

ABSTRACT

The sustainability of a business depends on customer satisfaction. This is seen from how well the quality of the product or service can meet the expectations of customers. This research is motivated by the importance of quality control in the Convection Industry, especially in Jersey products at UMKM Konveksi Bintang Jaya Collection located in Baleendah, Bandung. This UMKM faces the challenge of frequent findings of product defects, which have an impact on production efficiency and customer satisfaction. Given that clothing is a basic human need with a market that continues to show growth, making this product has a considerable business opportunity. Therefore, maintaining product quality is crucial for business sustainability in an increasingly competitive market. The SPC method was chosen because of its ability to identify the level of product defects and can assist in controlling production quality, especially related to product defects.

The purpose of this study is to analyze the application of the Statistical Process Control (SPC) method in controlling the quality of Jersey products in the UMKM Konveksi Bintang Jaya Collection, and provide suggestions for improvements to reduce the level of product damage from the production of these UMKM.

In order to achieve this goal, this research uses a Descriptive Quantitative method with data collection through Observation. Data is processed using various SPC tools such as Check Sheet, Pareto Chart, and P-Control Chart. This aims to identify the types of defects that are highest in number and monitor the course of the production process.

The results show that the highest type of defect is Printing Design and followed by stitching defects and incomplete defects. The P-Control Chart shows that the production process is still under control, but there is a defect rate of 10% which is considered quite high and this is certainly expected to be reduced. Therefore, the author provides suggestions for improvement in the form of applying DMAIC and PDCA in the quality control process at UMKM Bintang Jaya Collection.

This research contributes in offering practical guidance for similar MSMEs to improve competitiveness in a competitive market by applying the SPC method to monitor the course of the production process. In addition, this research contributes to the development of literature in the field of Quality Management, especially the application of the SPC method in the Textile Industry. Not only that, suggestions for future research are given including the study of the implementation of the proposed improvements to quantitatively measure their impact, analysis by considering other factors, as well as the development of product defect prediction models using other statistical methods.

Keywords: *Convection, Jersey Products, MSME, Quality Control, Statistical Process Control.*