
The Impact of Information Technology as a Driver for Improved Supply Chain Management in the Zimbabwean Retail Sector

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ABSTRACT

The study aimed at exploring the impact of information technology as a driver for improved supply chain management in the Zimbabwean retail sector. The study covered relevant aspects with regard to information technology and supply chain management. The study was conducted between March to July 2019 with a total of 63 respondents randomly selected from the retail sector of Zimbabwe. The data for this research was collected using structured questionnaires in the form of 5 points Likert scale. Findings from the study proved that information technology plays a crucial part of supply chain management. Conclusions were made that there is a need for the retail sector of Zimbabwe to constantly keep abreast of changes in technology to sustain.

Key terms: Information technology, Supply chain management, Zimbabwe, Retail sector

INTRODUCTION

Retail organizations today are operating in a volatile business environment with dynamic changes in technology (Akkermans *et al*, 2013). Supply chain management from the global view has been identified as a vital aspect in logistics management facilitating the ability of business goods and services to flow from point of origin to point of consumption. The retail sector from across the global village has improved the supply chain by the adoption of information technology (Amit and Zott, 2015). Information technology has played a vital role on supply management by its contribution to increased control over production, better inventory management, increased collaboration between supply chain partners and more effective order tracking and delivery (Bailey and Bakos, 2017). Global statistics have proven that an estimated \$4 trillion in revenue is segmented by logistics and the movement of the goods and storage almost accumulates to 10% of the gross domestic

product. Therefore for organizations to meet supply chain management requires the adoption of information technology.

Regionally information technology has contributed to improved supply chain management of the retail sector. Retail organizations from African countries that involve South Africa, Madagascar, Kenya, Tunisia, and Tanzania have improved supply chain management from the adoption of information technology. Statistics from South Africa have proven that information technology with its key aspects such as decision support systems, vehicle tracking systems, and warehouse security systems have played an essential part to supply chain management (Clemons and Row, 2015). Influence of information technology to retail sector supply chain management has been evident by a reduction in customer complaints by 66%, increased revenue generation by more than \$65 billion, reduced fleet downtime and improved consistency in fleet management.

Previous researches on supply chain management mainly focused on aspects that include its influence on performance, productivity and fleet management and a few or none attempted on information technology leaving a knowledge gap. The study attempted to fill the knowledge gap that deems to have been left out by past studies that were done in the same area of information technology influence to supply chain management.

Retail organizations in Zimbabwe seem to be failing to effectively adopt information technology for the betterment of supply chain management (Currie and Parikh, 2006). This has been evidenced by the retail sector making use of outdated technology, delays on the adoption of the latest technology, increased rates of the fleet downtime and poor monitoring of goods and services from point of origin to point of consumption. Statistics of Zimbabwean retail have shown that the effects of information technology on the supply chain has been evidenced by more than \$870 million decline in revenue, delays on the distribution of products, increased customer complaints by 12%, distortion of Information and closure of some retail outlet.

THE RESEARCH OBJECTIVES

- I. To determine the need for information technology in supply chain management
- II. To assess the information technology challenges experienced in supply chain management
- III. To foster possible ways of improving information technology in the supply chain management

REVIEW OF LITERATURE

Need for information technology in supply chain management

Improve on efficiency

According to Chen (2016), the need for information technology in supply chain management is to improve efficiency. Efficiency in supply chain management measures the effectiveness of the distribution of raw material and products from one point to the other.

In support of the above was Joel and Hillary (2018) who cited that information technology plays a major role in ensuring that efficiency is improved through the fact that the use of computers makes it easy to do business as compared to the use of manual. Thus in supply chain management, efficiency has been achieved by the use of information technology by improving on speed and conversion of input into output also referred to as productivity.

On contrary was Keith and Lisa (2017) who posited that not in all circumstances does the use of information technology improve on efficiency in the supply chain management as they are also hindering factors for instance internet challenges. In support was Friedman (2015) who posited that internet challenges may affect the efficiency of the business especially when the network is down. This is in line with the clearance of goods in the distribution channel by the use of computers and the transference of data from one organization to the other as hypothesized by (Washington and Praise, 2017).

