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### **ANALYSING THE IMPACT OF SUPPLY CHAIN AGILITY ON CUSTOMER SATISFACTION THROUGH RESPONSIVENESS AND INNOVATION**

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#### **Abstract:**

The performance of the supply chain of an organization can be a hidden resource or weapon to boost market performance and increase the profitability of the business. No other segments of the business can have the impact of the supply chain agility on reaching the market, improving the service levels, lowering retail prices and building value for both the business and the customers. Market often expect great products and services. They utilize lots of financial assets to satisfy the needs of the market. The products should be delivered on time and in good condition. In the modern day, customers can blast a company publicly on social media if their products have not been delivered on time and this can be so damaging to the brand reputation.

In this study, we look at some scholarly articles which have been on the bond between supply chain and customer satisfaction over the years. In the introductory phase, the paper describes in general what customer satisfaction is, what supply chain is and a statement on the relationship of the two. The body of the paper discusses deeply how these two are related and the importance of one on the other. Finally, the conclusion section provides some recommendations on how the relationship can be advanced to improve organizational outcomes.

#### **Key Words:**

*Supply Chain Management,  
Customer Satisfaction,  
Responsiveness, Innovation*

## **1. Introduction**

In the modest business environments, most organizations have recognized the need to redesign their supply chain performance, systems and approaches to gain the customer satisfaction and customer loyalty. The supply chain performance of an organization can be its hidden weapon to boost profitability and increase customer satisfaction. No other segment of the business can have the impact of the supply chain on reaching the customers, improving the levels of service delivery and lowering retail prices; which means effective supply chain management creates value for both an organization's business model and its customers.

Customers always expect excellent services (Laosiri Hongthong, Adebajo & Choon Tan, 2013 and Kibbeling, Van Der Bij & Van Weele, 2013). They are giving the business money and their time to totally satisfy their demands and gets to products or services on time and specific. If there is any issue, customers expect the company to have the clearness to show reasons why it happened and the contingency plan that has been put in place to address it. Especially in the current business environment, where customers can flash poorly performing companies on social media, the reputation of a brand is more liable to damage from unnecessary supply chain errors than ever. The supply chain is far and away from an organization's most effective service tool.

The SCM directly dictates the two most important components of customer satisfaction: fee and supply. An effective and efficient supply chain management means that a company can trouble its competitors on the price of goods and services while at the same time improving its profitability(Laosirihongthong, Adebajo Choon Tan, 2013). Having high operations also implies that the company will be capable of meeting or exceeding its customers' expectations on the timely delivery of their products and services.

Giving the clients what they want, when they want it and at the most affordable prices is the key to having them keep a high satisfaction level. An effective supply chain management allows the company to achieve all these(Laosiri Hongthong, Adebajo Choon Tan, 2013). By choosing the right supply chain approaches, systems and partners, the organization is likely to give its customers, be they businesses or individuals, the transparency, the excellent service and visibility that they all want. Having the right systems and approaches in the supply chain means that the organization has complete mechanism of its products' journey from start to delivery. It can also implement systems and new tweaks that aim at reducing errors in the supply chain and increasing the efficiency of the inventory.

The more the supply chain system becomes, the better the customer experience. Customer experience is translated into happiness and loyalty. Research shows that customers who have

experienced high levels of service in a particular organization are likely to come back and hence become loyal customers (Laosirihongthong, Adebanjo Choon Tan, 2013; Jacobs, Salisbury & Enns, 2013; and Kibbeling, Van Der Bij & Van Weele, 2013).

## **2. Literature Review**

Business organizations and enterprises are experiencing advanced pressure to improve the effectiveness and efficiency of the supply chain, as a strategy to deliver the best value to their customers within the shortest time possible. The effectiveness of the supply chain is becoming an important tool for companies to remain competitive. Heikkilä (2012) and Ellinger et al. (2012) explain that the competitive advantage of an organization over the rivalry in the market depends heavily on its ability to effectively handle the multiple challenges to rein in enhanced product quality, cost, and excellent customer service levels.

A very compelling reason for this position is attributed or connected to the fact that the competition in the market today is being waged across or between supply chains, and not just confined between organizations anymore. Heikkilä (2012) and Ellinger et al. (2012) add that the customers are significant stakeholder's business organizations and their happiness and satisfaction should remain a top priority for management. Customer satisfaction and loyalty have become subjects of great interest to organizations and research individuals because of how they influence not only the performance of an organization but also its profitability and the overall bottom line.

