



**A literature analysis of Walmart's supply chain excellence in term of integration,
distribution and operations**

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<p>Abstract</p> <p>This literature-based qualitative case study examines the world's leading retailing company Walmart to investigate whether Walmart possesses supply chain excellence in terms of integration, distribution and operations and yet saves costs. Supply Chain Management efficiency is essential for most businesses and crucial to customer satisfaction and company success.</p> <p>The literature studied involves retail industry supply chain activities and certain retail supply chain transformation elements and tools.</p> <p>This research study has been conducted using a case study qualitative measurement method.</p> <p>The findings show that the strategy of Walmart consists of cost-leadership methodology, which has been implemented in an efficient way throughout the sales planning and forecasting, synchronized supply and demand, execution process improvement, supplier partnership and customer experience. Walmart stores' strategy of everyday low price (EDLP) has attracted customers on a consistent basis. The implementation and integration of the above-mentioned practices has built an efficient supply chain.</p>	
<p>Keywords</p> <p>Supply Chain Management, Information technology, Logistics, retail industry, partnership, operations, lean, agility, integration.</p>	

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Acknowledgement and dedication

This thesis represents a turning point in my life. It marks the dividing line between being just a student and being a graduate ready to apply the knowledge I have acquired. These years of hard work studying have given me a vast knowledge of the field of supply chain management, all while helping growing my professional skills in this field.

Any stage in life requires courage, determination and perseverance. That is why it is essential to acknowledge that achieving what I aimed for has always been by the inspiration of my beloved father Colonel Majeed Jawad and my mother Engineer Fardos Majdy, whose successes during their lives have made me the man that I am now.

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Having witnessed all three of their successes and hard work to achieve their goals has made me determined to also achieve my dream. For that I would like dedicate this work to them.

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1 Background

Over the last couple of decades, there has been an expanding highlighting on Supply Chain Management (SCM) role in companies.

Many cases in the 90s demonstrate how companies have made considerable ventures to modernize their supply ties with a specific purpose to enhance consumer loyalty and increase their inside efficiency.

According to Christopher (2016, 301) it is not really singular organizations that contend with each other relatively, the competition is among competing supply chain which seeks customers with the least cost in the chain to develop the winning system of separate organizations.

Supply chain encompasses the supply of products to the manufacturer, work in process, inventory and finished product distribution to the final customer, and to manage the supply chain companies are looking for how to adapt choices across for example continues planning, inventory network functions, time, integration, efficient information flow and more. For that an efficient SCM is pivotal (Coyle, Langley, Novack & Gibson 2016, 8).

The start of this research case company Walmart, was as a single discount store founded in 1962 in the United States by Sam Watson. The single store strategy was selling more for less. This store has grown over the last fifty years and became the largest retailer in the world operating in 28 countries and e-commerce website in 11 countries and receiving around 260 million customers per week (Walmart 2017).

Now Walmart is one of the greatest operational and logistic giants. The products of this retail giant made in seventy countries worldwide, and it is managing 32 billion US dollars in inventory. With such huge numbers, an excellence in supply chain management system and strategy is definite. From the stand point of enabling the customers to save money, the whole organization successfully built and implemented the required business model to accomplish this goal.

And this thesis encompasses a close look into Walmart's supply chain in term of integration, distribution and operations respectively and reveal some practices that were implemented to achieve supply chain excellence.

1.1 Introduction

This chapter contains the research objective, question, benefits, risk management and definitions.

1.2 Research objective

Perpetual growth of Walmart during past couple of decades, even in the financial crises has forced academicians to analyze its supply chain management division. As company's growth openly indicates the existence of efficient SCM.

The key objective of this research thesis is to try to analyze Walmart's supply chain under the scope of integration, distribution and operations respectively. The research will try to also evaluate the impact of some practices that were implemented to achieve supply chain excellence.

1.3 Research and investigative questions

To identify phenomenon a research question must be stated to proceed with a study and in this thesis, the main research question of the study is as follows:

How did Walmart achieve supply chain excellence in term of integration, distribution and operations and yet saves costs?

The investigative questions which are leading to the main research question are:

IQ1: How did Walmart managed, utilized and integrated inter-organizational partnership and included corporate operations performance through it besides saving costs?

IQ2: How did Walmart utilized from the integration of enterprise resource planning application and logistics system into packaging to manage inventory and save costs?

IQ3: What is the role of logistics in improving Walmart's internal performance and interactions between business process of each element of the chain and save costs?

1.4 Benefits

The purpose of the research has been emphasized regarding supply chain management. This study would help students who want to study supply chain management in the future,

because it provides an important information about one of the most successful retail companies in the world.

This thesis will explain chronologically how Walmart's strategy have successfully been implemented in the managerial and operational level by integrating supply chain planning, management, supplier & customer management, supply & demand, forecasting and inventory management in an efficient way to achieve the strategy goal which consists of cost-leadership.

The researcher will also benefit from his own research and rap up his information about supply chain management. The research would also urge supply chain managers of processing companies to employ supply chain management literature practices to improve overall organizational performance. The researcher has taken 180 days to complete this thesis (See appendix 1).

1.5 Risk management

The probability of risk integration in thesis is significant. Supply chain activities are many and being precise to collect data within the subject, especially retail market is hard. All the elements and activities within supply chain management are interlinked. Collecting data can drive the researcher to proceed deeper into the subject and confuse the reader. The researcher was very careful in collecting data and following the process within the framework that is assigned for this research, however reading part of this thesis and leaving another can lead to confusion.

1.6 Definitions

The following general definitions are of the main concepts that have been stated in the review:

Supply chain: Is the series of integrated corporates that co-ordinate the physical execution and share information in order to assure a smooth flow of products or services, cash and information through the entire chain. The functions of supply chain are: the supply of products to the manufacturer, work in process, inventory and finished product distribution to the final customer (Coyle, Langley, Novack & Gibson 2016, 8).

Supply chain management (SCM): It is the management and planning of all the activities that are involved in sourcing, procuring, conversion and all the activities of logistics management. It also encompasses channel partner's collaboration and co-ordination. And the essence of supply chain management is integrating demand and supply management, in and across companies (CSCMP, Gibson, Hanna, Defee & Chen 2013, 1).

International logistics management: Is a complete system that manages the forward and reverse flow of goods' distribution and related information from the point of origin to point of consumption. It is cost effective (Perret, Jaffeux, Fender & Wieser 2007, 1.)

Inventory control: Can be defined as the process of managing a sufficient amount of materials which are held by the company in the supply chain for the purpose of customers' demand satisfaction (Grant, Lambert, Stock & Ellram 2006, 94.)

Warehouse: Can also be called storage area and it is a commercial building where raw materials or goods are stored by suppliers, exporters or wholesalers, they are constructed and equipped with tools according to special standards depending on the purpose of their use (Ghiani, Laporte & Musmanno 2013, 210.)

2 supply chain activities & good practices in the retail industry

This chapter consists of the theoretical framework of this research thesis.

