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IMPROVING HIGHER EDUCATION SUPPLY CHAIN PERFORMANCE THROUGH PROCUREMENT DIGITAL TRANSFORMATION

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Abstract

The objective of this study is to examine the correlation between the digitalization of public procurement for goods and services and the performance of the supply chain within the context of higher education. The method used in this paper is a literature review, wherein the author systematically gathers and examines scholarly journals and other relevant materials. The journal focuses on the topic of digital transformation and its impact on supply chains. The sources of information for this journal include reputable online platforms such as Google Scholar, Science Direct, and ResearchGate. The selected articles for this journal were published between the years 2018 and 2023. This study identifies the implementation of digital transformation in supply chains has been found to enhance transparency and improve overall effectiveness, hence playing a crucial role in enhancing supply chain performance. Hence, the implementation of digital transformation within organisations assumes a significant role, exerting a discernible influence on the enhancement of supply chain performance. This study makes a scholarly contribution by presenting and analyzing the effects of digital transformation and integrated systems on supply chains. The adoption of a strategic perspective is crucial in the implementation of digital transformation initiatives aimed at enhancing supply chain performance.

Keywords: barang dan jasa, transformasi digital, kinerja

Introduction

Presidential Decree No. 12 of 2021 governs the procurement activities of government goods and services financed by the State Budget (APBN) or Regional Budget (APBD). This regulatory framework encompasses the entire procurement process, commencing with the identification of needs and concluding with the delivery of project outcomes. The implementation of the Presidential Decree serves as a means for the government to establish effective governance in the purchase of goods and services, hence potentially generating additional value for organisations. The Presidential Decree instills optimism for the advancement of government purchase of products and services, as well as the achievement of digital transformation via an electronic procurement system.

Digital transformation encompasses the strategic modifications made inside an organisation to use digital technologies and novel business models, in order to enhance the operational efficacy of the entity. Digital transformation encompasses more than the mere adoption of cutting-edge technology; it involves establishing a strong synergy between information technology and business operations, resulting in significant outcomes for the organisation. This process necessitates careful consideration of the organization's preparedness, effective change management strategies, and the adept handling of key stakeholders (Norton et al., 2020). Digital transformation (DT) encompasses the strategic and operational adjustments made by organisations in response to evolving contexts, leveraging digital technologies such as mobile computing, artificial intelligence, cloud computing, and the Internet of Things (IoT) to revolutionise the generation of value inside their operations.

The COVID-19 pandemic has necessitated digital transformation in various sectors with regards to organisational factors. The global education landscape and institutions of higher learning have been compelled to swiftly adjust to the process of digital transformation in order to sustain their functioning. Numerous inquiries have emerged, namely pertaining to the offering of courses, virtual classroom settings, seating arrangements, capacity limitations, examination and assessment protocols, maintenance of academic integrity, utilisation of webcams, capacity and quality of video conferencing, and additional related matters. In light of this situation, numerous academic institutions are presently employing Zoom, Microsoft Teams, Respondus, and similar software platforms to sustain and perpetuate their activities.

Amidst the ongoing technological advancements and the concurrent intensification of competition among enterprises, organisations are faced with the formidable task of formulating their future programmes

(Sudrajat et al., 2019). The optimisation of supply chain efficiency necessitates the implementation of an appropriate strategy. The imperative for enhancements in efficiency and quality has prompted the logistics industry to embrace novel solutions and methods that offer customers greater freedom in selecting suppliers and product sources (Chibani et al., 2018). In the present era of rapid technological advancements, it has become imperative for enterprises to offer technology-based services that incorporate novel ideas aimed at enhancing overall organisational performance (Ngeno & Kinoti, 2017). Hence, it is apparent that numerous organisations have transitioned towards e-procurement as a comprehensive supply chain support function with the aim of attaining strategic business objectives, including enhanced operational efficiency, sustainability, and profitability (Mabeifam et al., 2017). The business dynamics have been impacted by the global economic downturn. Procurement is an essential and costly economic activity for all organisations, as highlighted by Mabeifam et al. (2017):

- Traditional procurement is a time-consuming operation that lacks value-addition.
- Within the framework of traditional procurement, there exists the potential for acquiring goods or services at a higher cost, deviating from the planned approach.

