Applying Six Sigma Methodology for Process Improvement in Apparel Sewing Process: With Special Reference to ABC Apparel Company

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Six Sigma is a project-driven approach to improve the process by eliminating the defects, delays in the system. Modern organizations adopt the Six Sigma methodology to improve their processes in order to eliminate the defects and address the customers' requirements in a greater manner. ABC Company is currently facing a quality issue of having a high deviation between the Actual time and the Standard time in their production line. Therefore, researchers applied DMAIC Methodology (D-Define, M-Measure, A-Analyze, I-Improve, C-Control) in Six Sigma with the aim of reducing their actual time in performances. This is applied and mixed study in nature. The main study objective is to improve the sawing process by reducing the time deviations between actual time and the Standard time of the apparel production in ABC Company by using Six Sigma Methodology". Primary data are used for the study, and samples of twenty-five apparel units from the pre-manufacturing round (Quality Checking round before manufacturing) are obtained. Also, five employees are interviewed to find the causes for the deviation in production time. Tools used in different phrases in DMAIC methodology, such as SIPOC Diagram, Defects per million opportunities, non-value-added time calculations, Control Chart, Cause and effect diagram are used as analytical tools. Analyzed data revealed that the current process's Six Sigma level of 3.4 was improved by reducing the non-value-added time from 1.75minutes per apparel. It is a 26.4% improvement in time performance. It is crystally clear that Six Sigma methodology can successfully apply to improve the process in reducing non-value-added time in the manufacturing process in apparel production in ABC Company.

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