ABSTRACT

UMKM Batik Yusri Bangkit is a batik producer located in Trusmi, Cirebon, specializing in handwritten, stamped, and combination batik. From November 2023 to October 2024, the average product Produk cacat rate reached 5%, exceeding the company's maximum target of 3%. The combination batik category recorded the highest Produk cacat rate at 8.3%, resulting in increased production costs, reduced product quality, and lower profits. This study aims to analyze the root causes of Produk cacats and provide improvement suggestions using the Six Sigma method with a DMAIC (Define, Measure, Analyze, Improve, Control) approach. Supporting tools used include CTQ, Control Chart, DPMO, Pareto Diagram, Fishbone Diagram, and the 5W+1H method. The analysis indicates that the main Produk cacat causes stem from human, method, machine, environmental, and material factors. The calculated DPMO value is 766,666 with a sigma level of 3.18. Proposed improvements focus on employee training, equipment maintenance, process procedure adjustments, and raw material control. With the implementation of these improvements, the company is expected to reduce Produk cacat rates and enhance product quality.

Keywords: Six Sigma, DMAIC, Quality Control, Batik, Produk cacat, UMKM.