Digital Transformation has facilitated more adaptability in addressing dynamic shifts within the market. The rapid pace of technology advancements significantly influences both suppliers and buyers in their engagement with online platforms for the sale and purchase of items. The activities within the electronic market often pertain to the management of the electronic supply chain. The adoption of e-procurement in the supply chain process offers various advantages to firms. The e-procurement process encompasses the acquisition of goods or services with the primary objective of securing the most favourable cost, while simultaneously satisfying the buyer's requirements in terms of quality, quantity, timing, and location. The conventional procurement procedures exhibit inefficiencies and are characterised by prolonged order processing durations, both within the organisation and in interactions with other entities. E-procurement plays a significant role in enhancing supply chain performance and optimising logistics strategies. Furthermore, the implementation of electronic procurement has been found to have a favourable influence on enhancing productivity, diminishing lead time, and minimising errors in inventory management. Consequently, electronic procurement has the potential to revolutionise the operational practises of enterprises (Ngeno & Kinoti, 2017). Hence, the author seeks to ascertain the potential impact of digital transformation on the efficacy of supply chain management.

Research Method

The study was conducted employing the literature review methodology. The author engages in the collection and examination of journals and other relevant materials. This writing focuses on the digitalization of electronic procurement and supply chains, drawing from a range of online platforms like Google Scholar. The prompt applied is “barang dan jasa" & "transformasi digital" & "kinerja". The selected articles span the years 2013 to 2023. The search yielded 1.060 articles and then we categorize the search into three section: supply chain management, supply chain performance and e-procurement. The author has thoroughly examined and comprehended the contents of the journal in order to arrive at the paper's conclusion.

Results and Discussions

Supply Chain Management

The supply chain refers to a series of organisations, facilities, and activities that are responsible for the production of goods and services (Stevenson, 2015). The process commences with the providers of fundamental raw materials and extends to the ultimate customer. The facilities associated with supply chain management encompass many locations such as warehouses, factories, manufacturing centres, distribution centres, retail outlets, and offices. Within an organisational context, such as a manufacturing facility, the supply chain encompasses not only the processes involved in sourcing and delivering materials, but also the crucial functions of receiving and fulfilling consumer demands. The functions encompassed within an organisation often comprise new product development, marketing, operations, distribution, finance, and customer support (Chopra and Meindl, 2016).

Based on the early definition of the supply chain, the concept of supply chain management is further developed. It refers to the effort of coordinating and integrating a number of activities related to products within the supply chain in order to enhance operational efficiency, quality, and customer service, thereby achieving sustainable competitive advantage for all collaborating organisations (Wisner, Tan, and Leong, 2009). According to Krajewski et al. (2016), there are several strategy can be applied to develop an effective supply chain.

1. Establishing the linkage between products or services and internal processes;
2. Establishing the linkage between products or services and external supply chains;

3. Establishing the linkage between products or services and customers, suppliers, and supply chain processes.

The three relationships are visually represented in Figure 1.

