

## ABSTRACT

CV Harapan Jaya Utama (HJU) is a company that produces shoes in accordance with orders from other companies that do not make sales by unit, but the form of wholesale sales. The company is trying to improve quality in order to compete with other shoe companies. However, the company is still facing the existence of defective products. Produced a defective product has exceeded the maximum limit of defective products company, which is an average of 3%. In addition, the number of defective products will add to the potential loss of revenue. Therefore, it is necessary to know the critical factors of quality improvement, which affects the quality of products and types of product defects, so we can cause a defective product and then be followed by recommendations for improvement of product quality improvement in reducing product defects and potential loss of revenue.

Six Sigma is a quality control method that can be applied to the company to reduce product defects. The main principles of Six Sigma are to achieve perfection (3.4 DPMO) by controlling the processes that occur. Steps in the implementation of Six Sigma are Define, Measure, Analyze, Improve, and Control. However, a restriction on research is only done to improve phase. Define is to identify factors - factors that influence product quality. In the Measure step is measuring the performance of production by looking at measurements of the process stability and performance measurement at the output level. Analyze phase is to identify the cause of product defects and production performance analysis. In the improve phase will be given recommendations for improvement to reduce the number of defective products. For supporting Six Sigma method, we need another tool which can solve the problem in the company. The Tools that is being used in this research is seven tools which is the simplest graphic method for solving problem. Seven tools consists of *histogram, pareto diagram, run chart, scatter diagram, control chart, check sheet, cause and effect diagram*.

Based on data of the number of defects in the July to December 2009, it is known that the product which has the largest number of defective product is shoes Compass. The critical factors of quality contained in the shoe Compass is a product of physical perfection is a flaw defect type foxing, fabric defects, defects sol, sewing defects and defects of the head. The causal factors of defects in the product are less knowledge and discipline labor, the composition of different doses foxing, frequently missing pattern, less maintenance, hot workplace-temperature, careless, and less precise.

**Keywords: Six Sigma, DPMO, Critical to Quality (CTQ), Seven Tools.**