2.1 Retail industry supply chain activities

Besides customary act of procuring and selling, most the retail tasks are caused by the framework of supply chain. For the sake of cost-effectiveness, retailers need to go past exchange functions. Though some of the persons claim that supply chain execution is complex, the various financial aids that have been understood by the business groups making an extreme measurement of SCM can't be restrained. Most of huge sellers now provide careful attention to the management of their provisions. These include synchronization, relationship building, and alignment.

Not every small and medium enterprises have focused on supply chain management for diverse reasons. Few companies do not increase the value of their operations and others are quite ignorant of it. It is crucial to prove that retailing-regardless of the company's size-is obvious in SCM.

According to Christopher (2016, 320) logistics is a process to manage the procurement of parts through the marketing channels in the organization, movement and storage of finished inventory. There is a way to find out current and future profitability through cost effective fulfilment of orders. It can be done by sharing data with the providers, mutually outlining the optimized supply chain by using verified tools and data innovation. It may likewise be characterized as processing of end to end for facts and figures to experience all accomplices for an action.

Supply chain refers to some of the possible solutions that can reduce or resolve the issues related to the challenges. Some of the areas explored in this study include some of the challenges regarding transportation, globalization and market growth (Gilling & Ulmer, 2016, 55.)

Organizations that basically evaluate these procedures and apply finest practices to satisfy their undertakings shall secure huge cost savings. The pattern for the procedures is the usage of lean standards. Lean is the terminology that begins from the giant automobile company Toyota in Japan to modernize the auto industry. Which aims to eliminate the waste in the process of supply chain.

Anything that does not increase the value of the client's viewpoint must be eliminated. This has led to the possibility of perpetual change, which is obvious that it is small in term of business exchange. Business should be updated and mistakes to be wiped out, in case it doesn't give any added value. As revealed above, logistics is illustrated to be part of the activities of the supply chain as recorded by Institute for Supply Management (ISM) (Cavinato 2010.)

For further clarification, some activities and their roles in the supply chain will be clarified in the following sub-sections.

2.1.1 Retail and logistics

Logistics as the dispersal and movement of material, does not comply with the context of present logistics industry, due to the variations in function that has already emerged in the recent years. The logistics of a company demonstrate the part of SCM that make strategies, employs it and handles the well-organized, effective forward and reverse movement of merchandise, services and related information for meeting customer's satisfaction.

The difference between supply chain and logistics of a company is that Logistics connects the supply chain practices. The success of the whole business that is dependent on the supply chain is consequently relying on how well the logistics undertakings are achieved. Therefore, inventory system is about procedures that depend on the design received by every single organization.

To make retail business productive, its wealth depends massively upon the proficiency and viability of its activities of logistics. Since logistics is a fundamental fragment of the supply chain, it is important to understand that transportation, warehousing, unitization or packaging, inventory and communication are also under the umbrella of the supply chain.

2.1.2 Inventory control

Inventories remain in companies' operations given that there is an irregularity among market forces (supply and demand). Holding stock has been a protected phenomenon in the past, even under Ford's generation model and yet it is. Multiple examinations and many researches, particularly through the Toyota manufacturing model have seen the disappearance of inventory in many organizations. The primary reason is that inventory establishes a waste whether it has been in retail division or assembling division. Thus, stock control identified by approaches and working methodology that are planned to upgrade companies'

utilization of the inventory for maximum benefit without interruption in consumer loyalty levels. Regardless of the extent of the store, retail inventory is viewed as controversial in stock management. This is a direct result of the total number of product offerings that are available for purchasing. A retailer must have expertise in stock administration to have the needed volume to get the best benefit out of the business. Inventory plays an important role in supply chain, as it facilitates the demand and supply balancing (Esper & Waller 2014, 2.)

2.1.3 Quality management

Companies consider that there is no concrete meaning for the concept of quality management. This is a general term and the origin is diverse when dealing with assembling, retail, transportation, IT, banking and so forth. Yet, to a retailer, what truly make quality operation, is more deals, less waste, and more benefits. The quality management team in a company recognizes that chances may exist to achieve a worse return on the equipment and space committed to production (Monczka & al 2015, 821.)

These visions do not appear as simple as they look since a considerable number of exercises should be done in retail supply chain management, starting from sourcing to utilization, involving logistics exercises too. Quality management activities are *quality planning, quality control, quality assurance and quality improvement*. These differentials can be termed success factors for assuring a solid quality. For this, a retailer should search for reliable dealers that can provide a guarantee about the value of their items and discover means to strengthen relations with top working providers.

2.1.4 Receiving and inspection

This is an essential function for retailers, particularly those who are focusing on quality and it is an approach to assure that clients do not get poor products. They are checked for defects and quality level on entry. This should be possible by reviewing every individual part or by using some certain assumptions. Records are marked by both deliverer and beneficiary.

2.1.5 Packaging

In order of assuring protection of goods that they don't get rotten or damaged when they are handled, transported, stored and distributed to customers, goods are required to be

packed properly. It is a very important concern in term of warehousing and material management, good packaging can have a positive impact on layout, design and overall warehouse productivity (Grant et al. 2006, 277).

The main functions of packaging from a logistics perspective are protect, organize, identify goods, reduce space and weight and costs in term of transportation and warehousing. Industrial users gain advantages from a well packed product utilizing from the modern technology which is getting closer to ideal in several types of packaging (Grant et al. 2006, 277).

One of packaging functions is performing *communication*; goods are packaged for identifying reasons; certain understood symbols such as bar codes and packing list (Grant et al. 2006, 279.)

2.1.6 Warehousing

Warehouse or storage area is a commercial building where raw materials or goods are stored by suppliers, exporters or wholesalers, they are constructed and equipped with tools according to special standards depending on the purpose of their use. And it plays an important role in combination with other activities, warehouse can be used to hold inventories in order to *save transportation costs, efficiency in fulfilling customers' orders, overcome the lead time of supply and reducing total costs of logistics* (Ghiani, et al. 2013, 2010).

There are more uses of warehouses such as breakbulk or subdivide large shipment of goods into smaller shipments LTL to deliver the goods to varies customers. Warehouses can be placed geographically in an area which would fit the best in term of transportation of LTL which would be sent to customers in order to pay for short haul rates. A company uses warehouses in order to reduce the total cost of logistics but establishing a warehouse depends on several factors i.e. the industry, capital availability, product characteristics and transportation costs (Grant et al. 2006, 229).

2.1.7 Communication

Information flow is a vital part in the supply chain. The correspondence through the inventory network process especially helps logistics execution. The data incorporates supply and demand volumes, stocks levels, product tracking, and costs. It is essential for retailers to get hold of information that are valuable for the upstream production network for proficient and viable execution. EDIs', Ere exceptionally complicated.

These applications support part or everything from material purchasing functions to delivering goods and services to customers, enabling billing and receiving functions to be controlled. All these advances provide many privileges as we have mentioned, they also can be used to reduce the level of complexity, increasing the speed of the process, gaining flexibility and reducing costs.

2.2 Retail supply chain good practices

Despite all the operations that are implemented in the supply chain, there has been growth in the retail industry for the purpose of balancing the service level along with the costs. They are usually debated as transformation in the retail supply chain. These are tactics that have been risen from the diverse economies to test current situation. For an example one concept could involve storage of delivered products in a warehouse, as a mean of reducing retailers' responsibility to the excess inventory.

