

THE IMPACT OF JUST IN TIME STRATEGY AND PULL CHAIN STRATEGY ON SUPPLY CHAIN PERFORMANCE

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ABSTRACT

Businesses used to be able to compete successfully as standalone entities, but in order to get an effective organizational performance, they need to compete as an essential link in a supply chain performance. For supply chain management to be successful, both internal and external integration are required of operational procedures across the supply chain performance. Therefore, just in time and pull chain strategy incorporated to assess the supply chain performance and found as significant to enhance the supply chain performance by meeting customer demands.

Keywords: *Just in Time, Pull Chain Strategy, Supply Chain Performance*

1. INTRODUCTION

One of the organization's most important and essential functions is a smooth supply chain management [1]. Supply chain management strategy may include a number of elements that have a significant effect on a business revenue and profitability. As a result, many business owners welcome the chance to choose supply chain strategies that are greatest [2], [3]. Rapidly growing

business industries embracing technological changes and adopting innovations. Businesses can reduce inventory costs while boosting productivity and minimizing waste by only placing orders for the items that are actually required for the production process [4]. This technique requires precise demand forecasting in order to produce [5], [6]. Just-in-time (JIT) inventory systems also decrease stock and increase productivity. JIT production techniques reduce inventory expenses because companies buy materials and parts just when they're needed for manufacturing and don't pay storage costs [7]–[9]. Furthermore, manufacturers are not left with excess inventory in the event that an order is cancelled or not filled [10]. Moreover, in the pull strategy of the supply chain, products are only produced in response to client demand; otherwise, no extra quantity would be kept in stock [11]–[16]. Business owners that only produce items that are ready for sale and have no inventory can also benefit from the pull technique [17]. An increasingly promoting factor of supply chain considered to be investigate in this research. Just in time and pull chain strategy considered as independent variable and supply chain performance as dependent variable.

1.1.Problem Statement

Overproduction, that happens when the market's supply of a thing go beyond its demand and leads to the accumulation of unsold stocks, is avoided by a just-in-time strategy [18]. These unsaleable commodities become dead stock in the inventory, creating waste and occupying space. By considering these factors and to fil the past researches gap, this research is mainly aimed to investigate the impact of just in time strategy implementation and pull chain strategy on supply chain performance [19]. An in-depth assessment of JIT strategy and pull strategy with the help of previously explored literature and practical content.

2. THEORETICAL FRAMEWORK

2.1. Pull Supply Chain Strategy

The supply chain strategic management and its implementations in business operations is one of the fundamental goals of the global business industry in which there is no operational and functional strategy could be happen without effective supply chain management [20][21], [22]. The supply chain is a process of functioning in business in which raw material go through with the

process of manufacturing and then product sold in consumer hands [23]. In supply chain theory there is a strategy of the pull supply chain that create the need of the product according to customer needs and requirements [24]–[26]. In fashion designing industry where designers create the dresses according to the customer’s requirement and their priorities where they want to wear custom - made design of the dress [27]. In this process the suppliers who is the designer of the retail store taking order from customers [28], and ask their essential needs and specification of the motif designs and other related features that enhances the customer interests and then it goes for manufacturing process and finished at the sale [29]–[31]. The pull strategy of the supply chain is a process in which product only made according to customer need otherwise there is no extra quantity would be available in stock [32], [33]. The pull strategy also facilitates the business owners in which they only made products that is ready for sale and no item can be found in stock.

2.2. Just in Time

The just in time is a type of inventory management system of the supply chain in which business companies made the products only to fulfill the requirement of the customers [34], [35]. In this method of supply chain, the companies only order that materials that could be easily available from suppliers on time and deliver the immediate demand of the customers [36], [37]. In this method companies always invest their capital in those products that are in demand in market and meet the requirements of the market and order the products for manufacturing because there are assure for the sale of the items on time and there is no other cost would be applicable in different factors such as storage, warehouses, transportation delay and other reasons [38], [39]. If business owners applying the just in time inventory management system in their business operations then there is several chances in supply chain efficiency and working perfectly in manage the inventories [40]. The just in time strategy of supply chain helps to investors to allocate their capitals in positive projects rather those who investing their assets in big inventories management [41]in which number of risks are involved in its sales and marketing growth [42]–[45]. The just in time management system of work helps to manage the inventories on time especially in large portion of the business where products should be sold at their time otherwise number of issues relate with it [46], [47]. The just in time strategy demand the accurate order taking efficiency that is only required to customers. It is helpful business strategy that provide the cash in company’s hand that they can invest in further orders in market and grow their space [48].

