Lean performance evaluation of manufacturing systems: A dynamic and innovative approach

Abstract:

Lean manufacturing has become an important avenue for both academics and practitioners in recent times. Many organizations around the world have attempted to implement it but the lack of a clear understanding of lean performance and its measurement will contribute to the failure of lean practices. There are many papers, articles, and reports that address lean techniques and tools, but few studies are found to focus systematically on lean performance evaluation. In order to fill the current gap, this paper presents an innovative approach to measure the lean performance of manufacturing systems by using fuzzy membership functions. The model is flexible, dynamic and easy to use. It enables a systematic measurement of lean performance by producing a final integrated unit-less score.