

**TWO CASE STUDY OF ISLAMIC FASHION SMALL BUSINESSES: OPERATIONS  
MANAGEMENT TOOLS APPLICATION**

**Budi Harsanto<sup>1</sup>, Mega Iskanti Putri<sup>2</sup>, Bella Nabilla<sup>3</sup>**

<sup>1,2,3</sup> Department of Management and Business, Faculty of Economics and Business, Universitas  
Padjadjaran, Indonesia

E-mail: budi.harsanto@unpad.ac.id

**ABSTRACT**

This article discusses the implementation of operations tools in small business environment. The method used in this study is case study and combined with application of operations management problem solving tools. This study has involved two Islamic fashion company in Indonesia. Company A established in 2011 and the current market reach not only domestic market but also international market such as Malaysia, Singapore and Germany. After examined in previous study using value chain analysis, two main problems related to operations management found in this company comprise location selection and inventory management. Company B established in 2012 with range of market to various places in Indonesia. The main problem faced by this company is supplier selection. For company A, economic order quantity (EOQ) method used for inventory management while factor rating method used for location problem. For company B, analytic hierarchy process (AHP) used for supplier selection.

Keywords: operations management, economic order quantity, factor rating, analytic hierarchy process.

**1. INTRODUCTION**

Clothing is something that is important to the survival of all mankind. The existence of clothing in terms of life, not only as a necessity, but also has become a trend that changes every season especially for women, or children, adolescents and adults. The fashion industry is a rapidly growing industry around the world, especially for women. One of the women's fashion industry that is popular today is the hijab fashion industry especially in a country of Muslims, such as in Indonesia. Based on data from the Global Islamic Economy Report in 2014 - 2015, the number of shopping fashion world Muslim community was USD 265 billion. A total of USD 18.8 billion came from the Muslim fashion shopping in Indonesia, which ranks third among the 15 Muslim countries in the world.

Contribution to such fashion shopping in Indonesian society that is so great closely related with the development of the Muslim fashion industry in Indonesia. Based on data from the Ministry of Industry of Indonesia, of the 750,000 SMEs in Indonesia, 30 percent is Muslim

fashion industry. Meanwhile, one of the cities with the greatest contribution to the industry is the city of Bandung.

With the development of hijab fashion business in Bandung, the number of companies that compete will increase. Therefore, a business strategy is also needed that enables company to be able to survive to realize the vision and mission of the company. The success of a company to achieve its objectives is determined by various factors, both internal factors and external factors. One of the big contribution of internal factors that affects a company's success is the implementation of operation management tools. The shifting of global business environment phenomenon that happening requires companies increase critical to respond.

## **2. LITERATURE REVIEW**

### *Operation Management*

Operation Management is the set of activity that create value in the form of goods and services by transforming inputs into outputs. Activities creating goods and services take place in all organizations (Heizer & Render, 2014). Other definition by Raturi & Evans (2005) said that operations management is concerned with the design, implementation, and maintenance of the operations function in manufacturing and service organizations – the activity that is responsible for acquiring such resources as materials, technology, and skilled employees, and configuring processes to create and distribute goods and service to consumers.

### *Location*

One of the critical decisions in operations management is determining the location. The purpose of determining the location is to maximize the advantages of the location for the company. Locations is such an important matters, for example if an expert asked about 3 keys to the success of retail businesses the answer is the first location, the second location and the third location (Harsanto, 2013). There are many methods to evaluate alternative locations. There are factor rating method, the break-even analysis method, the center gravity model, load range method and transportation models. The method used in this study is a factor rating. The factor rating method is a method that is widely used in the determination of the location. This method combines a variety factors of considerations using a certain weight with simple calculation format. Step-by-step calculation of factor rating method: 1) Determine the deciding factor, 2) Give the weight of these factors, 3) Determine the scale of ratings determinants, 4) Find the value weighted score by summing the results of multiplication point 2 and point 3. Location with the highest weighted score will be selected as the optimal result.

### *Inventory Management*

Inventory management is a series of decisions or policy of the company to ensure the company is able to provide supplies to the quality, quantity and time. One method that can be used is the EOQ (economic order quantity). Basically, the EOQ model aims to find the optimum point of order quantity that is a trade-off between the ordering cost and holding costs. Too small amount of order quantity will only result in big ordering cost which will cause disadvantages to company because of too often make order in a period of time.