To this end, researchers in the retail business commerce found new approaches in the retail trade, which is being implemented to face the effect of competition in their business by leading companies.

Burch, Lawrence & Agric Hum (2013, 250) underline the diverse transformations going on in the retail industry. These variations can be qualified to rise consumers' preferences in the demand for items and products. Below are some of the issues that are described briefly that have been adapted by industry.

2.2.1 Supplier-customer partnership

Supplier and/or customer partnership is the phenomenon of having commitment between companies to work with each other for gaining mutual benefit, they share relevant information and risks and they also share the achievements and rewards. It is also an extended relationship among sellers and buyers (Jusko 2011.)

Consumer-goods giant Procter & Gamble views supplier as an extension of the company. Rick Hughes, chief purchasing officer said "We expect the best from our business partners, and we are focused on growing long-term relationships that are sustainable, innovative and create joint value". It is important to have a solid relationship with suppliers since the risk of increased distance between co-operating companies is a lot higher in the global market and in order

to do that successfully, companies need to have a good understanding of information exchange, communication, common direction and trust (Jusko 2011).

Management plays important role to integrate supplier relationship within the supply chain activities and to create a stable environment among external suppliers in order to allow partners to collaborate between each other (Jusko 2011.)

2.2.2 Quick response (QR)

It is an alternative developed by the US textile producers to compete with companies who source from countries with low costs to get access to workforce and low-priced raw materials. The basic idea here is to decrease the list of unwanted Work in Process (WIP) and inventory balance of fast-moving items and products. This involves the reduction of lead times and more often delivery between partners. Thus, the speed of rotation of the shares increases, so does the volume of the product, which was docked cross. For example, it uses the partners in the value chain to adopt ways to save on food costs by information technology. And there have been developments on the QR to benefits the business. The retail fashion of UK reveals that companies taking QR along with financial evaluation, perform better financially than their equals who don't. This work applies to costs, profits and inventory.

2.2.3 Efficient logistics

Logistics activities mentioned above, including equipment and trucks are usually under continuous improvement by retailers, for example, through a "composite distribution system" Which is the spread of mixed level of temperature through the similar distribution center and transport It also includes the centralization in some specialized warehouse slower shifting materials. Previously this was done separately due to transport limitations that restrict such actions (Burch & al 2013, 252.)

2.2.4 Retailer contribution upstream the supply chain

The supply chain typically includes secondary and primary distribution. Primary distribution is for adding a value for the merchandise by an inbound flow into a warehouse manufacturing plant or a distribution center, while the latter is distribution from the warehouse to customers (SOL 2017).

Retailers have increased their presence in both hierarchies of the supply chain. This allows them to use their own logistics assets which are generally involved in suppliers' tasks. They have also carried out the activities of logistics at the doors of manufacturers, which has led to the Factory Gate Pricing (FGP), which means that transportation costs are not counted by the provider in the price of the products. (Burch & al 2013, 258.)

The cost and productivity performance are for upstream operations whereas downstream operations would need to measure the flexibility and delivery for competing on delivery, speed, design and flexibility (Chung 2015, 29.)

2.2.5 Effect of packaging costs and customer service

Companies has realized the fact that packaging has a direct effect on cost saving and customer service, in term transportation as increasing package information would reduce shipment tracking delay, when in the other hand increasing package protection would reduce item damage but increases transportation cost and by increasing standardization a company would reduce handling costs by saving load/unload time, reduce the need of special transport equipment (Grant et al. 2006, 279).

In term of Inventory packaging has also direct effect on cost saving and customer service because when it comes to increasing goods protection, a company would reduce damage, theft and insurance of the goods. It would also lead to availability of the goods (Grant et al. 2006, 279).

The same also in term of warehousing because by increasing package information, a company would reduce order filling time and labor cost. Increasing goods protection would lead to reduction in cube utilization but can decrease cube utilization by increasing the size of product dimension. Increased standardization leads to reduction in the cost of handling equipment (Grant et al. 2006, 279).

Another direct effect of cost saving and customer service is with communication because by increasing package information there would be a reduction in extra communication expenses which leads to saving in time (Grant et al. 2006, 279.)

2.2.6 Cross-docking warehouse operation

This concept is used as an alternative to serve as a distribution mixing centers. It is bypassing activity in which goods are transferred directly from the receiving dock to the shipping dock, in case of a pure cross-docking, put-away and order picking are avoided, at such situation information transfer becomes more important since it requires close coordination. Around 75 percent of food distribution involves the cross-docking from supplier to customer food stores. To consider cross-docking function two or more of the following criteria should be met. The criteria are; some inventory is time sensitive, customer is ready to receive inventory, received goods are pre-labelled, some of the inventory is pre-priced, distribution center is near capacity or shipment to fewer than 200 locations daily (Grant et al. 2006, 235).

2.2.7 Warehouse information transfer function

It happens simultaneously with the movement and storage function of the warehouse. In order to manage warehousing activities a company needs to transfer information i.e. in-bound and outbound shipments, inventory level and expiry date, available space, customer data and stock location. Organizations are using computerized information transfer for better functionality and error elimination, however paperwork is still significant (Grant et al. 2006, 238).

2.2.8 Efficient consumer response (ECR)

The main purposes of this method are to decrease costs for food retail and improve services. The importance of cooperation between retailers and suppliers is to regulate practices with the purpose of eliminating pointless costs all over the supply chain. This adjustment, for example, can be seen in the materials management gear. The key emphasis of ECR is on replenishment of products, category management, and empowering advanced technologies (kurnia & Johnston 2001, 230.)

Members of the ECR conference system made a scorecard from Latin America, USA, Europe and Asia, which has been utilized to evaluate the effectiveness of trade relations. This connection was the subject of four categories: coaches, supply management, demand management and integrators.

2.2.9 Collaborative planning, forecasting and replenishment (CPFR)

This idea has been implemented to stimulate relations among the trading associates who use IT. Predictions are accessible in inventory control and property is distributed among the participants of the total time visibility. CPFR is more influential in promoting periods of the season, and where there is a high demand for unpredictability.

Himanshu & Sharma (2015, 192) note that certain preconditions must be met for the positive performing of the CPFR, including modern computer systems, scale to defend the costs incurred, centralized decision-making arrangement, combined supply chain from the dealer to the storage.

2.2.10 Lean philosophy

Initially designed in the automotive industry of Japan Toyota, the lean concept has been applied to other processes in which they aim at cost savings. The plain concept of Lean is to manufacture only what the client desires, where he demands and when it is required. This is in stark contrast to the Ford Focus's massive manufacture system, which is not given to the product and its value chain. Managements must keep looking for operations that do not generate value, and stop them, but the rising cost of this procedure is the slogan. The value of lean philosophy is the only action that is done on the product and the client pays for in term of customer's viewpoint. Left-over is in the form of production time, overproduction, excess inventory movement, transportation and defects. Several structures have been established to eliminate these wastes, methods such as "FIFI" (Find It Fix It), with lean vendors, warehouse optimization, stopping unnecessary time-out, vehicle routes.

