The supply chain postponement strategy analysis business essay



\n[toc title="Table of Contents"]\n

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- 1. 2. Advantages and Disadvantages of Postponement \n \t
- 2. 3. Implementation of the Postponement Strategy Automotive \n \t
- 3. 3. 1 Example of Automotive Industry \n \t
- 4. Figure 1: Supply Chain Strategies \n \t
- 5. Figure 2: Topology and Postponement Options \n \t
- 6. 3. 1. 1 Manufacturing Postponement \n \t
- 7. 3. 1. 2 Labelling and Packing Postponement \n \t
- 8. 4. Conclusion \n

$n[/toc]\n \n$

"Postponement centres around delaying activities in the supply chain until real information about the markets are available". (Yang and Burns, 2003) Another definition about postponement is late customization or delayed product differentiation. In other words, it means delay the point of differentiation processed in a supply chain as much as possible until the supply chain is cost effective (Grag and Lee, 1998). Bowersox & Closs (1990) have classified postponements into three forms: time postponement, location postponement and form postponement. Time and location postponement belong to logistics postponement. From the logistics point of view, the postponement has five components, which involve labelling, packing, assembly, manufacturing and time. (Zinn and Bowersox, 1988)

In recent years, with the acceleration of the globalization process, the number of types of goods and personalized service of customer demand

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increasingly, the postponement strategy of supply chain management has been paid more attention. Postponement strategy is successful in a wide range of supply chain sectors such as automotive, food and fashion, which require high differentiation. (Li et al., 2007) For example, many food manufacturers change their label or trademarks to closer to needs of their customers. Thereby, this strategy greatly reduced costs and increased the market share.

2. Advantages and Disadvantages of Postponement

Product value and time are the most important variables that influence the postponement strategy. (Sanchez-Rodrigues, 2006) Regarding to supply chain strategy there are three major determinants affect it, such as product, market demand and manufacturing and logistics. (Pagh and Cooper, 1998) Postponement strategy followed the customization part of the "Just-in-Time"(JIT) production methods. It will be deferred to when to collect more information about the needs and uncertain demand has been reduction in the minimum time to be customized, thus reducing the finished products inventory (Brown et al., 2000), forecast earlier (Christopher, 2000), reducing the demand variability (Ernst et al., 2000) and risk diversification(Grag and Tang, 1997). From the green logistics point of view, though the strategy has a negative effect on the CO2 emissions, it can reduce the transport flows in outbound areas and mitigate the environmental impact of transport. (Sanchez-Rodrigues, 2006) The main drawback of the strategy is the higher cost of custom design and universal parts inventory. (Ma et al., 2002) The implementation of the strategy depends on the enterprise market characteristics and production of product type; therefore it is not suitable for any situation. Many qualitative and quantitative models analyse postponement strategy in different background, such as the Ma (2002) and Su (2005), they evaluate the costs and benefits of the implementation of postponement strategy.

3. Implementation of the Postponement Strategy – Automotive

As it is mentioned above, postponement can be divided into two kinds, one called form postponement, which avoids the vendor based on a forecast of production of the final product form different types of products. Another is time postponement or logistics postponement. It avoids the vendor transport product when the forecast demand does not produce actually, thereby reducing the environmental impact of CO2 emissions. Form postponement focuses on product. In the logistics system upstream operations are standardized as much as possible. With specific requirements of customer orders for product, the differentiation may occur at different stages of the process such as manufacturing, assembly, packaging and labelling. Time postponement focuses on time. At the central distribution centres, storing different products in order to reduce decentralization inventory in all sales market that result in high inventory distributed, when receive customer orders have a quick response. This kind of delay differentiation takes as long as possible.

3. 1 Example of Automotive Industry

Postponement strategy can also be seen as an approach of the supply chain to combine pull systems and push systems (Figure 1). This is part of the undifferentiated products produce and transport as the same as forecast, https://assignbuster.com/the-supply-chain-postponement-strategy-analysis-business-essay/

while the differences in response based on market demand. Therefore, the differentiation of the supply chain changes into a pull-type supply chain. In a push-type, the automotive company bases on forecast the demand of the customer to production, then products are sold through distributors to the market step by step. The drawback is that distributors and retailers in a passive position, vehicle enterprises have little information communication, less coordination, long lead time, big inventory amount and weak ability of fast response to market. The advantage is to make use of the manufacturing and transportation in the supply chain to provide economies benefits for automotive enterprises, but also the use of stocks to balance the imbalance between supply and demand. In the push stage, the car manufacturers predicted the semi-finished of mass production or the various modules of generalization, in order to access the same effects as mass production. During the pull stage, the product was able to achieve differentiation, under the need of the orders to combine various modules effectively, or according to the requirement to further process semi-finished products in order to achieve customization service.

