

Development and Validation of Integrated Continuous Improvement Framework for Competitiveness: Mixed Research of Ethiopian Manufacturing Industries

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Abstract : The purpose of the study is to develop and validate integrated literature-based JIT, TQM, TPM, SCM and LSS framework through a combination of the PDCA cycle and DMAIC methodology. The study adopted a mixed research approach. Accordingly, the qualitative study employed to develop the framework is based on identifying the uniqueness and common practices of JIT, TQM, TPM, SCM and LSS initiatives, the existing practice of the integration, identifying the existing gaps in the framework and practices, developing new integrated JIT, TQM, TPM, SCM and LSS practice framework. Previous very few studies of the uniqueness and common practices of the five initiatives are preserved. Whereas the quantitative study working to validate the framework is based on empirical analysis of the self-administered questionnaire using a statistical package for social science. A combination of the PDCA cycle and DMAIC methodology stand integrated CI framework is developed. The proposed framework is constructed as a project-based framework with five detailed implementation phases. Besides, the empirical analysis demonstrated that the proposed framework is valuable if adopted and implemented correctly. So far, there is no study proposed & validated the integrated CI framework within the scope of the study. Therefore, this is the earliest study that proposed and validated the framework for manufacturing industries. The proposed framework is applicable to manufacturing industries and can assist in achieving competitive advantages when the manufacturing industries, institutions and government offer unconditional efforts in implementing the full contents of the framework.

Keywords : integrated continuous improvement framework, just in time, total quality management, total productive maintenance, supply chain management, lean six sigma

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