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## Inhibiting Factors of Inventory Management: Study on Food and Beverage Micro Small And Medium Enterprises

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### ABSTRACT

The production process in a business will run smoothly if the company has adequate raw material availability. Raw materials is one of the factors of production that management is quite complicated to do. The production process can not run smoothly if the available raw materials are not sufficient so that eventually the company will lose consumers. Conversely, an excess inventory of raw materials can increase storage costs, increasing the risk of damage so as to reduce the profit earned. For small and medium enterprises (SMEs) who produce food and beverages, managing raw material inventory is an important thing to do to get quality products so as to improve its performance. Raw materials used to make the production process is a raw material that is easy to rot and perishable. Micro SMEs (MSMEs) are required to be able to produce quality products using fresh raw materials. This study aims to analyze the obstacles encountered by MSMEs in managing raw material inventory. Based on the results of the research can be seen that the availability of raw materials on the market, as well as unstable prices is a factor inhibiting MSMEs in doing raw material inventory. In addition, the storage of raw materials that still simple also become a constraint MSMEs to store raw materials in large quantities. Therefore, the government's role in stabilizing prices and supporting the availability of raw materials on the market.

**Keywords:** Inventory Management, Raw Materials, Inhibiting Factors, Perishable

**JEL Classifications:** D2, D24, M1, M11

### 1. INTRODUCTION

Until now, small and medium enterprises (SMEs) are considered to have a major contribution to the economy in Indonesia. Although the development of SMEs is increasing from year to year, but not a few SMEs out of business. According to Chairman of Kadin Indonesia, several factors that become weakness of micro SMEs (MSMEs) are marketing difficulties, limited access to financing sources as well as human resources and raw material difficulty is (Mutmainah, 2016).

Inventory management is important in the overall performance of a business, whether MSMEs or large companies. Integrated managed inventory function, assumed responsibility for material forecasting, planning, inventory control, as well as providing various information needed for corporate policy making (Akindipe, 2014). Discussion on SME inventory management has been done by many researchers. Sunday and Joseph (2017) in his study concluded that inventory management affects the

company's financial performance, so the company must maintain the appropriate inventory levels to improve profitability and reduce inventory costs. Narayanapillai (2014) stated that MSMEs in Bangalore India without exception have been aware of the importance of inventory management. However, in practice most of them do inventory management based on simple heuristics. Inventory management for long-lasting products is certainly different from perishable products that have certain expiration times such as food and beverage products. The raw materials used by food and beverage products can not be stored for too long because they can cause the material to become rotten or damaged. Research on non-durable supplies has been done by researchers such as Baron (2010), Stanger et al. (2012), and Pauls-Worm et al. (2013). All three studies have revealed that non-durable products require special treatment. The product has a limited consumption period and requires a storage area that has certain characteristics. So far, management of supply management is rarely done by MSMEs because of lack of knowledge about the importance of doing inventory. This is in accordance with research conducted

by Suratman et al. (2013) which shows that there are still many food and beverage SMEs that have not implemented raw material inventory management in their business. Food-beverage SMEs produce products with specific consumption times. If the raw materials used are not fresh anymore (fresh) then MSMEs can not produce a quality product. Though quality is one of the factors that determine the ability of products to compete in the market.

Food-beverage SMEs are industries that produce products with certain consumption periods. Quality raw materials and proper production processes will produce a viable and safe product for consumption. The problem in this research is to analyze the obstacles faced by MSMEs in doing raw material inventory management.

## 2. LITERATURE REVIEW

Inventory is an important part of business. Inventories are not only necessary for operations but also contribute to customer satisfaction (Stevenson et al. 2014). Inventory in a company is a savings in the form of raw materials, finished goods and semi-finished goods. For the company, this inventory can later be used to perform the production process (raw materials and intermediate goods), or directly sold by the company (finished goods).

According Olowe (2009) inventory management related to the determination of the number of efficient stock to achieve optimal inventory in the company's working capital. Lack of raw material inventory can disrupt the smoothness of the production process. SMEs can not meet consumer demand because the number of products produced is reduced. Consequently consumers will switch to other company's products. This can cause harm to SMEs because of reduced sales value. In the meantime, excess inventory can increase the risk of damage to raw materials inventories and increase inventory costs that may be used by other parts of the company. Toelle and Tersine (1989) states that excess inventory can increase inventory costs and require larger storage. It shows that the frequency of ordering of raw materials has contributed to the cost of inventory.

Supply problem is one of the problems faced by MSMEs in many countries. The Narayanapillai (2010) study found that inventory management by SMEs in India is still low. Similarly Ferenciková (2014) in his research concludes that most SMEs in Cheznaya do not do inventory management.

More than 50% of the total investment capital of an enterprise is invested in inventory (Heizer and Render, 2015). It shows that through the company's inventory management can make savings to improve corporate profit. According to Stevenson et al. (2014) the general purpose of inventory management is to achieve satisfactory customer service levels while keeping inventory costs within the appropriate limits. Inventory has a strategic role and acts as a buffer between production and sales within the company. It is imperative for a company to perform inventory controls as it affects its financial performance (Waters, 2003).

For SMEs that produce goods that are not durable, raw material inventory is also an important thing. The thing that is often

encountered in the supply of materials is not durable is the product can not be used because it has reached expiration time and suffered damage due to weather factor (Baron, 2010). To run an economical production system and can produce a quality product then MSMEs must be aware of good inventory management in order to improve its performance. The right inventory can accelerate the company to do the production. Through the inventory management of SME actors can produce a competitive product because the price, quality, profit is influenced by the level of inventory.

