Lean, six sigma and lean sigma: fads or real process improvement methods?

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Abstract

Purpose
The purpose of this paper is to explore if six sigma and lean are new methods, or if they are repackaged versions of previously popular methods – total quality management (TQM) and just-in-time (JIT).

Design/methodology/approach
The study is based on a critical comparison of lean with JIT and six sigma with TQM, a study of the measure of the publication frequency – the number of academic articles published every year of the previous 30 years – for each topic, and a review of critical success factors (CSF) for change efforts.

Findings
The more recent concepts of lean and six sigma have mainly replaced – but not necessarily added to – the concepts of JIT and TQM. lean and six sigma are essentially repackaged versions of the former, and the methods seem to follow the fad (product) life cycle. The literature offers fairly similar and rather general CSF for these methods, e.g. top management support and the importance of communication and information. What seems to be missing, however, is the need for a systemic approach to organizational change and improvement.

Practical implications
A prediction is, given the fad or product life cycle phenomenon, that there will be a new method promoted soon, something perhaps already experienced with the borderline preposterous concept of lean six sigma. On the other hand, based on the gap in time between both JIT and lean, and TQM and six sigma – a gap filled by BRP/reengineering – the next method will be process oriented. This paper concludes with the discussion of the need for a process-based approach to organizational improvement efforts.

Originality/value
This paper is of value in that it analyzes what lessons can be learnt from organizational change and improvement efforts. The analysis includes a comparison of CSF for any change project before discussing the need for a process (systems) perspective for successful organizational improvement efforts.

Keywords
Just in time | Lean production | Total quality management | Six sigma | Production processes

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Both Lean and Six Sigma have their uses and very often go hand in hand. While Six Sigma remains more geared to solving pressing customer needs, Six Sigma alone cannot improve overall process speed or maximize returns on investment for investors. Lean Six Sigma (LSS) tries to combine the advantages of these two approaches and minimize the weakness of both. The Lean Six Sigma methodology entails using lean methodologies to identify and remove non-value adding activities and processes, and then applying Six Sigma methodologies to identify and eliminate process variation. The tools used for the imp Six Sigma process enables an organization to measure the number of “defects” in a process, methods to eliminate them and get close to “zero defects” as much as possible. Managers face challenges in improving the quality and efficiency of the business. To overcome, they need to implement the best methodology and tools to analyze and control the process. The best way to improve the result is to improve the process. What is Six Sigma? It is an integral part of Lean Six Sigma process, but can be implemented as a standalone quality improvement process. Indeed, it is the most preferred tool that can help improving the efficiency and the effectiveness of any organization. Within the DMAIC framework, Six Sigma can utilize several quality management tools. Lean and Six Sigma process improvement methods present simple differences. But there is one critical consideration to keep in mind when using them. It can even be said that, despite this difference, the Lean and Six Sigma methodologies complement each other. The Lean approach aims to make processes leaner and more agile by reducing the interval between activities. As the processes follow in production cycles, by decreasing the time between tasks, the cycles will be faster and will occur more times in the same time interval. To achieve this, the Lean method seeks to eliminate waste, which we will define as “fads or real process improvement methods?” Dag Na "slund. First, the paper explores if six sigma and lean are new methods, or if they basically are a repackaged versions of previously popular methods – total quality management (TQM) and just-in-time (JIT). NÄSLUND, D. (2008) Lean, six sigma and lean sigma: fads or real process improvement methods? Business Process Management, Vol. 14, 269-287. NAVE, D. (2002) How to compare Six Sigma, Lean and the Theory of Constraints. Quality Progress, March, 73-79. OHNO, T. (1988) Toyota Production System: Beyond large-scale production Productivity Press. PIORE, M. J. & SABEL, C. F. (1984) The second industrial divide, New York, Basic Books Inc. SCHONBERGER, R. J. (1982) Japanese manufacturing techniques. Nine hidden lessons in simplicity, New York, USA, The Free Press. SHEWHART, W. A. (1980) Economic co