

The Effects of Lean Production Tools and Techniques Implementation at Malaysian Manufacturing and Service Industries: A Case Study Review

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Abstract

In today's business world, the organization struggles to continuously improve their organization because of the customers consistently demand higher quality product in a shorter delivery time and at a lower price. In order to achieve that, the organizations use various initiatives such as lean production tools and techniques. This paper discusses a case study review on the effects of Lean production tools and techniques implementation at Malaysian manufacturing and service industries. The results show that, there are significant effects on productivity improvement, cost saving, improvement of product quality, reduce delay on delivery, reduce the number of accidents (safety) and improve morale of their workers to the Malaysian manufacturing and service industries when implementing the lean production tools and techniques at their company. Therefore, the finding will help most of the Malaysian companies to start considering investment on the implementation of lean production at their companies with regard to the benefits that they will gain.

Keywords

Lean Production, Tools and Techniques, Effects, Malaysian Industries

Biography

Mr. Mohd Shahir Yahya is currently a PhD student at Faculty of Mechanical and Manufacturing Engineering. Mr. Mohd Shahir Yahya holds a Bachelor of Engineering in Mechanical (Industrial) degree from Universiti Teknologi Malaysia and a Master of Manufacturing System Engineering degree from Universiti Putra Malaysia. He had also served as lecturer in Industrial Engineering at the Department of Manufacturing and Industrial Engineering, Universiti Tun Hussein Onn Malaysia (UTHM). He has taught courses in industrial engineering, production planning and control and entrepreneurship. His research interest includes ergonomics product design, lean production, and production planning and control.

Dr. Musli Mohammad is a Senior Lecturer in Industrial Engineering at the Department of Manufacturing and Industrial Engineering, Universiti Tun Hussein Onn Malaysia (UTHM). Before joining UTHM in 2003, he worked as a Total Quality Management Executive at the UMW Toyota Motor Sdn. Bhd. Musli graduated with a Bachelor of Engineering in Mechanical (Industrial), a Master of Science in Industrial and Systems Engineering, and a Doctor of

Philosophy in Engineering and Industrial Management. He has served as an Expert for Asian Productivity Organization project to develop a toolkit on Business Excellence for Asian SMEs. He has also involved as a researcher in a global study on quality / business excellence awards, which was commissioned by the Baldrige Performance Excellence Program, National Institute of Standards and Technology (NIST), USA.

Prof Dr. Badrul Omar is a Professor in Engineering Design at the Department of Materials and Design Engineering, Universiti Tun Hussein Onn Malaysia (UTHM). Before joining UTHM in 1999, he worked as an Assistant Director at the Ministry of Education Malaysia. Badrul graduated with a Bachelor of Science in Mechanical Engineering, a Master of Science in Computer Aided Engineering, and a Doctor of Philosophy in Mechanical Engineering Design. He had also served as lecturer in Mechanical Engineering at several Polytechnics in Malaysia since 1983. He has also serve as a panel member of auditors at various levels, namely at the faculty, university, ministry of education and the national level. His research interest include design sustainability, engineering design methodologies and engineering design optimisation, where he has acquired numerous medals at national and international innovation competition, at both local and international level.

Mr. Edly Ramly Ramly graduated from University of Bradford, UK with Bachelor Degree in Manufacturing System with Management. He then furthered his studies at Sheffield Hallam University and awarded with a Master Degree of Science in Engineering with Management. Mr. Edly has been actively involved in the field of Continual Improvement activities since the beginning of his tertiary education. While accomplishing his Master Degree in the United Kingdom, he had been extensively trained for Lean System and Six Sigma. Presently Mr. Edly is the founder and certification director for EFR Certification. With his excellent interpersonal and communication skills, he has conducted various high impact trainings and workshop in the area of workplace improvement, variation and waste reduction, and practical problem solving techniques including statistical tools. Due to his extensive exposure in different management systems and strong project management skill, he is currently providing Lean, Quality (ISO9001), Environment (ISO14001) and Safety (OHSAS18001 & MOSH) management system related consultancy, trainings and supports to local and multi-national companies that seek quality improvement and breakthrough. Apart from being trained as Lead Auditor, he is also approved auditor by Society of Motor Manufacturer and Trader (SMMT) Industry Forum for ISO/TS 16949. Edly also one of approved trainer by Department of Occupational Safety and Health (DOSH) for continuous education program for safety officer. His industrial experience was in the automotive industry. During his stayed with the TRW Automotive, he was tasked with the responsibility of promoting and implementing Lean and Six-Sigma within the Organization. Due to his extensive exposure in Lean and Six-Sigma Management System, he was invited by National Productivity Corporation (NPC) to conduct public training in the area of Six-Sigma implementation. In addition have been conducting many round of lean workshop focusing in 5S, changeover reduction, Total productive maintenance (TPM), and cellular layout.