## 3. RESEARCH METHODS

This research uses explorative method. This study was conducted by distributing questionnaires containing open and closed questions. Open questions are used to dig deeper information about the difficulties of UMKM in managing raw material inventory. Data were collected by cross-sectional or one-shot approach. Data was collected only once for MSME owners of food and beverages in Surabaya and Sidoarjo. The method of collecting data by survey method is by distributing questionnaires to a number of respondents directly. The number of respondents who are willing to fill out the questionnaire as many as 30 people.

## 4. FINDING AND RESULT

Based on the results of respondents' answers, MSMEs that have been recorded can be grouped into 3 criteria, i.e., micro, small and medium businesses. Criteria of micro business if it has maximum annual sales of 300 million rupiahs, small business if it has maximum annual sales of 2 billion 500 million rupiah while medium-sized businesses if they have annual sales of up to 50 billion rupiah. The data of UMKM criteria are listed in Table 1.

Table 1 shows that most SMEs are on a small scale which means they have a maximum sales per year worth 2 billion 500 million rupiah. As many as 66.7% of respondents stated that they have made raw material inventory to support their production smoothness. Raw material inventory is one of the decisive factors in the success of MSMEs performance. This is in accordance with Munizu's opinion (2010) in his research stated that the technical and operational aspects, is one of the internal factors, consisting of the availability of raw materials, the production capacity of

**Table 1: Characteristics of MSME enterprises**

Characteristics	Amount
Business Scale	
Micro	11
Small	14
Medium	5

MSME: Micro, Small And Medium Enterprises

**Table 2: Inhibiting factors in inventory**

Cause	Amount (%)
Quality of raw material	60
Unstable price	40
Availability of raw material	16.7
Storage area	13.3



modern equipment testing and quality control have an influence on the improvement of MSMEs performance. Inventories of raw materials undertaken by business actors are based solely on customary factors. Only 10% of MSMEs perform inventory based on a particular supply model. Generally they keep the stock of raw materials for 2–3 times the production process. If the inventory has decreased, the business actor will contact the supplier to make the purchase. This study is in line with Narayanapillai's (2014) study which found that MSMEs in India perform inventory management based on simple heuristics.

Inventory management in food and beverage products is limited by the expiration time of raw materials. Some raw materials used can not be stored for long periods of time because it will affect the quality of the product. The following are some of the inhibiting factors faced by businessmen in raw material inventory.

The quality of raw materials is the main cause of problems in performing inventory management. Raw materials used by SMEs beverage food is a natural material that is easily damaged and rotten. For business people who produce meatballs for example, although the meat used can be stored in the refrigerator, but they feel the product is better quality when using fresh raw materials. Likewise soy-based products. Soybean will change its texture if it is stored for more than 3 days.

With regard to the quality of raw materials, storage is also one of the factors that become obstacles in performing inventory management Table 2. Wheat flour should be kept in a **dry and not moist** to maintain quality while the eggs should be **stored at room temperature where** a special order is not damaged and broken. Likewise with fruit-based products. In order for the fruit not to rot quickly and change its quality, then the fruits should be stored in places that have certain conditions. Unstable price is also an obstacle in making inventories. As we all know that the price of goods is always up and down is never stable. This makes it difficult for business actors to make purchases. When the price is cheap, they can buy in accordance with the needs of production and supplies. However, when they have a supply of raw materials they are faced with inadequate storage space and increased storage costs. As is well known that most of the company's assets are in stock. Kurfi (2003) states that inventory is the main asset investment **currently** in most manufacturing firms. At the time of high prices, **raw materials are purchased only to make the production process without any residual for inventory.**

MSMEs can not afford to buy raw materials at high prices because the capital owned by UMKM is very limited. Financing factor is a problem **that** is often faced by MSMEs. The same thing is also stated by the **Center for Domestic Trade Policy** (2013) which reveals that the limitations of capital **and** the difficulty of **accessing** the funding **is still a constraint in the development of MSMEs business.** Lack of knowledge **and** information cause business actors can not meet the requirements that have been set. For MSMEs who have received capital assistance, also face new problems in financial management. The absence of separation between financial probadi and business finance causes the capital aid can not be utilized optimally.

To solve the problems related to price stability and the availability of raw materials, it is necessary to intervene the government to overcome it. The government is expected to issue policies that are expected to stabilize the price of some raw materials used by food and beverage MSMEs. Price volatility can lead to reduced profits earned by business actors. They can not raise the selling price even though the price of raw materials used increases. As a result some MSMEs have to reduce their production capacity. Munizu's research (2010) shows that government policy as a part of external factors has a considerable influence on internal factors such as availability of raw materials and production capacity.

The next inhibiting factor is the availability of inconsistent raw materials. Some raw materials such as soybeans are sometimes difficult to obtain on the market. In such situations, the supplier will offer a price that is more expensive than the previous price. Similar to price, solving this problem requires government assistance. The government is expected to provide solutions by implementing policies that can ensure the availability of some raw materials of beverage products.

## 5. CONCLUSION

The results show that most MSMEs have done inventory management although the determination of the amount is still done in a simple way. Factors inhibiting MSMEs in the supply of raw materials that need to find a solution is **the quality of raw materials, prices and availability are not consistent and storage.** The quality of raw materials is a common problem in MSMEs that produce food and beverages. Therefore, MSMEs need to provide adequate storage place to keep their raw material stocks guaranteed. While the price factor and availability of raw materials on the market require the role of government in overcoming the problem. The government should implement policies that can stabilize prices and ensure the availability of production raw materials.

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