Facilitate tracking of records

Information technology improves the tracking of records that include sales reports, distribution reports, involves and distribution routes (Trish, 2017). Unlike in the past when organizations used to use a manual system to track records through the use of filing of records that brought challenges on tracking records as they were prone to other hazards like fire (Gideon, 2018). The use of computers and internet in the supply chain management has facilitated the tracking of records making it easy than the use of the manual system (Reign, 2018).

On the contrary was Bison and Milton (2017) postulated that information technology on the supply chain may face other challenges that may lead to failure to recover the records for instance wrong filing and hard disk crushing. In support was Steve and Friedman (2017) stated that records tracking can be hard in the supply chain when the information in the computers is not properly filed or when the hard disk crushes. There are numerous cases of organization in the retail sector failing to track records of supply chain management despite having adequate information technology accessories in place (Lillian, 2017).

Improves inventory management

Information technology usage in the supply chain improves inventory management (Downen, 2018). Inventory management can be a major challenge considering the fact that they will be many stocks in the organization hence keeping track of it may be a challenge but typing the name of the product on the computer makes it easy to track (Milton, 2017). Information technology improves on inventory management in the fact that the system can easily tell when the stocks are low and when they need to reorder the stocks. Thus inventory management is key to supply chain management hence information technology is key to the retail sector.

Stone and Munar (2018) argued that in a much as information technology improves on inventory management in the supply chain it is time-consuming on the sorting and grouping of the stocks in their rightful categories. The process of organization inventory can be tiresome leading to delay in delivery times and distribution of products to their final point on supply chain management (Reign, 2017). Thus there is a need to constantly upgrade the information technology to meet with the changes in the variety of inventories.

Information technology challenges experienced in supply chain management

Expensive to maintain

According to Judith (2016), information technology in the retail supply chain management has challenges of being expensive. Information technology is expensive in the fact that there is a need for constant abreast with the changes in technology. According to Morgan (2017), information technology is expensive to maintain especially when keeping up with the changes in the retail sector for instance in the past they were no bar code scanner but nowadays they are being used although being expensive.

In a research conducted by Heather (2016) on the challenges faced due to the use of information technology in Canada, the findings proved that more than US\$1 billion is being directed to the maintenance of information technology. Thus many retail organizations on the supply chain prefer working with both information technology and the manual system as the two complements each other despite information technology being fruitful to the business because of its efficiency and improved speed (Wellington, 2017).

Possible ways of improving information technology in the supply chain management

According to Chen and Bison (2017) for effective improvement of information technology in the supply chain, there is a need for the organization to keep abreast of the technological changes. Many organizations in the retail sector have excelled for instance Walmart that is effectively making use of technology in their operations. In the same view was Denver and Lillian (2016) who poised that information technology plays a pivotal role in supply chain management hence there is a need for the adoption of the latest technology in the retail sector (Nelson and Washington, 2018).

METHODOLOGY

A qualitative study was adopted for the purpose of this study to gather information from managers/ owners of retail operators drawn from Gweru. Structured questionnaires were made in the form of 5 points Likert scale which was pilot tested to 10 selected retail managers. Random sampling was adopted in selecting 63 respondents as the questionnaire was successfully issued to them. Fifty questionnaires were returned to achieve a 79% response rate of ten females and 40 male owners participated in this study. 70% of the respondents were aged from 25 to 50 years, 20% younger than 25 years and 10% over 50 years. Data was entered in SPSS analyzed using descriptive statistics.

FINDINGS AND DISCUSSION

There were 10 (20%) females and 40 (80%) males' respondents, which deduces the fact that males dominate in business as compared to their female counterparts. The results showed that 68% of the respondents were in agreeing that information technology influences supply chain management in the retail sector. 67% of the respondent believed that information technology is important to supply chain management considering the fact that it improves speed, reduces mistake occurrence and enhanced operational efficiency. 75% of the respondents were also in agreement that the challenges that affect supply chain management with relation to the adoption of information technology include lack of resources, resistance to change and delays on abreast of technology. 66% of the respondents were in support that for information technology to enhance improved supply chain management they need for consistent technological upgrading, innovation and technological transfer.

CONCLUSIONS AND RECOMMENDATIONS

The findings concluded that information technology influences supply chain management. This is attributable to the need for the technological upgrade, gain data insight, automatic purchasing and real-time inventory management. Most retail outlets were found to be lagging behind in relation to technological advancement as most of them were still using manual systems in this twentieth century.

Declaration of Conflicting Interests

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