### *AHP (Analytical Hierarchy Process)*

AHP is an operations management tools to determine the supplier developed by Thomas Lorie Saaty in early 1970. The AHP is used to find the order of priority of the various alternatives in solving a problem. AHP provides decision makers the value of the alternative criteria available for later arranged in tiers preferences. The results of AHP is the form of priority ranking of the decision alternatives that are available. According to Saaty (1993: 30), the hierarchy is defined as a representation of a complex problem in a structure of multi-level where the first level is a goal, followed by level factors, criteria, sub-criteria, and so on down to the last level of the alternatives. By implementing the AHP will assist the company to determine the suppliers based on criteria appropriately and accurately.

## **3. METHOD**

According to I Made Wirartha (2006: 68) research method is a branch of science that discuss or question the ways of carrying out research (that includes searching, recording, formulate, analyze to draw up a report) is based on facts or phenomena scientifically. Qualitative method with descriptive approach used in this study, as expressed by Sugiyono (2012: 3) is a qualitative method to obtain in-depth data, a data implies. Qualitative methods can significantly affect the substance of the study. It means that the present method of direct qualitative nature of the relationship between researchers and informants, object and subject of research. One of the method of qualitative descriptive study is the case study method. This study focuses intensively on a two object that is studied as a case. According to Nawawi (2003) says that the case study data can be obtained from all parties concerned, in other words, this case study data collected from various sources.

The main objective of qualitative research is to understand the phenomenon or a social phenomenon with more focused on the complete picture of the phenomenon under study rather than develop them into variables are interrelated. The outlook is acquired a deep understanding of the phenomenon to further produced a theory. Because the goal is different from quantitative research, the data acquisition procedures also different between qualitative and quantitative research. The operations management tools used are factor rating method for location selection, economic order quantity for inventory management and analytic hierarchy process for supplier selection. Factor rating method is general approach that is

useful to evaluate and compare the various alternative locations by using the concept of weights and scores.

#### **4. COMPANY A**

Company A is a hijab fashion company established since 2011. The company is engaged in the business of fashion hijab, which is a pioneer in 2011. The goods are sold starting from clothes, subordinates, such as skirts and trousers, outerwear, dress, veil, until now penetrated clothes for small children. The current market reach not only domestic market but also international market such as Malaysia, Singapore and Germany.

There are two problems found in A company associated with the operations management processes. It is about location selection and inventory management. As an emerging SME, the company's production process is still carried out in the owner's home whom play a multiple role as outlet centers and production sites. Because the location of the company is in a residential area, which is not proper for a manufacturing company because it can interfere with the surroundings environment, leads the company to have a spread vendor (beside fabric). By having a spread vendor, it leads the company to pay a higher cost for the delivery of raw materials or even finished goods.

Moreover, another problem is about the company's inventory management that is not regulated properly. As for raw materials, the employees just put everything that came to the company in one place, without any clarity about the material name, amount of material, color, and for when the material will be used. All the materials are mixed with the fabrics that will be produced for different months, which takes longer to the production process. There is a storage for raw materials, but reached the capacity limit so the other materials left outside. The storage reached its capacity limit because of the excessive purchase made by the owner. Without visible benefits and usefulness, unused materials will only lead to wasting money.

In the other hand, inventory for finished goods is also quite bad, because they pile the finished goods outside the warehouse they already provide, because sometimes the finished goods came in the afternoon, and the person who is responsible of warehouse already go back home, because they need to input the data of the goods before going in to the warehouse, and by that, the other workers just piled up everything outside.

Table 1 Factor Rating Method Results

<b>Alternative Locations</b>	<b>Potential Market</b>	<b>Proximity Suppliers</b>	<b>Proximity Consumers</b>	<b>Rent Place</b>	<b>Infrastructure Facilities</b>	<b>Total</b>
<b>North</b>	1.2	0.4	0.8	0.15	0.45	3
<b>East</b>	0.6	0.6	0.2	0.45	0.3	2.15
<b>South</b>	0.9	0.8	0.4	0.6	0.6	3.3
<b>West</b>	0.3	0.2	0.6	0.3	0.15	1.55

As described at the table 1, the highest total score is a location on Southern side of Bandung, because it includes everything start from close to supplier, have a cheaper rental place, and mostly in Southern Bandung is an industrial area which meet the needs of Company A location selection.

As for inventory problem, Company A requires 21.250 yards of fabric to produce 17 models of cloth with 1250 yards of fabrics per cloth in a month. This means 255.000 yards of fabric needed in a year (R). With IDR 425 million of total fee for every order made (S).

$$EOQ = \sqrt{\frac{2xRxS}{C}} \quad (1)$$

$$EOQ = \sqrt{\frac{2x255000x425}{1}} \quad (2)$$

$$EOQ = 14722,43 \quad (3)$$

With EOQ calculation method, it can be determined that the company's optimal materials order is 14.722 yards of fabric per order. So the company has to arrange the order for 15 times in a year.

