could be documented and collaborated with partners through an e-procurement system. For instance, know-how and cooperation with regard to product designs could be incorporated into the e-procurement system, thus enhancing supply management performance. Second, supply chain members could integrate business activities to achieve a mutual goal through an e-procurement system. Third, whereas procurements system could be subjected to outsourcing for cost-down implementation (Parry *et al.*, 2006), managers should consider implementing e-procurement systems because they can provide such benefits as the lowering of process and procurement costs (Puschmann and Alt, 2005). Forth, consistent with previous findings (Angeles and Nath, 2007), the current study suggests that when evaluating the implementation of e-procurement systems, managers should consider the issues of end-user resistance, partner relationships, information infrastructure system integration and standardization in order to achieve supply chain performance.

#### 4. Conclusion

The purpose of this study was to determine how e-procurement affects supply chain performance. E-procurement is a technological function of a procurement system. Partner relationships, information sharing, and supply chain integration are proposed as three intermediated variables based on the technological nature of e-procurement, which could potentially capture basic strategies applied through technological functions and also represent the rationales of the impact of e-procurement on supply chain performance. This e-procurement improves supply chain transparency and effectiveness, and it provides a substantial contribution to supply chain performance. Furthermore, e-procurement enables businesses to measure and monitor order parameters such as processing time, order delivery time, and current status. As a result, the introduction of e-procurement in businesses is critical and will have an impact on enhancing supply chain performance.

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