2.2.11 Agility in supply chain

Again, the flexible supply chain is formed as a reply to a Lean production system, which was adopted in some way to adapt to the supply chain. However, the US researchers have argued that the supply chain must be flexible to meet the growing instability of customer demand, specifically in the fashion industry.

Christopher (2016, 309.) states agility as the ability of the company to respond quickly to changes in demand in term of scope and diversity. There is always a need for contradiction, not to be confused with lean chain flexible deliveries. This is due to that lean more emphasis on decreasing waste, while it is not flexible enough to meet the short product life cycle faster/shorter delivery and primarily, the leanness feature shows less ability to maneuver.

The sensitivity of the market means that the readiness and responsiveness to actual demand instead of forecasting, which have been made before. ECR also provided an opportunity to get I.T Point Of Sale (POS) info about customers' needs and respond straight to it. Companies had driven forecasts and not on-demand response. But the back-bone of the supply chain to be constructed so that it can adapt and respond to requests in real time. Virtual means that there is no inventory; Most IT drives supply chain and is used to move merchandise faster. Before, complex formulas were made to enhance the sum of inventory needed and to assign the position of these stocks in the supply chain. But with the beginning of the Internet and electronic communication, older methods were not as accurate. Currently, real-time data is available among partners' chain that it automatically eliminates complexity.

The integration process makes information exchange among the chain, development of new products and the use of individual information systems easier. This allows facts and figures to be viewed in real-time between partners. As companies keep on subcontracting their trade and have more dependence on suppliers to achieve their goals. There must be no obstacles to process exchange information, trust and be committed among partners. The networks confirm companies statement of no longer competition but its supply chain. The supply chain is now seen as a cooperative essential concept in the value chain. Companies that benefits able to better organize, design and handle the association between partners. Agility can be interrupted if there is any stress from any part of the network. Because of that, there is a demand for a strong relationship to perform agility.

2.2.12 Leagile

Leagile supply chain approach is an alternative that pursues the balance of contradiction between the agile supply chain and lean. Supporters of the two earlier alternatives suggested that lean can be accepted in several parts of the supply chain and agility can also be functional to other parts too. This is generally known as the hybrid strategy. The most significant factor here, is that the features of demand are identified. One of the theories include leagile is the "postponement strategy", which has been a pioneer in the IT industry (Purvis, Gosling & Naim 2014, 4-6).

2.2.13 Pricing strategies

Competition among sellers may be very strong and making a winning strategy can be hard mission. Pricing is a marketing aspect, which generates income. Others, such as place, product, and promotion are economically driven elements (Purvis & al 2014, 13).

The pricing philosophy is quite straight. When the value of the item is huge, it produces less sales, and when the price is little, it decreases revenue. Discovering a suitable price for a product is crucial to business accomplishment. The perception of break-even could be the first thing to consider when looking for the price range of a product. Break-even is an economic tool that displays the ratio among sales and costs, which is mandatory to recover the money in the business. Businesses can generally utilize it as an understanding of pricing of business. It is sometime evaluated as a $\text{Fixed Cost} / (\text{Selling Price/Unit} - \text{Variable Costs})$. A perfect price makes a company earnings and costs stable. Using this method is easy if two factors are known, functioning costs / expenses (insurance, logistics costs, water, rent, salaries, office supplies, advertising, telephonies. etc.) as well as the worth of merchandise/product.

The total of these two costs put together the whole cost of the item. Selling price should be higher than the whole cost for a business to be maintainable. Business policies tend to come from a marketing point of view, which is mainly cost driven. These marketing procedures or calculated positions are (cost leadership, product differentiation and market segmentation).

Cost Leadership is advertising strategy that allows companies to trade regular items at lowest prices against rival. Large retailers such as Walmart used this tactic in its operations for years and it have worked out well for them. Companies that want to focus on lowering prices must diminish the cost of goods sold, to invest in technology, use lean methods and have no gaps in their value chain. This involves simplifying procedures, building connections, reducing costs, accomplishing efficacy and effectiveness.

Product Differentiation is the opposite of management costs. The product can be customized, and be characteristic mainly, unlike comparable products in the market. The uniqueness of economic difference can be viewed in its price. In such case, products have a high value. The benefit of this strategy is that it offers manufacturers greater power of commodity pricing without customers complaining and objection. One of the best-known causes for product diversity is to avoid the storm in price competition.

Market Segmentation enables companies to determine most potential customers existing in the market and position the business for this segment. It is also known as the “focus strategy” as it focuses only on the market share. It involves demographic, geographic, behavioral and psychological segmentation. Market segmentation needs are accessibility, measurement and long lasting (Monte, Riahi & Robalino 2013 16.)

There are many aspects that influence pricing decision. In term of trade, a good way is to start with product necessity. If the need for goods is high, there is always the possibility to gain high profit in the absence of equal competitors. But in the market of strong competition, even if the demand is high, increase in price can be harmful, as customers would not hesitate to go to another shop. This is a clear illustration of supply and demand laws. Price elasticity is also an essential reason, since some products are higher prices sensitive while others are not.

Advertisements in the cyclic periods often come with huge price cuts, mainly to sponsor and expand the sales in the market. One more purpose is the sale old products before they expire.

Store location is part of companies’ policy of pricing. Prices can vary depending on locations. Popularity and regulation of the store can specifically be observed by companies’ tactical position. Prices are also linked to public perception. A company is recognized for its upright quality and at the top end of the company would like to ensure it maintainability of its prices.

Several government laws deliver a standard playing field for competition in the systems of pricing. These administrations are required to provide different but equal chance for success in business. These can vary from pricing, misleading of fixed price and acumen in price. The level of customer service and facility is directly proportional to the cost of moving business. This is the problem of controlling department under the high maintenance costs and the lowest price simultaneously. Accomplishing this equilibrium is essential to ensure the sustainability of the company.

2.2.14 Pricing methods

Pricing methods can support and maintain a competitive advantage in different market positions. Cost Based Pricing comes after the cost of values and goods and the fixed costs are recognized, the profit percentage combine to the product and assists as the selling price. This technique is plain given that the costs are evaluated properly. The disadvantage

is that it does not allow for the product demand as well as competitors price. Furthermore, on the basis of demand prices established based on expected demand. It generally considers the reasonable price for the predicted target market.

Competition Based Pricing arises legend that some businesses are no more due to high pricing and many companies are shut down because of underestimation. Competition based Pricing is attained through the optimization of product prices. The important thing is to keep the price at the level of the recording of prices shifting of the rivals. Price optimization is complete by recognizing the consumers vision, market identification to recognize product's advantage on another product.

Price skimming is high for innovative products when the retailer accepts a monopoly. The price, that is high, is not maintainable, as rivals want to reduce the cost. Retailer swiftly decreases product's price, to preserve a piece of the market cut. The concept of price penetration is unlike skimming strategy. The new item is marketed at a low price with the intention of gaining market share. As demand increases, the price rises. It is mainly good to keep away competition. Other price modification policies involve bundling discounts, product, dynamic and active pricing.

