

A structured review of Lean Six Sigma in various industrial sectors

# A structured review of Lean Six Sigma in various industrial sectors

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## Abstract

### Purpose

The purpose of present study is to expose the detailed review for benefits and challenges about implementation of Lean Six Sigma (LSS) in business organization and spread of LSS literature in term of various sectors wise, research methodology wise and journal wise.

### Design/methodology/approach

This paper covers the literature on LSS from 2000 to 2018. The authors have selected a large number of research papers using the keywords as Lean Six Sigma implementation in automotive, micro small medium enterprises, health care, education, financial sectors and many more. A total of 216 research papers have been reviewed on LSS distribution of sector wise, research methodology adopted, active countries, year of publication and critical barriers in implementation of LSS.

### Findings

The present literature classifies the spread of LSS in four important sectors of manufacturing, health care, human resource, financial and education. It presents the critical barriers and benefits of LSS implementation in various sectors mentioned above and an important research gap, where practitioner/researcher can focus more during their research on LSS.

### Practical implications

It is important for industry, researchers and LSS practitioners to be aware about challenges and success factor during LSS implementation in various sectors such as manufacturing, education, financial, human resource and health care. Hence, this paper could provide significant and valuable insights to industry and practitioners for successful implementation of LSS projects.

### Social implications

LSS results in reduced waste, defects and improve process, which in turn provide high-quality products at minimum cost, and this leads to customer delight, which ultimately raises the societal living standard. The results encourage LSS practices without fear because there is a huge discussion of near about all success and failure parameters about LSS.

### Originality/value

To the authors' best knowledge, no studies have still covered the literature review of LSS implementation in three different sectors: manufacturing, service and process. The present study was mainly focused on presenting a systematic review of literature in said sectors and found the gap between current status and future direction for the implementation of LSS in different areas.

## Keywords

Six Sigma

Lean Six Sigma

Manufacturing industries

Financial sector

Healthcare sector

Education sector

### Citation

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This article addresses the misconception surrounding six sigma by reviewing the benefits of implementation in various industries especially the Service sector. It requires long-term commitment. The policies and organization structure needs to align to the approach. Profess facts and data and use the same for performance evaluation as well. Recognize behaviours aligned to the renewed culture. The merits of Lean Six Sigma within the healthcare sector are there for all to see. The Dabbawalas or meal-box delivery people are another case in point. Six Sigma has significant application in the service sector. The case studies and corporate success stories are visible. In a start-up environment as well, the principles apply with some variations. Lean Six Sigma is a process improvement methodology designed to eliminate problems, remove waste and inefficiency, and improve working conditions to provide a better response to customers' needs. It combines the tools, methods and principles of Lean and Six Sigma into one popular and powerful methodology for improving your organization's operations. I have been directly involved in the successful implementation of Lean Six Sigma in many organizations, and I have done consulting in several organizations who had tried and failed to implement an effective Lean Six Sigma program. In the successful programs, the following principles were adopted. In the failed implementations, at least one or more principle was not followed. The purpose of present study is to expose the detailed review for benefits and challenges about implementation of Lean Six Sigma (LSS) in business organization and spread of LSS literature in term of various sectors wise, research methodology wise and journal wise.,This paper covers the literature on LSS from 2000 to 2018. The authors have selected a large number of research papers using the keywords as Lean Six Sigma implementation in automotive, micro small medium enterprises, health care, education, financial sectors and many more. The authors have selected a large number of research papers using the keywords as Lean Six Sigma implementation in automotive, micro small medium enterprises, health care, education, financial sectors and many more.