The level or extent of service quality is connected to customer happiness, which is a key ingredient for customer satisfaction and loyalty. Heikkilä (2012) and Ellinger et al. (2012) further explain that meeting the pre-purchase expectations of a customer is a significant aspect of keeping them satisfied. The supply chain relationship plays such a vital role in achieving customer satisfaction as one of the major goals of most business management.

Supply chain management systems help to plan, implement and control the operations of the supply chain to ensure that the needs and demands of the customer base are met and exceeded in some circumstances. According to Jacobs, Salisbury, and Enns (2013), Ellinger et al. (2012) and Heikkilä (2012), supply chain management coordinates the flow of materials, finances, and information between and among all those participating in the business from the manufacturer to the final user of the product or service. Heikkilä (2012) further add those customer relationship strategies and activities can generate organizational success in supply chain and distribution management efforts as well as its overall performance.

The success of an organization's supply chain management encompasses integration of customers at the downstream and integration of suppliers at the upstream, considering that each of these entities in the chain is a customer and a supplier at the same time (Laosirihongthong, Adebajo Choon Tan, 2013; Jacobs, Salisbury & Enns, 2013; and Kibbeling, Van Der Bij & Van Weele, 2013). In the competitive business environment, Heikkilä (2012) explains that having better relationship management with the customer base is significant for the success of the organization.

Having better relationships with business partners like suppliers and customers play a significant role in ensuring the success of the supply chain. The ability of supply chain has an influence on customer satisfaction and shareholder value. In a study titled "The influence of supply chain management competency on customer needs and satisfaction and shareholder worth" Ellinger et al. (2012) look at how the relationship between supply chain management and customer satisfaction can be derived from the performance of an organization.

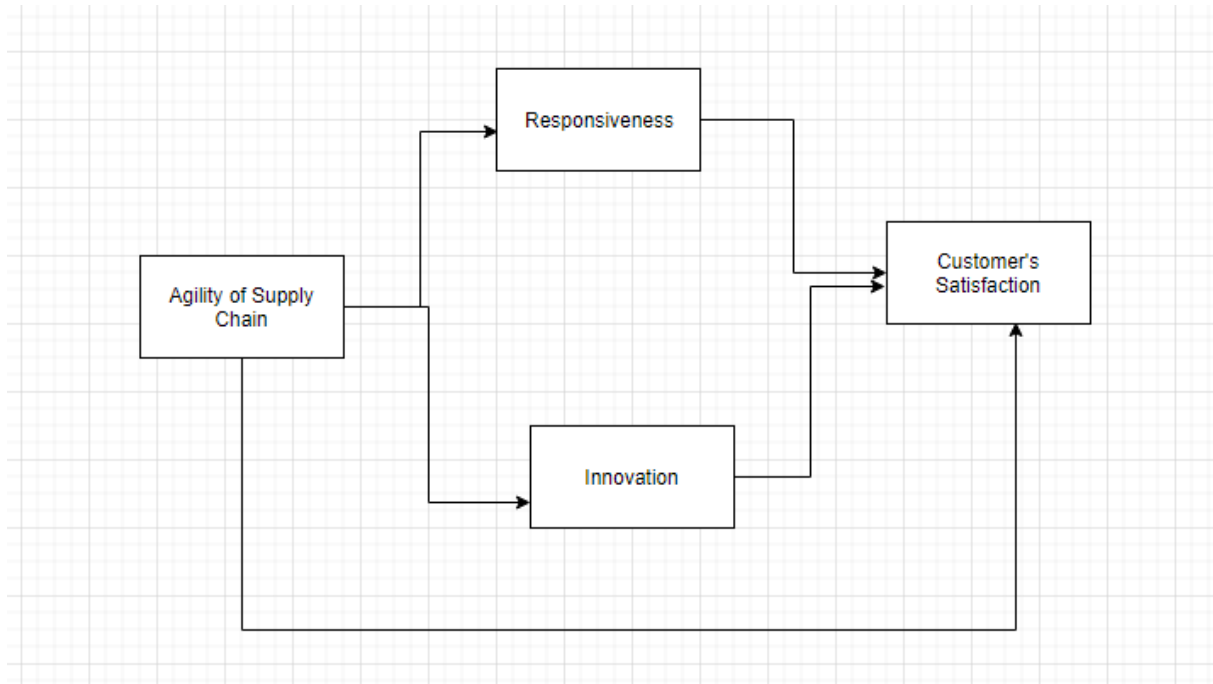
Supported by Jacobs, Salisbury, and Enns (2013), Ellinger et al. (2012) explains that supply chain management plays a critical role in the creation of value for the shareholders by influencing customer loyalty and satisfaction and a key driver of organizational financial and operational performance. However, Jacobs, Salisbury, and Enns (2013) explain that since supply chain management affects each of the key drivers of firm financial and operational performance, lack of appropriate metric for quantifying the influence or impact of supply chain management restricts organizations from optimizing their supply chain models.