2.2.15 Specific retail pricing strategies

Fixing the selling price for the retail trade is much more upfront, than production, for example, recognizing costs more closely in retail trade related to logistics processes. Vendors were able to have more chance to change their prices to their higher share in the value chain. Taking the responsibility of companies' own means of transportation generates more pricing choices. Retail pricing policies contain costs and prices, but are not restricted to the rate to the provider.

Mark-up price on cost is basically combining industry standard net revenues to the products cost. In the short-term, increase on retail is determined by separating the Euro mark-up by retail pricing strategy. This is a ratio combined to the cost to achieve the selling cost. An overall appeal is to keep the mark-up sufficiently huge to accommodate circumstances of shrinkage, discount or other unexpected costs to make the business feasible over the long time. It is not possible for sellers to utilize diverse check-ups on various product offerings.

Sometime sellers must follow the producers pricing methods. Manufacturer Suggested Retail Price (MSRP) is frequently implemented by small sellers to avoid price conflicts. It is likely for a few dealers to have lowest promoted price (sellers cannot sell at a price below

these prices). As a rule, it fixes the seller of making decisions on the price that may unfavorably disturb the competitive advantage. Competitive pricing includes the price, which found sellers to build interest for clienteles, reliant on their prices as a suggestion. Having a place can be a good object with this tactic. These positions can be any of the marketing methods described above.

They are variation, focus strategy and cost leadership. Selling prices are set psychologically, they are set at a level that the client sees it reasonable, for instance, they are typically made of decimals, i.e. Item is traded at price of 9.99 euros that are rounded off by the client at 9.00 euros.

2.3 Development of supply chain

Supply chain development is complex, because business has become global. The concept of SCM was presented for the first time by the industry consultant of United States in the starting of 1980. Supply chain strategy analyses the input to determine the critical issues to address a strategy and identify set of plans to develop new and innovative capabilities (Dittmann, 2012, 1.)

Development of physical capacity in the field of global supply chain has begun in the early nineties, and the tendency of worldwide financial integration has been since ages. With the growth of e-commerce, the relationship between buyers and suppliers developed instantly by IT systems. For instance, customers can get to any seller regardless of their location or position and are accessible at any time. It expanded service levels, increased the profits and decreased costs. Supply chain process is a horizontal process which guide the flow of product across the enterprise (Dittmann, 2012, 1.)

Global integration brings new challenges for the relationship management of the supply chain. It also points to a complete inclusive of logistics, which is not only responsible for one-on-one business, but several network and business relationships. There are several scholars who have researched many procedures of the supply chain.

Dittmann (2012, 2) note that supply chain begins with the customers need and understanding some threats generated by domestic and foreign competition. Effective SCM needs a cross-functional incorporation of the company that organizes the actions of the main business procedures. Links of business procedures have a straight impact on the decision-making levels, like the risk management, customer service provider and financial planning and operations.

Dittmann (2012, 3) believes that supply chain estimates the financial goals of the company and generate a set of actions that generate capabilities for its needs, yet optimization of financial flows in business methods satisfy shareholders and advance the efficiency of the supply chain. Cash flows are entangled in every business procedure of the supply chain and financial flows optimization is needed in all phases. This displays the need to manage financial flows in the business processes and the supply chain. This enhances the ability of decision of Chief Financial Officer (CFO) and Chief Executive Officer (CEO) in difficult situations.

Cash inflow as well as outflow of cash in the SC is firmly expressed by the capability of companies' capital. Synchronization level across financial flow administration and the SC can be observed as a signal for measuring the effectiveness of the work as well as the financial liquidity within companies.

3 Information and methodology

In this chapter, the researcher explains the research information collection procedure and research method and design, demarcation and data validity and reliability.

3.1 Information collection procedure, research method and design

This research study has been conducted using a case study qualitative measurement method (Trochim 2006). The study is based on literature-based review which includes substantive findings about Walmart.

The research approach was applied to assess if the world's leading retailing company Walmart has achieved supply chain excellence in term of integration, distribution and operations and yet saves costs.

This method is appropriate for this study because Walmart strategy has been studied by researchers since decades, and the obtained secondary data has allowed testing the objective derived from the investigative questions.

This research is based on secondary data and all the thesis process has taken over six months. The secondary data, were obtained from 37 reliable books, journals and articles; some were hard copies and some were published online. Primary data were not collected because the case company is not present in Finland.

The researcher has reviewed the theoretical framework and studied it carefully in order to research the sources that describe Walmart's supply chain to investigate and discuss whether Walmart possesses supply chain excellence in term of integration, distribution and operations and yet saves costs.

The implementation of seeking that objective was first by illustrating how did Walmart managed, utilized and integrated inter-organizational partnership and included corporate operations performance through it then later the researcher proceeded deeper to investigate how Walmart utilized from the integration of enterprise resource planning application and logistics system into packaging to manage inventory and save costs then illustrated the role of logistics in improving Walmart's internal performance and interactions between business process of each element of the chain and save costs.

At the end, the researcher has proceeded to the conclusion and made a summary of the results, that has lead Walmart to possess an efficient supply chain in term of integration, distribution and operations, that has made the company be able to lower costs and lead to deliver a quality product at the right time to the end customer. By viewing (Figure 1.) the reader can clearly understand the design of this research.

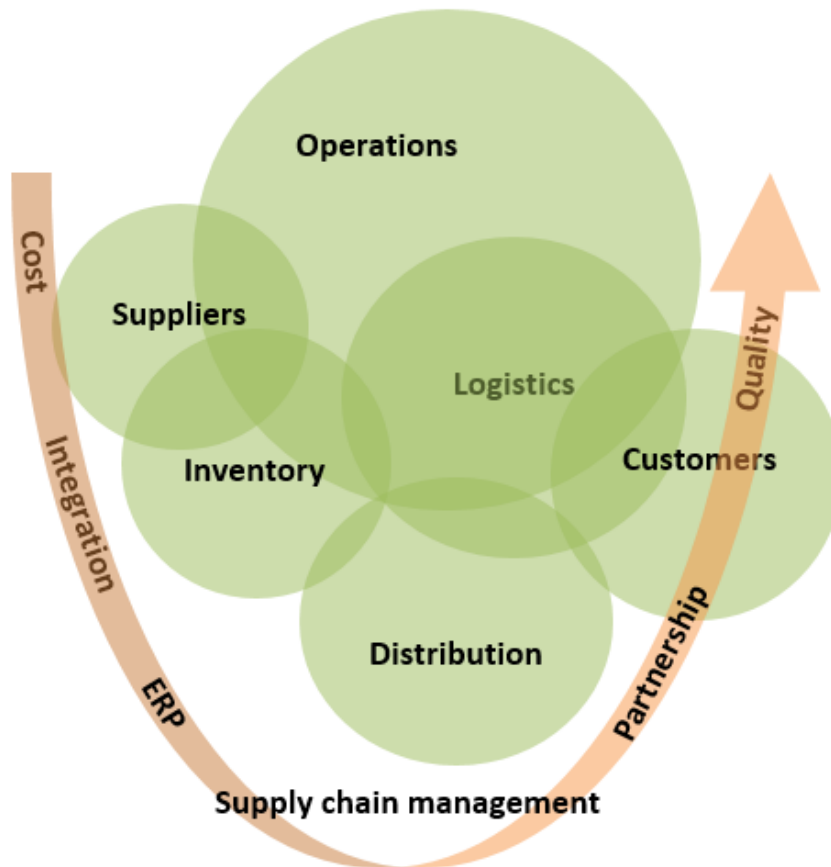


Figure 1. Research design

3.2 Demarcation

This research purpose is to describe Walmart's supply chain to investigate and discuss whether Walmart possesses supply chain excellence in term of integration, distribution and operations and yet saves costs. The effort which was made on data collection was significant and the researcher limited the focus on integration, distribution and operations but excluded the method of procurement from the supply chain.

