

# A STUDY OF SIX SIGMA METHOD FOR INVENTORY MANAGEMENT IN BAKERY INDUSTRY

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#### ABSTRACT

The bakery industry in Malaysia is not something that is strange anymore. As the year passing, this industry have expanding more than before and facing many changes. People nowadays are more interested with the bakery than any other food since it is cheap and light. However, there still lack of research on this industry. This research is to study how the implementation of the six sigma method for inventory management in bakery industry. This research took place in the bakery around the Kuantan, Pahang. The purpose of this research is to identify the problems on product defective rate in bakery industry and to study how implementation six sigma methods can reduce waste in bakery industry. This research is using qualitative method which the data collection is mainly through the interview with the experience worker that knows well about the operation and the inventory in the bakery. Other than that, observation method is also used in collecting the data. Secondary data is retrieved from the case study from the previous study, journal, article and web site. The data that collected are analyze using Atlas/Ti software. At the end of this research, the result need to answer the objective and problem statement. The problem on the product defective rate are identified which there are six of it. The problem include customer relationship, handling inventory, replenishment inventory management in the bakery industry.

#### INTRODUCTION

Growing on bakery industries made consumer more demanding on the product and it is important to produce something that can satisfied the customer. The manager need to face certain problem such as sales are slowing down and operating costs are increasing, while customers are becoming more demanding and selective (Efstratiadis et al., 2000; Henchion and McIntyre, 2005). It is become the responsibilities of the management to analyze the problem. In addition the products that produce have an expiry date, so it is better to have an eye on the quality of the product. It is really important to sell the product before the expiry date if not it will become a waste and will affect the profit of the company. Other than that, problem that always occurs in bakery usually inventories management. Without a proper management on the inventories, the shortage and surplus may occur and it will affect the production and also the quality of the product

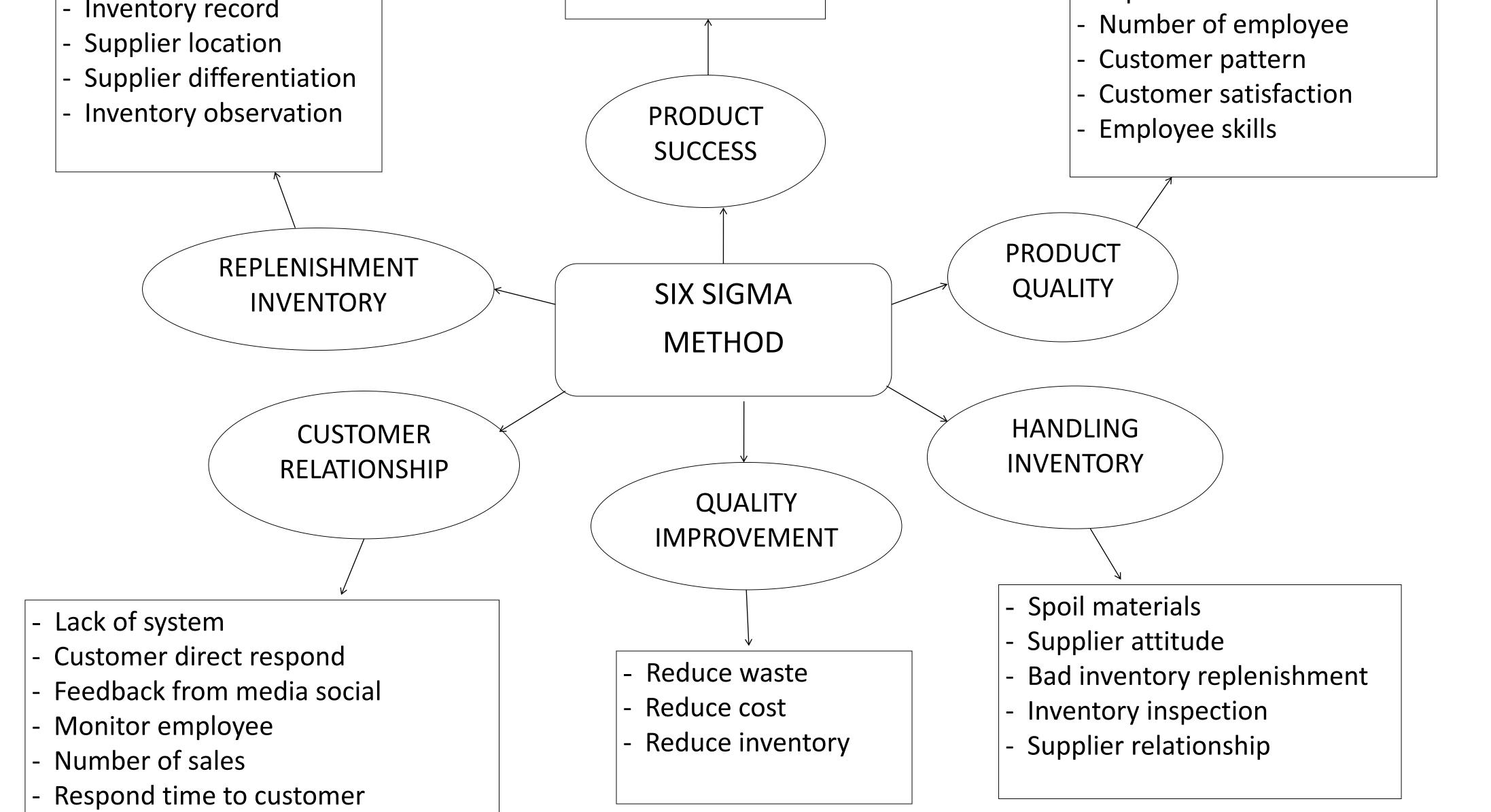
<b>OBJECTIVE/S</b>	RESULTS		
<ul> <li>To identify the problems on product defective rate in bakery industry.</li> <li>To study how implementation six sigma method can reduce waste in bakery industry.</li> </ul>	<ul> <li>Lack of system</li> <li>Raw materials shortage</li> </ul>	<ul> <li>Fluffy</li> <li>Delicious</li> <li>Variety design</li> <li>Regular customer</li> <li>Variety flavour</li> <li>Repeat buyer</li> </ul>	<ul> <li>Employee attitude/role</li> <li>Increase of competitor</li> <li>Good materials</li> <li>Update technology</li> <li>Employee relationship</li> <li>Not for resell</li> <li>Expired date</li> </ul>

#### METHODS

This research is a qualitative method which the data collection are using face to face interview and observation. Later, the data will analyze using Atlas/Ti software.

Research technique:-

- Primary
- collecting a data that not exist yet and gain for the first time
- face to face interview, recording and observation.
- Secondary
  - all sources that are available to a researcher in order to obtain the necessary information for a research problem.
    case study, article, journal, report and



web site

- Repeat buyer
- Regular customer
- Production of the bread per day
- Inventory turnover

### **CONCLUSIONS AND RECOMMENDATION**

- The objective are achieve where the problem are identified and six sigma method help to solve the problem, since the process of six sigma method results in higher levels of efficiency and effectiveness.
- Researcher should not only focus on the small bakery but also try to focusing on the big bakery that is well established. Try to look further on the other product since these researches are more focusing on the bread and bun only. There is also a lot of the product that can take in the consideration such as pie, tart, and cake.
- For the bakery, it is recommend to have a system on managing inventory since currently there is lack of system that is use to manage it. Without any system to manage it, it seems a little bit messy and difficult in inventory management.