The purpose of the study by Ellinger et al. (2012) was to address the existing gap between supply chain competency and firm performance by examining the influence of supply chain management competence on two vital organizational performance metrics: shareholder value and customer satisfaction. Supply chain management competency is described here as a means through which firms can create competitive advantage but it must also be noted that few business enterprises have highly competent supply chain management systems. According to Jacobs, Salisbury and Enns (2013), supply chain management competency's primary function works to integrate between and within supply chain member organizations.

The ability of an organization to create higher levels of customer satisfaction is considered a significant differentiator and therefore has become a key aspect of business strategies for improved organizational performance. Jacobs, Salisbury, and Enns (2013) and Ellinger et al. (2012) explain that customer satisfaction is a measure, which looks at how the services and

products offered by the organization are meeting or exceeding the expectations and demands of the customers, and the supply chain plays a massive role in this.

## **2.1 Research Model**



## **2.2 Responsiveness affect customer satisfaction**

The more responsive you are to your customer the more satisfaction you will get from the customers. Responsiveness is the process of responding in the market by using the ability of supply chain in the given timeframe because in market the most important method is documentation of the product with the responsive modeling with the evaluation and strategies of the business market. There are different responsive models with the interactive structure of market performance evaluation.

Responsiveness in supply chain can increase the customer satisfaction because time to time deployment of work with respect to supply chain increases the customer relationship with organization. Having better relationships with business partners like suppliers and customers play a significant role in ensuring the success of the supply chain. The competency of supply chain management has an influence on customer satisfaction and shareholder value.

## **2.3 Innovation affect customer satisfaction**

Innovation is the process of making the changes in the existing research model whereas the consideration of each of the model to make sure that the innovation based functionalities are pre supply fit in research analysis. The optimization of supply chain model can be critical if the framework is not followed.

Innovation with supply chain normally improve the processes to grab the customers while the satisfaction of customer based on the value of the product or a service in which it has been cleared that the integrated structure should be validated in the secure processing of supply chain innovation. The victory of an organization's supply chain management encompasses integration of customers at the upstream and integration of suppliers at the downstream, considering that each of these entities in the chain is a customer and a supplier at the same time

### **3. Research Methodology**

#### **3.1 Research Design**

The design for this research was centered on two methods primary and secondary, in primary research method, we would use the data that was not available online, i.e. by conducting a survey questionnaire and analyzing the outcomes, moreover, collecting data on these organizations to discuss the case studies of innovation on them. Secondary research method consisted of academic journals, online publications of quality and innovation.

The approach used to make appropriate erudite strategy on the way the research is called research design. It aids in carefully illustrating a comprehensive and thorough way of carrying out a study. It sheds the simple study questions and problems that are talked about in the chosen study. The research began with a suggestive, investigative and analytical approach.

#### **3.2 Data Collection Method**

For data collection, we would utilize both primary and secondary data resources as well as using surveys for the quantitative research of the IT divisions about the effect of innovation culture. A brief description of the data collection methods is given below. The main research method is using the survey to attain quantitative data to collect primary data, in addition to a literature review to collect secondary data. This combination proved useful in terms of preserving the strengths and reducing the weaknesses in both approaches.

The case study evidence and data may be obtained from numerous sources like stored records, documentation, direct observations, physical artifacts interviews, and observing participants. Primary data was gathered using face-to-face interviews and semi-structured with the lead

management level employees and external consultant in the business units and Information technology in the company. The Semi-structured interviews include carrying out specific interviews with the target respondents to determine their views regarding certain phenomena.

#### **4. Analysis and Findings**

As related to supply chains, customer satisfaction metrics determine and indicate how successful business enterprises are at providing products and services to the market within the required parameters and variables. Based on a competent supply chain system, improving customer satisfaction levels, as advanced by Jacobs, Salisbury and Enns (2013) and Ellinger et al. (2012) is vital for organizations because it influences the financial performance of the company.

