

Towards sustainable lean success: a systematic literature review on critical failure factors

Technological
Sustainability

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Abstract

Purpose – Lean manufacturing (LM) is a leading philosophy used by organizations to become inevitable in the challenging market. However, prior research showed evidence that 90% failure rate of LM within 10 years of implementation, hence this study is to undertake a systematic literature review on the failure of LM implementation.

Design/methodology/approach – This study was conducted with the guidance by review protocol, research questions' formulation, systematic searching based on identification, screening and eligibility using Scopus and Web of Science databases, quality appraisal, data exclusion and analysis.

Findings – Derived from 15 sub-themes, five main themes were discovered based on the thematic analysis to answer the research question on “What strategies should manufacturers do to prevent the failure of LM implementation?”, namely (1) leadership, (2) culture, (3) knowledge, (4) resources and (5) suppliers.

Research limitations/implications – WoS and Scopus were employed in this review, despite there are 14 databases with the ability to search for potential articles in them. Mixed-Method Appraisal Tool (MMA1) was used to evaluate the quality control process, however using various quality assessment techniques helps to search for appropriate review objectives.

Practical implications – The primary emphasis of this study can be used as a reference by the manufacturers to ensure that LM implementation is a success story to gain a competitive advantage.

Originality/value – Despite a large body of literature on LM, there has been little attempt to review this study in a systematic approach, discover trends and generate thematic potential on the failure factors of LM, making it difficult for academics to replicate and interpret.

Keywords Lean implementation, Lean manufacturing, Failure, Systematic literature review

Paper type Research paper

1. Introduction

Manufacturing and service companies in the developing world have not neglected the application of lean manufacturing (LM). Manufacturing industries have emerged with the challenges of the global market shift, which has increased the volatility and consumer demand, requiring manufacturers to be more adaptable than ever (Wahab *et al.*, 2019). Manufacturers must design appropriate strategic approaches to reach a competitive advantage and keep improving to compete in this challenging market (Al-Dhaafri and Alosani, 2020). Thus, LM implementation has become a strategic approach and is inevitable to survive in the market. Many firms worldwide apply the lean philosophy to develop and