2.3. Supply Chain Performance

The supply chain performance measurement is a task of the supply chain management of the business industries that defines the operational activities of the business [49]. The supply chain performance start from the manufacturing of the raw material to deliver the items in consumers hands [50], [51]. It is only depending on the efficient supply chain management that hold the entire business industry and its operations through different strategic networks [52]–[55]. The supply chain performance is an objective that finalized the business operation in related industries. In textile industry, the supply chain performance is high in demand and rapidly increasing its value in global market [56], [57]. The provision of supply chain industry in textile having number of opportunities because they are linked to the consumer basic necessities [58], [59]. The supply chain management investigate the need and desired of the consumers, behavioral and change of interest, cost effective approaches and different other services that are related to consumers [60], [61]. The supply chain performance is a method in which business companies create the strategic decisions and possible solutions to create the presence in market [62], [63]. The strategic supply chain performance depending on the policies that are set by the managerial section of the business that enhance the efficiency of the production areas that encourage the high needs of the supply chain performance in textile industry [36], [64]. All kind of business profitability depending on the availability of the products in market that meet the consumer needs on time rather they should wait or change their behavior towards the objects [65], [66]. The supply chain management reflecting its operational activities through its performances [67], [68]. It helps to businesses to measure the performance criteria that evaluate the gaps in industry. There are number of factors that correlate with the supply chain performances in which employee's interest that helps to active the deadlines, managerial participation, commitments of suppliers and retailer's performances to achieve the goals [69]–[74]. These associated factors are linked with the performance of the supply chain management in any kind of business that helps to generate the expected results that companies required through their supply chain performances.

2.4. Operational Definition

2.4.1. Pull Supply Chain Strategy

The operational side of the pull supply chain strategy is quite secure method in which less risk factors are involved [75]. It encourages the suppliers to invest their capital only for the demand of the customers. Its unique strategy for supply chain management in order to design and manufacture the items and depending on the consumption of the customers as per required items [76]. The pull strategy of the supply chain always seeking the need of its customers and most of the time it is also considering in the availability of the product in some cases as seasonal requirement [77], [78]. The pull demand strategy to drive in business efficiency has less certainty in business production and limited customer loyalty rather than other products that are circulating in market throughout the year and are the essential needs of the customers [79].

2.4.2. Just in Time

The operational theme of the strategy of just in time in inventory management process is quite effective and functional due to its nature [80], [81]. It is type of strategy in which business companies taking orders to design the product according to its demand in market [82]–[84]. It help companies to face its competitors when they are manufacturing large number of products and it is saved in their ware houses. The just in time strategy is an ongoing process that do not hold the products of the companies in their inventories, it is a system in which running items effectively create their operations of supply chain [85]–[87]. The just in time method of manage is also depending on the forecasting of the companies in which companies strategically decide the quantities of the material when they have to be made accurately. But in this system number of risk factors are involved in order to meet the dead line of the customers because in just in time process, the order should be getting from supplier when it is urgently required [88], [89]. In many cases the just in time strategy fails when on time order to suppliers can take extra time to deliver the raw materials or manufactured finished items in terms of delay of transportation, bad weather or any other accident.

2.4.3. Supply Chain Performance

By definition the operational strategy of the supply chain performances creates the profitable business margins for industries and provide best outcomes in services to the customers [90]. It is also creating the customer experiences and attitude towards the products and hold their interests

for a longer period of time. The performance -based structure of the supply chain helps to maintain the criteria in which the accuracy of the time management is considering for deliver the products to its customers [91]–[94]. Currently, business industries become efficient to meet the market requirements in terms of customer demand and they are also taking initiative to perform supply chain strategies to fulfill the customer needs at their door step [95]. The end goal of the supply chain performance is to product delivery to the customers that is gone through with various levels ad companies expected safe delivery of the objects [96]–[100]. The era of technology increases the efficiency of the supply chain performance and increase all that measures that create the possibility to achieve business goals with its supply chain management. It is fact that business successful strategies depending on its policies that they took to build their supply chain performance.

3. LITERATURE REVIEW

[101] Examined the impact of pull strategy of supply chain and just in time. The correlation explains that the both factors of the supply chain management is relevant to each other. The pull supply chain strategy focusses on the need on specific demand of the customers which they required [102], [103]. While just in time strategy of the supply chain business model also focusing on relevant orders of the customers that they need on time. In this case, the companies giving orders to suppliers for product delivery with time accuracy [104]. The only difference is that the pull strategy mainly focusing on customer's requirement [23], [105] according to the availability of the items while the just in time is bound to provide customer needs in all certain manners [2], [106], [107]. The just in time strategy has many unexpected risk factors that are related to the availability of the items from suppliers that could be affected with any risk factors.