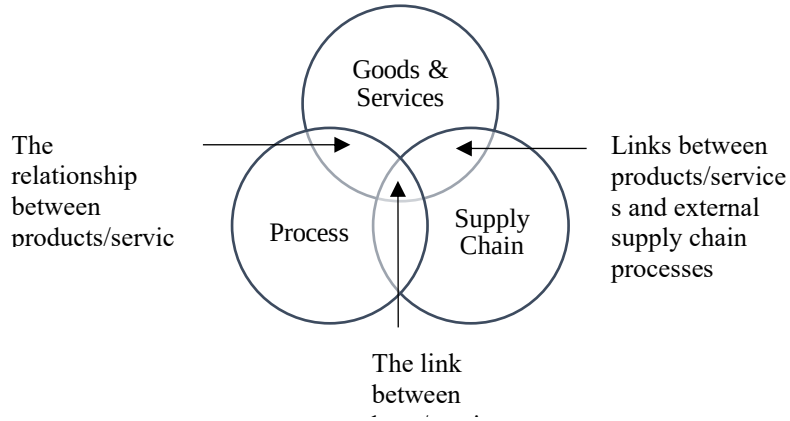

Figure 1. Effective Supply Chain

Supply Chain Performance

The concept of Supply Chain Performance refers to the interconnected network within an organisation, characterised by both upstream and downstream links. This network encompasses a range of processes and activities that contribute to the creation of value, ultimately resulting in the provision of goods or services to end customers (Mabeifam et al., 2017). The concept of supply chain performance comprises both quantifiable factors such as cost and quality, as well as qualitative factors such as capacity utilisation and resource utilisation. This is achieved by employing effective supply chain management practises (Pattanayak & Punyatoya, 2020). The performance of a company, which is influenced by its supply chain, can be categorised into three distinct dimensions: resource performance, output performance, and flexibility performance. Resource performance is a supplementary factor that contributes to the attainment of efficiency. Output performance, on the other hand, is an additional aspect that enhances the company's capacity to deliver services. Lastly, flexibility performance serves as an extra advantage in terms of the company's capability to adapt and respond to alterations in the environment. Measuring supply chain performance in project-based organisations presents challenges due to the multitude of stakeholders involved and the inherent unpredictability within the supply chain.

E-Procurement

The use of e-procurement, as a digital transformation enabler in supply chain, has a transformative impact on organisational performance through the optimisation of good governance practices, cost reduction, and accountability. Firstly, E-procurement is a process that enhances efficiency and automation in the procurement lifecycle, encompassing activities from requisition through payment. This approach minimises the need for human paperwork and reduces administrative burdens. The results show that E-Procurement system is preferred over the other alternatives to enhance the efficiency of the organization, improve sales performance and better relationships with trade partners and suppliers (Gupta et al, 2015). The implementation of E-Procurement contributes in reducing costs in the search for information and allowing the purchase of higher quality products at lower prices, ultimately resulting in better purchasing decisions (Garrido et al, 2008). The enhancement in efficiency not only reduces operational expenses but also accelerates the procurement process, enabling organisations to promptly address market needs and fluctuations. Secondly, the implementation of e-procurement systems facilitates the enhancement of accountability and compliance inside organisations. The use of standardised procurement procedures and approvals serves to mitigate the potential for fraudulent activities and uncontrolled spending. According to Rotchanakitumnuai, S. (2013), the implementation of a transparent e-procurement process has been found to have a beneficial impact on the practice of good governance. This includes enhancing cost effectiveness and accountability, while simultaneously reducing the occurrence of collusion among suppliers. The inclusion of significant suppliers at all stages of development and effective communication of the potential benefits derived from the utilisation of

e-procurement systems are crucial for businesses (Purchase et al, 2010). In addition, digital procurement systems offer extensive audit trails and tracking tools, so guaranteeing the traceability and accountability of every transaction.

To conclude, the implementation of E-Procurement has contributed in improving organizational performance. This is achieved through several means, such as improving operational efficiency, boosting sales figures, and cultivating stronger ties with trade partners and suppliers.

Conclusions

In conclusion, the studies indicate that the implementation of digital transformation has a positive impact on the performance of supply chains. This improvement is observed in various dimensions, including sustainability, operational elements such as quality and cost reduction, and accountability. Additionally, digital transformation empowers downstream enterprises and facilitates the capture of value through the provision of digital services. Nevertheless, there is a notable gap exists regarding what kind of strategic governance model that would fit best the procurement and digital transformation. Moreover, limited comprehension on the influence of organisational culture, employee attitudes, and change management strategies on the overall efficacy of digital transformation endeavours within supply chain operations. For further research, it is imperative to conduct a comprehensive examination of the intricate relationship between socio-cultural elements and the technological aspects of digital transformation. This is crucial in order to offer practical knowledge to organisations that seek to optimise the advantages of modern technologies in augmenting supply chain performance.

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