The researcher limited the research theme to be within the investigative questions which are:

IQ1: How did Walmart managed, utilized and integrated inter-organizational partnership and included corporate operations performance through it besides saving costs?

IQ2: How did Walmart utilized from the integration of enterprise resource planning application and logistics system into packaging to manage inventory and save costs?

IQ3: What is the role of logistics in improving Walmart's internal performance and interactions between business process of each element of the chain and save costs?

And the thesis main research question:

How did Walmart achieve supply chain excellence in term of integration, distribution and operations and yet saves costs?

By reading the investigative questions, the research questions and looking at (Figure 1.) The reader can clearly understand what this thesis is discussing; the researcher first started to identify the field of study, then reviewed books, journals, articles and reports that are discussing about Walmart supply chain, the interlinked activities and strategy among supplier, Walmart itself and its customers.

Even though the activities of the supply chain are complex and overlapping, the researcher kept focusing on the investigative questions and the main research question theme. To give the main finding of this thesis which is that Walmart's has an efficient supply chain in term of, integration, distribution and operations and this made the company able to lower costs and lead to deliver a quality product at the right time to the end customer.

3.3 Data validity and reliability

The data validity includes complete experimental concept and establishes the obtained outcomes to meet all requirements of the scientific research method. The internal validity determines the experimental design including the steps of scientific research method and its structure. This concept is used in order to evaluate qualitative research when it comes to make a research to derive information. And a good qualitative study can reveal an unclear or confusing situation (Eisner 1991, 58.)

All the obtained information of the theoretical part is obtained from books and articles and the information of the discussion are result of proved studies and books, and all conclusions were derived carefully within the designated framework to answer the investigative questions and prove the statement of this thesis.

The idea behind reliability is that the significant outcomes should be more inherently repeatable and a one-off finding. It is an important issue to examine the reliability and creditability of this research to ensure its reliability and creditability (Sagor 2000, 142.)

Researcher has carried out the same logic to collect the researched data and to conclude the results. The researcher has also backed up the research contents relevant discussions, articles, books and researches that were discussing supply chain concepts, Walmart's supply chain management path of processing activities, approaches and retail business activities.

4 Discussion

It is believed that trust in a business relationship resides in the condition that a partner does not value other partner's vulnerabilities (Ross 2013, 50). Management generates the cross-functional team which consists of a "machine cell" employees to implement the outsourcing analysis. Such as, administrative and factory costs include process engineering support, indirect labor, corporate office administration, depreciation, product design and maintenance charges (Monczka & al 2015, 818.)

The indicator measures investor confidence in ability to honor its external commitments. This principle applies to the raising of resources by countries. When a government wants to raise funds in the market through the issuance of debt, it convinces investors with higher interest rates, to offset the risk of default associated with that country.

According to Mangan and his colleagues (2016, 325) it is common to find in the literature the concept of trust associated with co-operation. For Ross (2013, 210) the investors' confidence implies the tendency to cooperate. Mangan and his colleagues (2016, 202) suggests that cooperation is apparently induced by trust. However, other institutional and social mechanisms, joined with trust, are essential to make inter-organizational relationships. Walmart is trying to increase formal relations (D&B hoovers 2016, 8).

Walmart checks quality first, then once approved, they assign prices for the customers. Besides assuring that distribution process is aligned with the above mentioned competitive priorities. In this case, the search for assuring quality and price reduction is basically in the quest for productivity towards building relationship (Monczka & al 2015, 776.)

Walmart innovativeness extended to use set of elements that established direct contact and efficient information flow in term of planning and forecasting with its partners such as synchronizing demand projection by using collaborative activities since the beginning of technology evolution. Walmart shared central database and store level point of sale with partners to achieve a solid trust (Lu 2014). This has eliminated barriers of communication, disturbances and losses. At the same time, these resources enabled the company to provide a set of information that characterizes the consumption habit, allowing the managers in the company to identify problems, track occurrences, track merchandise repositioning, and provide better product management.

According to Mangan and his colleagues (2016, 160) integrated supply chain management has a broad scope, including sub-suppliers, suppliers, internal processing operations, stocking and distribution, wholesalers, retailers and end consumers. And this explains how Walmart's supply chain is integrated with partners in a way that when a retailer issues an order of a product, a real-time information flow is generated and transferred through all partners' order processing operations, which leads to a high provision of order fulfillment.

According to Ross (2013, 150) the objective of SCM meets the needs of end customers by providing appropriate products and services when they are needed, at a competitive price. Doing so requires that the supplies achieve the appropriate levels of the five operations performance objectives which are quality, speed, reliability, flexibility and cost.

According to Ross (2013, 205) the quality of a product or service which arrives to the customer, consists of the performance of the quality of each operation in the supply chain. The implication of this is that mistakes at each stage of the chain can become a multiplier effect on the end customer's service. For example, if each of the seven steps in a supply chain has a 1% error rate, only 93% of the products or services will be of good quality when reaching the final customer. So, only if each step takes responsibility for its own performance and that of its suppliers, the supply chain can achieve high quality when it reaches to customer (Monczka & al 2015, 784).

In the view of Mangan and his colleagues (2016, 201) an accounting firm may be able to respond quickly on demand, having a group of accountants in reserve, waiting for the demand that may (or may not) occur. In accordance of Fernie and Sparks (2009, 125) there is an alternative perspective to speed which is time spent on goods and services in the chain. For example, products that move quickly through a supply chain, from raw material suppliers and retailers, will lose small amount of inventory, because with material, it cannot give significant periods in the stock. This, in turn, reduces working capital and other supply chain costs, it will also reduce the overall cost of delivery to the end customer. And to achieve a balance between optimization of demand and transport process, speed, responsiveness and demand fulfillment of the customers. Walmart has adapted the principals of lean and agile design in its supply chain because it uses the optimization of the process of its both of inventory and transportation to reduce cost in term of lean principals and at the same time it is using cross-docking to be responsive to market demand fulfillment in term of agile principals (Sehgal 2010.)

According to Ing-Long Wu and his colleagues (2014, 130) SCM values consumers and all those who have direct interests with the company. Any product that is does not reach ideal time of its consumption loses its value. Consumers now days have become more demanding by looking for more values, better services and greater convenience.

Must Arrive by Date (MABD) program started in 2010 and included criteria to hold suppliers and streamline Walmart's supply chain to make sure that products availability on shelf at the time that customer needs them (Brott 2016.)

In addition to the costs incurred within each operation to transform the inputs, the supply chain incurs additional costs that come from each operation in a chain that does business with the other. The costs of these transactions can include issues like the costs of finding suitable suppliers, prepare contractual agreements, monitor supply performance, products between operations, maintain stocks, and so on.

