MANAGING LEAN PROJECTS: UNDERSTANDING THE STRUCTURES OF LEAN PRODUCTION

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Abstract
The purpose of this paper is to assess problems with lean production (LP) in the wake of recent worldwide recalls of millions of cars by automakers at the forefront of LP. The paper defines LP more broadly than the literature to include the structures of culture and political economy. It uses Toyota as a case study to identify the structural weaknesses of the entire lean production system beyond the shop floor. The main findings are, firstly, that the Toyota system is not well understood, and often misunderstood, with respect to its possible political-economic and social conditions of existence. This implies that the system cannot be easily replicated elsewhere. Secondly, changing structural conditions, particularly in the labor market and industrial system, have encouraged Toyota to introduce slower lines of production for older and female workers, use buffers to overcome more frequent production halts, and reduce the design cycle. Coupled with rising demand for its vehicles and the inevitable use of accelerated testing of complex systems, the recent spate of quality problems is not unexpected. These findings are of value to project managers who wish to obtain a deeper insight into the structural problems of LP and project management.

Keywords
Lean production, lean project management, structure, quality, culture.

INTRODUCTION

The purpose of this paper is to assess the problems with lean production (LP) in view of the global recall of millions of cars by various car makers such as Toyota, Honda, GM Daewoo, General Motors, Nissan, Suzuki, Daihatsu, and Hyundai because of problems with steering wheels, brakes, air bags, pedals, floor mats, and other parts over the last few years (e.g. