

THE STUDY OF LEAN CONCEPT USING VSM METHOD TO IMPROVE CUSTOMER SATISFACTION IN MODERN RETAILER

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Abstract. The growth of modern retail business is very rapid in Indonesia because Indonesian people absorb new habits adopted from foreign cultures so that people's habits in shopping needs begin to change, retail companies are required to be responsive to current shopping patterns that the demands are fast and precise, one of them is by applying lean concept to the transaction process. The location of the study was conducted at Transmart Cempaka Putih, Central Jakarta. The business managed by Transmart Cempaka Putih still had problems caused by waste, one of them is the process of transaction of goods that many consumers still complained of the many queues. These problems can be solved by eliminating waste that occurs by applying the concept of Lean in the company. This research used quantitative methods by measuring customer satisfaction. In this study, the authors aim to apply the lean method in the company in order to shorten the time in the transaction process of goods in achieving customer satisfaction. Each process was mapped using Value Stream Mapping and customer satisfaction was analyzed.

Keywords : Lean, Customer Satisfaction, Retail, Waste, Value Stream Mapping

1. Introduction

Retail is a retail sale that involves the sale of goods or services intended for personal use, not for resale (Kotler, 2000: 502). The retail business is one of the most important sectors in national economic growth, because there are many economic activities in it. Retail business is one of many business sectors that has many players, so competition in the retail business is very tight. Nowadays, retail activities have become necessity, where customers already have changed patterns and will always change along with the development of trends, therefore retail activities have to be dynamic.

Gaspersz (2007) revealed that lean is a continuous improvement effort that has the aim to eliminate waste, provide value to customers, and increase added value. Based on the theory above, the writer can make a conclusion that lean logistics is an effort made in order to reduce activities or processes that do not produce added value and is carried out continuously at the right time, place, quality and quantity in meeting customer needs.

Transmart is a retail company in Indonesia which is the owner of the Carrefour supermarket chain and Carrefour Express and a subsidiary of PT Trans Retail. Carrefour has been operating in Indonesia since 1998, then all of its shares were acquired by CT Corp. on November 19, 2012. Then it changed its name to PT. Trans Retail Indonesia from before PT. Carrefour Indonesia, so the Carrefour brand changed to Transmart Carrefour. In retail business, problems were often still found, including retail businesses run by Transmart Cempaka Putih. The business movement was undertaken by Transmart Cempaka Putih still had problems, namely in the transaction process of goods which still causes a lot of waste. Besides harming the company, with the occurrence of problems in the transaction process of goods such as the accumulation of customers in the process of payment of goods makes customer satisfaction less than the maximum. In this study, the authors aim to apply the lean method in the company to shorten the time in the transaction process of goods in achieving customer satisfaction.

2. Hypothesis

H1 : There was a waste in the transaction process of goods in Transmart Cempaka Putih

H2 : Lean concept with Value Stream Mapping method could be minimize the accuracy of waste in the transaction process of goods.

3. Method

The method used in this study was a quantitative method with value stream mapping as a tool for mapping the problems that occur in the transaction process. This study used a questionnaire with a 5-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree) used in assessing the questionnaire items. Furthermore, researchers distributed 267 questionnaires to visitors who made transactions in Transmart Cempaka Putih. Then, the data was analyzed and processed using the SPSS application.

4. Discussion and Result

4.1 Data Collection

Sugiono (2011), revealed that the questionnaire is a technique in collecting data that is done by giving statements and questions to respondents to answer. This study was using the Solvin formula because the population was large and not yet known with the formula

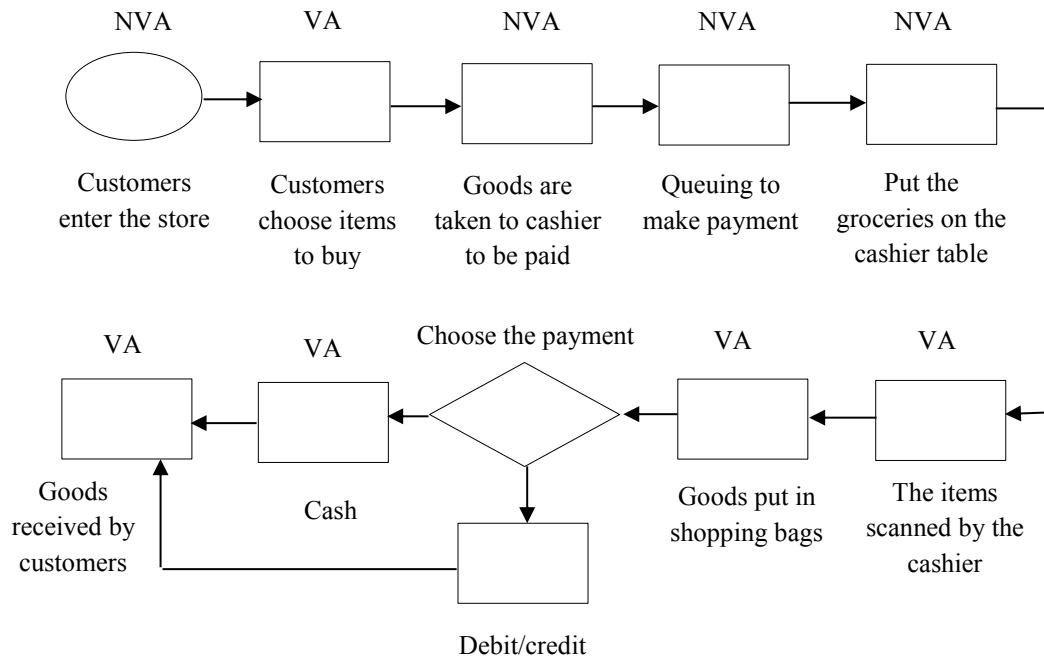
$$n = \frac{N}{1+N(e)^2}$$

After the data was calculated using the Solvin formula with a population of 800 people and a tolerance of 0.05, a sample of 267 people / respondents was obtained.

In accurate data collection, the data was taken directly when the transaction process was being carried out, the waiting time of consumers was measured / started when the customer queued until the goods were placed in plastic or packaging.

4.2 Value Stream Mapping

Value stream mapping was the tool used to determine the activities that exist in the transaction process, which affected customer satisfaction at PT Trans Retail Indonesia (Transmart) Cempaka Putih. Value stream mapping in the transaction process of Transmart Cempaka Putih can be seen in Figure 1. It was useful to know the sequence of processes that occur in the transaction process and to see which activities that did not produce added value (waste).



Information :

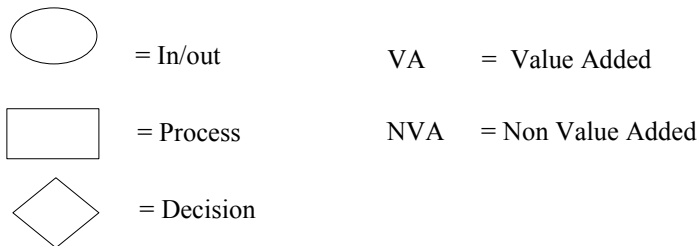


Figure I. Value Stream Mapping Transmart Cempaka Putih.

In this study the indicators used include:

1. Cycle time in a book written by Stevenson and Chuong (2014), explained that "cycle time is the maximum time allowed at each workstation to complete its set of tasks on a unit."
2. According to De Feo (2014) Takt time comes from German which means meter in music, which measures the speed, beat of music. This is the time that reflects the level at which the customer purchases a unit of product.
3. Prices and discounts. According to Dodds (1995), the high prices felt by customers as an economic sacrifice. Prices can influence the customer's decision to make a purchase.
4. Consumer Attention. According to Ruben Stein and Shaver (1980) shopping is a social activity to overcome the loneliness for some people to overcome various kinds of chaos. This customer group considers shopping as a social activity, so retailers must pay more attention and deal with customers as if they are a chart of the company's family.
5. Additional Services. According to Gonzales-Benito (2005), additional services can make customers happy by providing additional services such as additional operating time, location, and availability of free samples that can increase customer attractiveness.
6. Variation. According to Levy and Weitz (1995), the wide variety of products offered can be an important strategy for retail that serves to attract a group of customers who have

different tastes and preferences and encourage to increase the purchase volume and frequency.

7. Waiting according to Wilson (2010), namely waiting for officers or operators for various reasons such as waiting for information, materials and so forth
8. Motion. Sritomo Wignjosoebroto (2008: 106) said that motion is a movement or activity carried out by workers to complete a job with the aim of knowing which parts or movements are needed and not needed so that they can be used as a reference in improving the way of working by removing movements that are not needed to be more effective and efficient.

Based on the data, some indicators related to customer satisfaction in Trans Retail Indonesia (Transmart) were explained. Namely waiting, motion, takt time, cycle time, variations, prices and discounts, customer attention, additional service.

Table I
Questionnaire, 2020

No	Indicator	Score
1	The queue process runs orderly	1031
2	Change is always available	1068
3	Virtual payments facilitate the transaction process	1094
4	There are various kinds of virtual payments	1054
5	Transmart Cempaka Putih employees serve the transaction process skillfully	1030
6	The queue at weekend smoothly	798
7	The product scanning process is fast	1021
8	The clerk puts groceries into plastic quickly	993
9	The queue is always smooth	874
10	The transaction process takes no more than 5 minutes	856
11	Products offered are complete	1024
12	Products are available with a variety of brands	1052
13	The amount of inventory on the shelf is always fully available	998
14	The price of the product is affordable	870
15	Many discounts are given	902
16	“Transmart Cempaka Putih” employees are always ready to help you	1028
17	“Transmart Cempaka Putih” employees are welcoming and polite when serving you	1050
18	Cashier available can operate entirely	890
19	The number of cashiers available at Transmart Cempaka Putih is enough	965
20	Provide after sales service such as receiving returns for defective products	920

Source : *Questionnaire*, 2020.

The questionnaires that have been distributed show the results that the indicator shows the lack of customer satisfaction caused by the number of cash machines that cannot operate entirely, namely by 890 points according to consumer ratings, which then affects activities or other indicators such as cycle time and takt time which have an average speed 6: 07: 37 s / customer and 4: 55: 05 s / process.

Table II
Average of Transaction Process at Transmart Cempaka Putih

	N	Total Time	Average/s
Cycle Time	90	3,277,800	6:07:37
Takt Time	90	2,459,700	4:55:05

Source: *Average of Transaction Process at Transmart Cempaka Putih, 2020.*

Factors that influence customer satisfaction :

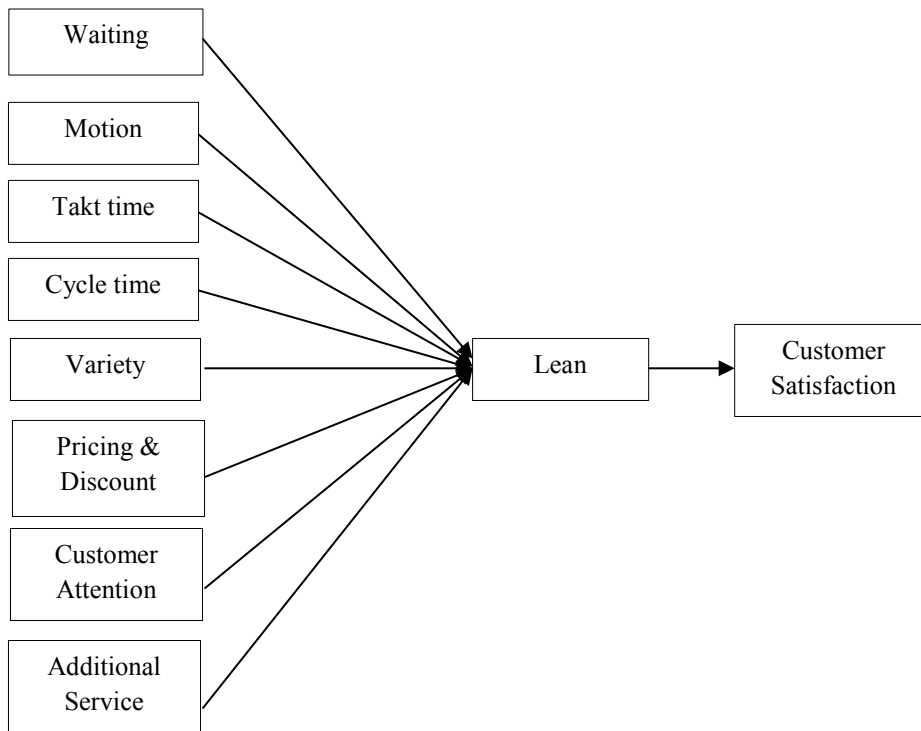


Figure II. *Factor that influence customer satisfaction.*

5. Conclusion and Suggestion

5.1 Conclusion

The results of this study reveal that the Lean concept when applied to the transaction process at Transmart Cempaka Putih results in higher customer satisfaction. Supporting factors in the facilities offered aimed at meeting customer needs are the added value in achieving customer satisfaction. The services provided greatly affects the satisfaction and image of Transmart to its customers.

The transaction process is a process that has the most influence in meeting customer satisfaction, where long waiting times in the transaction process are still a problem that is often complained of by consumers. The problem arises because at least the cash register operates mainly on weekends, thus making the waiting time for making transactions longer.

5.2 Suggestion

Based on the research the researchers have some suggestions:

1. Operate more cashier machines especially on weekends.
2. Separate transactions between consumers who buy a lot of products (using trolley) with a few (baskets).
3. Provide self-service to facilitate customers who only buy a few items / who use e-money / e-wallet.

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