Having an effective and efficient supply chain means that a company can beat its competitors on the price of goods and services while at the same time improving its profitability. Having high operations also implies that the company will be capable of meeting or exceeding its customers' expectations on the timely delivery of their products and services. Giving the clients what they want, when they want it and at the most affordable prices is the key to having them keep a high satisfaction level. An operative supply chain management permits the company to achieve all these.

By taking the right supply chain approaches, systems and associate partners, the organization is likely to give its customers, be they businesses or individuals, the transparency, the excellent service and visibility that they all want. Having the right systems and approaches in the supply chain means that the organization has full control of its products' journey from start to delivery. It can also implement systems and new tweaks that aim at reducing errors in the supply chain and increasing the efficiency of the inventory. The more improved the supply chain system becomes, the better the customer experience.

Customer experience is translated into happiness and loyalty which can be gained by including the innovation and responsiveness in the domain . Research shows that customers who have experienced high levels of service in a particular organization are likely to come back and hence become loyal customers. (Laosirihongthong, Adebajo Choon Tan, that's because giving the customer the right priority i.e response to his inquiries before and after sales. Keeping the business visible with the customers will definitely help to gain customer satisfaction. 2013; Jacobs, Salisbury &Enns, 2013; and Kibbeling, Van Der Bij& Van Weele, 2013). Supply chain management aims to promote the competitive performance of an organization by strictly integrating the central processes and functions within an

organizational system and connecting these jobs with the external operations of customers, sellers and other members of the channel (Jacobs, Salisbury, & Enns, 2013; Kurta & Nam, 2010).

Supply chain management and integration have been widely linked to organizational performance. Jacobs, Salisbury and Enns (2013) and Kurata and Nam (2010) explains that just as the supply chain changes has been related to organizational practise, a vital amount of research work done to evaluate the relationship between supply chain performance and customer satisfaction. The findings of these studies show a positive relationship or correlation between performance and customer satisfaction, and if adding the catalyst responsiveness and innovation in the performance it would be better and more profitable.

Jacobs, Salisbury, and Enns (2013) explain that since one major objective of supply chain integration is to improve customer satisfaction and customer satisfaction is related to organizational performance, customer satisfaction, therefore, may be the missing variable. The aim of their study, therefore, is to light up what role customer satisfaction plays in SCM integration and its overall effect on financial behavior. To achieve this, Jacobs, Salisbury, and Enns (2013) use the organizational learning theory. Kurata and Nam (2010) explain that customers can be satisfied with different approaches that can cumulative or operation specific. However, the cumulative measure is better than transaction-specific customer satisfaction because it takes a long term perspective. Operation specific customer satisfaction is likely to produce meaningful results and insights into a specific encounter and may be analytical of additional transactions in the future. Jacobs, Salisbury and Enns (2013) state that the benefit of cumulative customer satisfaction is that it provides a more fundamental concept of an organization's present, past and future practice.

The degree to which customers are satisfied in an organization depends on how the business partners, suppliers and employees are integrated. It means that an efficient supply chain management plays such a vital role in ensuring that customers are not only satisfied but also stay committed to the firm. According to the organizational learning theory, integration between internal and external functions which include the supply chain are related to customer satisfaction. Common learning and information which is created through info sharing along the supply chain advance the chances of a mutual understanding among the people within the organization.

Therefore, the expectations of the customer are kept constant with the ability of the supply chain to see the needs of the customers; met demands and needs being linked with happy clients, mainly to the extent that the customer has significantly enhanced the related



information and knowledge shared across the parties. Jacobs, Salisbury, and Enns (2013) explain that through alliances with suppliers and customers, organizations can learn to tailor their products and services to more closely match the specific demands and requirements of the customers.

For data collection, we would utilize both primary and secondary data resources as well as using surveys for the quantitative research of the IT divisions about the effect of innovation culture. A brief description of the data collection methods is given below. The main research method is using the survey to attain quantitative data to collect primary data, in addition to a literature review to collect secondary data. This combination proved useful in terms of preserving the strengths and reducing the weaknesses in both approaches.

The case study evidence and data may be obtained from numerous sources like stored records, documentation, direct observations, physical artifacts interviews, and observing participants. Primary data was gathered using face-to-face interviews and semi-structured with the lead management level employees and external consultant in the business units and Information technology in the company. The Semi-structured interviews include carrying out specific interviews with the target respondents to determine their views regarding certain phenomena. According to Kibbeling, Van Der Bij and Van Weele (2013), integrating with suppliers and customer's yields better organizational performance and this has contributed to advanced interests and taking the strategic significance of integrating customer's needs, sellers and vendors and manufacturers. Supplier and customer integration has been shown to improve the quality of service delivered, flexibility and responsiveness. For consumer products which last for long periods of time, after-sales services play a significant role in the purchase decisions of customers.

Chavez, Feng and Wiengarten (2016) add that while firms are responding to pressures from the governmental agencies and other international regulators to adopt more environment-friendly practices in their business operations, these enterprises also have an extra eye on their customers, using environmental practices as a tool to advance their brand image and therefore improve customer loyalty and satisfaction. It means that the business model of an organization must be balanced with environmental issues. Flexibility, reliability and business sustainability are key supply chain competitive priorities which paint the image of an organization to the customers.

As a component of delivery, customers want to see companies adopt supply chain practices which are aimed at protecting the environment while at the same time providing quality for their money. Ellinger et al. (2012) and Barve (2011) explain some supply chain performance

issues that can be used by business organizations to drive customer satisfaction. The first aspect stressed by Ellinger et al. (2012) and Barve (2011) is improving on the delivery time. Customers often want their products and services delivered on time and with promptness. It means that in some circumstances and situations, the clients will adopt no-forgiveness policies.

One simple mistake or slip up could cost the organization a good number of clients for a very long period of time or even for good. Therefore, management teams should meet the promised delivery windows to ensure that customer trust is maintained and that repeat business is encouraged. According to Chavez, Feng, and Wiengarten (2016), an effective supply chain management system which focuses on customer satisfaction leverages the use of technology to track inventory and enhance visibility.

The modern business and retail industry is so competitive and is technology-oriented. Companies are using technology to automate their warehouse activities and fulfill the needs of the consumers. Automated warehouses speed up the supply chain and delivery systems and make them less prone to mistakes which will offer greater visibility into facility management. Supply chain visibility is an important component of customer satisfaction. Chavez, Feng, and Wiengarten (2016) explain that companies which do not have a big picture view of their supply chains find it nearly impossible to implement consumer-focused strategies such as the just-in-time replenishment of inventory.

Customer demand can also be satisfied by adopting agile inventory strategies. The management of inventory is a constant struggle for most business enterprises. However, modern customers are powering a significant change in how businesses handle their inventory. Even today, Chavez, Feng, and Wiengarten (2016) explain that retailers are finding it extremely difficult to strike an optimal balance between out-of-stock inventory situations and excess inventory. Adopting agility allows the partners in the supply chain to constantly work together to produce the number of goods needed daily.

#### **4. Recommendations**

The company should establish standards of performance. The company's performance standards should accurately and adequately reflect customer expectations (Williams & Naumann, 2011). High-performance standards which are set from an actual and accurate examination of the operational capabilities ensure that the organization adequately meets the customer expectations (Susskind, Kacmar & Borchgrevink, 2003). Failure to establish high-performance standards results to low-quality products and services which do not only meet

the needs and requirements of the customers but also lowers the customer loyalty to the company's products and services (Susskind, Kacmar & Borchgrevink, 2003).

#### **4.1 Improving Responsiveness**

The company should improve its willingness and ability to provide prompt service to the customers. As mentioned above, responsiveness is a time-oriented concept whereby customers expect the company to handle all interactions in a timely and prompt manner. The company should adopt technology to improve its responsiveness. For example, a customer support system can be improved through multiple customer service options, such as live chat, video conferencing, and email (Siddiqi, 2011). Also, the company can implement traditional customer support such as traditional phones and communication channels to improve the company's responsiveness, which in turn improves customer satisfaction.

#### **4.2 Customer on the first priority**

The company can deliver better value to the business as well as to the customers through the fostering of a customer-centric culture. The company should set the customer at the core of every business, which ensures that customer needs and requirements are met efficiently. All stakeholders in the company must be encouraged to keep the customer at the center while making all the strategic decisions (Sureshchandar, Rajendan & Anantharaman, 2002). The organization should make customer satisfaction part of the core values of the organization. Also, the company should link customer satisfaction to the key performance indicator (KPI). This will ensure that the employees are encouraged to focus on fulfilling the requirements and the needs of the customers. To improve a customer-oriented culture in the company, the management should ensure that all departments are involved in customer service (Naumann, 2000). This improves their understanding of customer needs, which in turn ensure that all the company's employees are aligned with the core value of the firm, i.e., customer-centricity (Shah, Rust, Parasuraman, Staelin & Day, 2006).