## **5. COMPANY B**

Company B is a company engaged in the ready to wear fashion, especially fashion hijab. The company was founded in 2012. Its main products such as clothing hijab like tunic, jogger pants, long sweater, cullotes raw materials from several suppliers of fabric in Bandung. The main consumers are among women from adolescence to adulthood. The products are marketed widely from Bandung to various places in Indonesia.

In its business practices, company B do not have a supplier with adequate performance yet. This resulted in frequent gap between the number of products ordered by the amount of product delivered by the supplier. In addition, there are products that do not meet the quality standards in the products delivered by the supplier and therefore can not put the production process. There is no utilization of operations management methods applied to select a supplier at company B. At this time, the supplier selection is done by taking into account the price as the primary consideration.

There are 3 supplier options available for the company B namely SM, DM, and RT. SM became the chosen supplier for the moment because it offers the most inexpensive price compared to two other suppliers. However, other than the supply can not meet demand, there also high enough product defect rate which is around 5% in a year, so that factors other than price should also be considered in the selection of suppliers, for example, the quality factor and continuity.

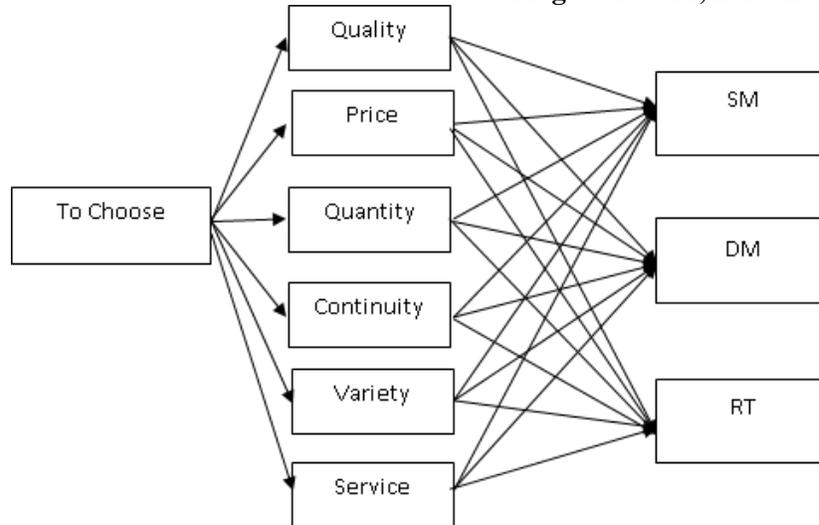


Figure 1 Supplier Selection Hierarchy

By using AHP, the result of data processing as follows:

Table 2. AHP results

Criteria	Weight	SM	DM	RT
Quality	0,313	0,320	0,557	0,123
Price	0,313	0,525	0,334	0,142
Quantity	0,098	0,589	0,252	0,159
Continuity	0,132	0,142	0,525	0,334
Variety	0,087	0,252	0,589	0,159
Service	0,058	0,320	0,557	0,123
<b>Weighted Value</b>		0,381	0,456	0,163

The results show that the supplier DM has the highest value, followed by BC and RT.

## REFERENCES

- Baig, V. A., & Akhtar, J. (2011). *Vision. Supply Chain Management Value Configuration Analysis Approach: A Case Study*.
- Chopra, S. (2010). In *Supply Chain Management*. New Jersey: Pearson.
- Crain, D. W. (2008). Using Value-Chain Analysis to Discover Customer Strategic Needs. *Strategic and Leadership*.
- Dopico, D. C., & Porral, C. C. (2011). Analysis of Value Chain and Sources of Differentiation in International Fashion Markets. *European Research Markets*.
- Evans, I. A. S., & James, R. (2005). Principles of operations management.
- Feame, A. (2012). Dimensions of Sustainable Value Chains: Implications for Value Chain Analysis. *Supply Chain Management*.
- Harsanto, B. (2013). *Dasar Ilmu Manajemen Operasi*. Unpad Press.
- Heizer, J., & Render, B. (2014). Principles of operations management. Pearson Education.
- Saaty, T. L. (1993). Pengambilan keputusan bagi para pemimpin. PT Pustaka Binaman Pressindo, Jakarta.
- Saaty, T. L. (1986). *The Analytic Hierarchy Process: Planning, Priority Setting, Resource Allocation*, Pittsburgh:RWS Publication.