Many of the recent developments in supply chain management, such as partnerships or reduction of number of suppliers, are attempts to minimize costs transaction (Monczka & al 2015, 780.) Therefore, it is observed with these objectives that the best way to improve the performance of the supply chain management, while simultaneously controlling short-term costs, is not only limited to cutting budgets and expenses, but in investing in central level improvements, as well as in the knowledge of designing a supply chain management (Christopher 2016, 308.)

Walmart deals with all activities of movement and storage that facilitate the flow of products from the point of purchasing raw material to the point of final consumption, including management of the path that is considered within the company, as well as managing the flow of information to provide efficient levels of service to consumers at reasonable cost. Managing logistics and information flow throughout the chain enables managers to assess, strengths, and weaknesses in their supply chain which helps them to make decisions that result in cost savings, quality enhancement, and more. These elements increase product competitiveness by creating added value and differential to the product (Fernie & Sparks, 2009, 245.)

SCM must have capacity to adapt the changes of the market in an agile and efficient way (Christopher 2016, 324.) And business management software has allowed the total integration of processes eliminating organizational barriers.

Walmart believes that achieving excellence is by having a logistics tool that would align the entire complex of the system through information technology, to control sales and inventories, allowing a continuous exchange of information between stores and suppliers and to guide the other components of the system (Walmart Stores 2016, 7).

Enterprise Resource Planning (ERP) applications support everything from material purchasing functions to delivering goods and services to customers, enabling billing and receiving functions to be controlled. All these advances are aimed at reducing the level of complexity, increasing the speed of the process, gaining flexibility and reducing costs. Walmart technology and information have become essential tool in decision making. (Christopher 2016, 312.)

In Walmart, supply chain solutions provide the entire chain with the possibility of detailed information on the buying and selling process, and are therefore being targeted by several retailers. Based on these, there is a retailer's control of purchase scheduling, order generation information, inventory position, receipt dates, location and mode of receipt, payment date control, among other data that facilitate the right product, the right day, and the right place (Christopher 2016, 325.)

Companies need to have a solid inventory management practice so it can get the most out of the supplies. accurate stock management allows the company to properly use the supplies and maintain a monitoring of the use of inventories for the final production of the goods.

Cross-docking practice is pivotal in Walmart strategy; it is used to replenish inventory in an efficient way. It is a way to eliminate extra storage by direct transfer from inbound or outbound trailers by unloading products from an incoming trailer and directly loading them into outbound trailers without the need of storage. Products are cross-docked at Walmart distribution centers and repackaged within 24 hours or less. then delivered directly to stores. This enhanced efficiency and reduced transportation time. This strategy has reduced prices significantly (Lu 2014).

On the other hand, the integration of the logistics chain into the packaging area has the purpose of establishing a process of internal and external relationships with the company, interlinked so that it is possible to analyze, develop, reformulate and, consequently, to design packaging more appropriate to the production process (Christopher 2016, 320.) This demonstrates the marketing function, the organizational objectives and the needs and expectations of the consumers of Walmart. In this way, the integration of the supply chain will help this process through the flow of products that flow from the supplying sources and are

directed to the consumers. While information and resources flow in the opposite direction, they exit consumers and go to supplying sources, with a flow and a backflow of products and information (Christopher 2016, 321.)

Concerning the objective of establishing a supply chain management and an ECR for the supply chain in packaging, the packaging sector of Walmart has a relatively complex network of inter-relationships between organizational departments, service providers, suppliers and manufacturers.

In accordance of Ganesan and his colleagues (2009, 91) the integration of the supply chain will help the process through the flow of products that flow from the supplying sources and are directed to the consumers while information and resources flow in the opposite direction. The major difficulties are in the chain of production of fresh fruit and vegetables, in which chain's own characteristics have delayed the modernization of the distribution system and packaging. The high perishability of the product, the great specialization and production in small properties, strongly centralized in large cities. The great concentration of purchasing power in the hands of large retail chains and the disruption of the sector, hinders the adoption and acceptance of changes (Christopher 2016, 326.)

In the view of Ganesan and his colleagues (2009, 91) it is possible to observe that the SCM integrates the industrial and commercial processes of Walmart. Starting from the final consumer and going to the initial suppliers, generating products, services and information add value to the customer. Supply chain management acquires, strategic value for the company involved, with the aim of adding value to the customer and eliminating everything that does not have value for the customer including extra costs and loss of time.

According to Sehgal (2014, 220) Walmart network used logistics as a central part of its competitive strategy to become the world's leading retail network. Therefore, it plays an important role, especially in today's globalized world, because it is a fundamental factor to achieve success in an aggressive competition, where all processes and decisions must be analyzed and integrated completely (Ellinger, Chen, Tian & Armstrong 2015, 480).

In term of logistics, Walmart now has an accurate tool to measure the effects of good planning on the distribution of its merchandise, in terms of external aspects, consumers and suppliers, as well as its internal aspect, flow of materials and physical storage of raw materials and finished products. This allows the company to reduce costs and increase its competitiveness in the global market, where cost-reduction factors are essential for business continuity (Ellram & Cooper 2014, 19.)

The integration between customer and supplier, through the box bar code that has passed through the system, makes the supplier know that product has been sold and must be reset, thus restarting the logistics process. In accordance of Gilling and Ulmer (2016, 65) with heavy investment in information technology, majority of companies tracks the sales of each product individually, which guarantees, among other benefits, the immediate replenishment of inventories. Through these resources and supply chain management, they have the right product at the right time and at the lowest price to serve the global market (Fredendall & Hill 2016, 148).

To ensure its compliance with the policy of providing daily low-priced products to customers, reduce promotional campaigns and improve stability and predictability of demand, Walmart's logistics plays a key role in achieving good results. It must be always well structured, perform services efficiently and more importantly be considered as a central component of the marketing strategy through service standards that allow it to meet its demand. Therefore, allowing efficient delivery in the right time through the distribution-centers for a perfect cycle of the supply chain (Sehgal 2014, 225.)

Since focusing on logistics issues is the method that allows Walmart to keep its prices low and its customers more satisfied. With inventory scanning and an integrated computerized system, customers would hardly find delay in checking prices, making the customer almost always return to their stores (Christopher 2016, 323). The next comparison of what has been budgeted with what occurred shows potential errors in the forecasts and provides valuable subsidies for the improvement of new forecasts of cash flows.

Walmart continuously focuses more on supply chain effectiveness and less on advertising, reflecting lower costs and lower prices on average than competitors. Before, the logistics were distributed horizontally, obeying a functional order and execution by specialized departments. It is also identified that logistics is integrated and the process does not start and ends within the limits of the company; there is communication and perfect harmony between the distribution channels so that the logistics process flows (D&B hoovers 2016, 5.)

Since Walmart uses the theory that logistics is a system because it has planning to serve its customers and uses information technology to integrate operations and has performance indicators that ensure the forecasts of demand and profitability of each segment. Walmart emerged an irresistible and inevitable retailing force today. Consistent growth of Walmart has concretely showed that company possesses an efficient SCM (Christopher 2016, 302.)