#### **4.3 Continuous Improvement**

Lastly, the home building company should adopt the notion of continuous improvement in creating customer satisfaction (Bergman & Klefsjo, 2010). There has been a continued escalation in consumer's expectations, which is as a result of the dynamic environment. This has resulted in a situation whereby customer satisfaction strategies which were effective this year may become obsolete and result in dissatisfaction the next year (Imai,

2012). Therefore, it is important for the company to ensure that it implements the notion of continuous improvement in customer satisfaction. The dynamic nature of competition has resulted in emerging trends in customer satisfaction, and therefore, it is essential to ensure that the company remains up-to-date with the changes occurring in the business.

## **5. Conclusion**

The objective of supply chain management is creating happy and satisfied customers by ensuring that all the activities of the supply chain are coordinated into a seamless process (Büyüközkan & Çiftçi, 2012; Chavez, Feng & Wiengarten, 2016). To improve customer satisfaction, organizations should make their supply chains more customer centric or customer driven. Customers should be put in the center of all the business processes. There are several ways through which this can be achieved. Firstly, organizations should improve the visibility of their supply chains. The supply chain should be made visible by collaborating with the key stakeholders in the chain. Collaborating with the key stakeholders to gain real-time visibility requires important questions like the number of orders coming in and how to prioritize them, the number of products stock and those on stock and ways of improving delivery times for the customers.

Secondly, demand forecasting is a key to advance customer satisfaction through supply chains, organizations should be capable of forecasting what they need and the time they will need it. Organizations can use POS data for retail outlets, returned products data, data from shipping and delivery and warehouse shipment data. Such data helps in making the supply chain more efficient.

Thirdly, the inventory and distribution network should be advanced to make it customer-driven. The supply chain management of any company is operationalized with a strong distribution network. Getting customer feedback and using the feedback to improve the distribution network can make it more customers-based. Retail companies or enterprises do not sell goods and services they cannot deliver and the salespeople should not or do not promise deliveries they are unable to make. Broken promises and late deliveries may mean the loss of a large number of customers.

Accurate filling and billing of orders, timely delivery and ensuring the products arrive in good conditions are significant to the success of that brand. Therefore, a significant component of supply chains and supply chain management is that they are completely customer driven. In the mass-production period, manufacturers produced standardized goods that were pushed through their distribution channels to the customer. In contrast, in today's modern markets,

products are being driven by the customer base, who expect to receive the services and product configurations matched to their unique demands and needs (Laosirihongthong, Adebajo & Choon Tan, 2013; Jacobs, Salisbury & Enns, 2013; and Kibbeling, Van Der Bij & Van Weele, 2013).

Through the channel collaboration and partnership of suppliers, the manufacturing team, the wholesale team and the retail companies along the entire supply chain who work in unison towards the common objective of creating significant value for customers, supply chain management allows business ventures to respond with the unique product configuration demanded and needed by the customers (Büyükoçkan & Çiftçi, 2012; Chavez, Feng & Wiengarten, 2016). In the current business environments, supply chain management plays two roles: first, to commute customer demand that extends from the point of sale all the way back to the suppliers, and secondly, as the physical flow processes that engineers the cost-effectively and timely distribution of products through the whole supply pipeline.

Barve (2011) and Kibbeling, Der Bij and Van Weele (2013) further adds that in the current business environment, it is becoming completely impossible for companies and their ventures to ignore or remove sources of volatility and turbulence. Therefore, supply chain managers must be willing to accept uncertainty but at the same time develop a strategy that will enable them to match supply and demand at costs that are acceptable (Laosirihongthong, Adebajo & Choon Tan, 2013; Jacobs, Salisbury & Enns, 2013; and Kibbeling, Van Der Bij & Van Weele, 2013). It means that to achieve a certain level of customer satisfaction, organizations must have supply chain agility. The requirement for businesses to become more responsive to the changing competitive landscape, the needs of the customers and increasing environmental volatility or turbulence are driving interest in the concept of agility in the supply chain.

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