Figure 1: Supply Chain Strategies

Source: (Naylor et al., 1999)

Chan et al. (2004) described that postponement strategy in automotive supply chain can lead to shorten process lead times and maximum flexibility. Figure 2 show that the flexibility plays an important role in defining business process topologies. (Wadhwa and Rao, 2000) The uncertainty of demands for any given product is a significant factor of time postponement (Zinn and Bowersox, 1988), which influenced by the variety environment. There is a https://assignbustor.com/the.gupply.chain.postponement.strategy.analysis.

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significant benefit by using postponement strategy moving from make-tostock, to the assemble-to-order scenarios. (Figure 2) Postponement can let the final assembly have a potential benefits for product and volume flexibility to bring it closer to actual customer demand. The point between pull and push stage is called Customer Order Decoupling Point (CODP). CODP is an important policy for the implementation of the postponement strategy in supply chain. ' All activities in the supply chain performed after the CODP are customized and targeted at the specific customized and targeted at the specific customer order, while all activities in the supply chain before the CODP are standardized'. (Van Hoek, 2001) Figure 2 shows that the location of CODP affects the supply chain strategy, through the analysis of decoupling point of the passage of time that can be combined to make different supply chain strategy. Figure 1 displays when the decoupling point in upstream, the demand is more stable and less variation, while the downstream demand is less stable because of the changes of the product. The decoupling point is divided the supply chain into two parts which base on customer needs. Its main purpose is to let the differentiation point of the products (in decoupling point) as close as the end user, reducing the risk of shortages and excess inventory. (Mason et al., 2000)

Figure 2: Topology and Postponement Options

Source: (Wadhwa and Rao, 2000)

3. 1. 1 Manufacturing Postponement

According to the different time and location, the process can be divided into two stages. If the final manufacture has less impact on value of the products there is no need to delay the final integrated manufacturing process. https://assignbuster.com/the-supply-chain-postponement-strategy-analysis-business-essay/

Secondly, if the volume and the weight of the goods increased too much, then choose to delay their label or trademarks or delay the package that can reduce transportation costs and warehousing costs. Thirdly, if the volume and the size of the product have a little change, it can use time postponement to achieve the demand of customers. When the final manufacture of the products have a high added value, it is necessary to delay the final manufacturing process. If the weight and size increased too much, in order to facilitate the transport and storage that should use assembly delay. If the size or weight increased marginally, because they can be separated production therefore this can use postponement manufacturing. Because the standardization design, the automotive company use fewer parts and components together to meet the customer needs products. They use lower cost to enhancing customer satisfaction to reduce the loss of sales of inconsistent supply and demand.

3. 1. 2 Labelling and Packing Postponement

The technology of producing basic products can be applied in mass production of the global automotive industry. Secondly, the product must be designed to module oriented, that is, it can through production modules and auxiliary equipment to meet the customer requirements 4 © otherwise the final assembly or final manufacturing will cost too much. In addition, the technology has a link with the type of the postponement activity. The final manufacturing has high technology that may be lead to more complex processing type, thus it will use manufacturing postponement. Generally, higher uncertainty such as the increased distribution of links and in a relatively tight advance period, they need for a higher level of

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postponement. There usually have more distribution centres in time postponement, labelling and packing postponement. Considering the demand of the customer, the length of the advance period can affect the type of the postponement.

4. Conclusion

To sum up, postponement is a useful strategy in supply chain. It through moving the differentiation point to backward and concentrate the uncertainty resources to improve the agility and flexibility of the supply chain. This strategy can reduce the inventory and forecasting risk costs.

More importantly, the "customization" and "standardization" not only meet the demand of the customers and reduce inventory costs and risk but also create more market value for the company.

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