Walmart network comes through long-term relationships with its main suppliers through long-term high-volume contacts and the intensive exchange of demand information, therefore ensuring economies of scale and greater predictability for suppliers. Despite being an evolving concept that is restricted to more advanced companies, at Walmart, SCM has been adopted successfully, achieving excellent results in terms of growth and profitability.

An essential objective of SCM is to obtain the best customer service, with the lowest possible total cost. To achieve these objectives, it is not enough to improve the internal performance of each process of the companies that are part of the chain. Because it is also necessary to manage the interactions between the business processes of each element of the chain. It is important that the facilities provided by information technologies are used intensively, to make decisions with the lowest risk margin, to operate with the highest levels of efficiency, and to communicate with customers and suppliers in the best possible way. Through a process of cooperation and exchange of information between the distribution channels, the company allows greater coordination and synchronism of activities. Through integration, supplier, manufacturer and distributor to make products produced and distributed in the right quantity, to the right location at the right time to lower costs for the producer and distributor reaching the level of service desired by the customer (Sehgal 2014, 226.)

Walmart managed to reduce costs by investing in trucks and modern distribution centers and a better level of customer service by targeting the services offered. By adopting the SCM concept, the company expand its vision and can become much more responsive and flexible than competitors, which would be highly desirable. A more profitable and less costly company will undoubtedly be in a position of superiority over its competitors (Bode & Wagner 2015, 220.)

According to Scilly (2017) Walmart stores strategy of cost-leadership has been successfully implemented in an efficient way throughout the sales planning and forecasting, synchronized supply and demand, execution process improvement, supplier partnership and customer experience. Walmart stores strategy of everyday low price (EDLP) has attracted customers on consistent basis.

As a result of this research the overall methods of Walmart's supply chain management are a little refined from the standard main components of the usual supply chain methods in term of operations, distribution and integration (Robinson 2015.) Walmart's operational part of the supply chain operates on demand planning, forecasting and management of the inventory. It starts by forecasting the demand of the customer by analyzing purchasing records and the external drives like change in trends, competition, promotions or sales.

Accurate forecasts that are derived by demand planning is an essential step toward inventory management efficiency. And to assure availability of products forecasts are compared to the level of inventory. The distribution function of Walmart's supply chain is moving products from manufacturing plants or warehouses to stores to deliver it to customers. The accurate integration of Walmart's supply chain connects work and information flow among all links in order to maximize efficiencies

Walmart's SCM methods have made the company achieve lower costs which lead to delivering a quality product at the right time at the lowest cost possible to the end customer.

5 Conclusion

The efforts made by the American chain Walmart for supporting all actions with the purpose of strengthening participants' partnership and developing an efficient supply chain is recognized. The company enhanced efficiency and synchronization of the movement of materials throughout the productive chain in the market, with a continues focus on lowering costs. And to manage the assembly of process by management teams and build a solid long-term relation with suppliers and customers, Walmart Cross functional teams served to break down organizational barriers and co-operated with all external and internal parties involved in the process to deliver the final product to the consumers.

Walmart has used set of elements such as relationships, consistent communication and responsive programs that established direct contact and efficient information flow in term of planning and forecasting with its partners such as synchronizing demand projection by using collaborative activities with its partners. Walmart shared central database and store level point of sale with partners to achieve a solid trust

Walmart has understood that extending its performance beyond its organizational boundaries, to external partners in the supply chain, will lead to better business management and cost reduction in the long-term.

To be effectively responsive, Walmart has adapted the principals of lean and agile design in its supply chain, it has used the optimization of the process of its both of inventory and transportation to reduce costs. At the same time Walmart uses cross-docking to be responsive to market demand fulfillment in term of agile principals. Walmart also invested in central level improvements, as well as in the knowledge of designing a supply chain management.

Since Walmart information technology is playing an important role in decision making of its SC process flow and strategy. The ERP application of Walmart supports material purchasing functions, delivering goods, services to customers, enabling billing and receiving functions to be controlled.

Walmart's efficient consumer response (ECR) that deals with enhancing the complex network of inter-relationships between organizational departments, service providers, suppliers and manufacturers besides it's cross-docking method that allows direct transfer from inbound or outbound trailers, Walmart has maintained a solid inventory control and eliminated extra storage.

Walmart developed its strategy so it extended to the integration of the logistics chain into the packaging area to establish a process of internal and external relationships with the company, interlinked so that it is possible to analyze, develop, reformulate and, consequently, to design more appropriate packaging according demands of the production process. This integration of the supply chain has helped to increase efficiency in flow and back-flow of products and information.

Walmart has utilized quantitative key performance indicators so that managers would be able to assess strategy weaknesses and strength and to focus more on customers, development, cooperability and human factor management. All of that has helped Walmart to be able to respond quickly to customer demands and helped building an efficient consumer response.

In term of lean manufacturing and agile responsiveness, Walmart succeeded to add value to the customer and eliminate everything that does not have value including extra costs and loss of time.

To ensure compliance with the policy of providing daily low-priced products to customers Walmart focused on predictability of demand.

Tracking technology has assured immediate replenishment of inventories to fulfill demands. These tools created an efficient integration between suppliers and customers.

Walmart network used logistics as a central part of its competitive strategy to become the world's leading retail network. Logistics activities of Walmart did not include internal activities within the company but included perfect harmony between the distribution channels so that the logistics process flows with partners.

One of Walmart's objectives is to obtain the best customer service, with the lowest possible total cost. This had lead Walmart to focus on improving the internal performance of each process of the companies that are part of the chain. Because it realized the fact that it is necessary to manage the interactions between the business processes of each element of the chain to achieve supply chain excellence.

The study illustrated that strategy of Walmart consists of cost-leadership methodology, which has been implemented in an efficient way throughout the sales planning and fore-

casting, synchronized supply and demand, execution process improvement, supplier partnership and customer experience. Walmart stores strategy of everyday low price (EDLP) has attracted customers on consistent basis.

The study has also illustrated the interactions between the mentioned practices and strategy to align the entire complex of the system through efficient information technology, partnership and logistics. This has allowed continuous exchange of information between suppliers, stores and customers, and guided the management of the other components of the system to achieve excellence.

As a result, the overall methods of Walmart's supply chain management are a little refined from the standard main components of the usual supply chain methods in term of operations, distribution and integration.

Walmart's operational part of the supply chain operates on demand planning, forecasting and management of the inventory. It starts by forecasting the demand of the customer by analyzing purchasing recorders and the external drives like change in trends, competition, promotions or sales.

For Walmart, accurate forecasts that are derived by demand planning are an essential step toward inventory management efficiency. And to assure availability of products, forecasts are compared to the level of inventory. The distribution function of Walmart's supply chain is moving products from manufacturing plants or warehouses then to stores in order to deliver it to the end customers. The accurate integration of Walmart's supply chain connects work and information flow among all links in order to maximize efficiencies.

Walmart's has an efficient supply chain in term of, integration, distribution and operations and this made the company able to lower costs and lead to deliver a quality product at the right time to the end customer.

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Appendices

Appendix 1. Thesis process Gant-chart