[108] stated the relationship between pull supply chain strategy and supply chain performance can be signified. It can describe the successful practices of the business limitations in supply chain industry. The pull supply chain strategy focusing on custom- made orders of the customers that is designed by the requirement and needs while supply chain performance cannot as much play active role in this scenario [109], [110]. Because the pull strategy of the supply chain management doesn't need to place its efficiency in order to sold out its product because it is already sold at the time of the order of the customers [111]–[113]. The pull strategy of the supply chain already meets all that

necessities of the supply chain performance that customers expecting to their suppliers and waiting for the completion of their orders [28], [114]. In textile industry especially in fashion design houses where customers came to find out their solutions according to their desires and get best supply chain performance without any supplier effort in develop to the sale interest.

[115] described the relationship between just in time and supply chain performance as, the just-in-time idea could enhance quality control, shorten lead times, enhance vendor performance, and eliminate waste [116], [117]. Manufacturing may occasionally decide to delay output for a while or employ the postponement management approach [118], [119]. The just in time strategy create the products and items that are running in market demand and supply chain performance of the company enhances and develop the possibility of the viability of the products [120]–[122]. The supply chain performance measures and activities build the just in time products delivery on time and concentrating on all issues that are related with the immediate product delivery orders [123][124]. The just in time strategy is involved several risk factors that can delay the orders delivery of the customers [125], [126] but the supply chain performance continues helping to manage the efficiency of the supply chain with related possible solutions [127].

[128] evaluated the relationships among independent variables of pull supply chain strategy and just in time business model has an effective association with dependent variable of the supply chain performance [129]. Several business industries are related with efficient supply chain performing measures that enhances the on -time delivery of the products to the customers through various manufacturing procedures [130]–[133]. The pull strategy of supply chain and just in time inventory management system only depending on the effective supply chain performance of the business corporations that they are managing only through their suppliers effectively commitments for product deliveries [134]–[137]. The supply chain performance is also depending on the factors that are associated with the manufacturing, production cost, ware houses, transportation, fuels, cost effective policies and other certain elements that can affect the pull strategy and just in time business model [138], [139].

3.1 General Research Model

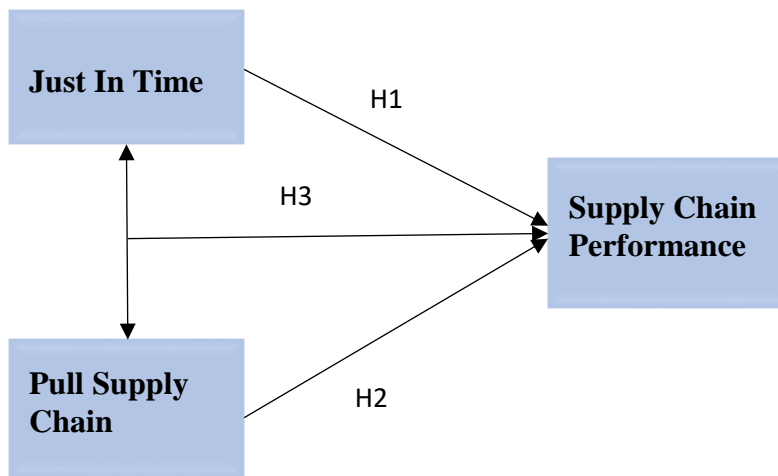


Figure 1: Conceptual Research Model

4. DISCUSSION

The investigated research variables can be considered with some critical points that facilitates an organizational operations by improving supply chain performance. The demand for a product alone in a pull strategy for supply chain management, determines the levels of production and distribution. When supply is insufficient to satisfy demand, the pull supply chain strategy also emphasizes the possibility for risk. Whereas, a JIT strategy, is flexible and capable of adapting to the demands of the ever-changing market. For instance, Toyota doesn't purchase raw materials until it has an order. The company has been able to reduce costs and quickly adapt to changes in demand because it can now store less inventory without having to worry about current inventories. In order to reduce the costs of purchasing goods that they won't be able to sell, businesses may choose to use a pull supply chain approach. Pull supply chain strategy also emphasizes having the ability to respond quickly to a specific demand or order by verifying consumer demand that is crucial when introducing products using a pull method into the supply chain.

5. CONCLUSION

Enhancing the supply chain's overall competitive performance. The Just in time and pull chain techniques were specifically considered in this research. The findings provided advance authority to the idea that using the JIT and pull strategy strategies will increase organizational performance by fortifying supply chain connections. Top executives must successfully manage their companies' internal operations, but they also need to get them ready to compete as key players in a supply chain. For long-term success, there must be competitors between supply chains. Although the idea of supply chain rivalry is rather simple, it can be challenging to identify and implement measures that would promote such competition.

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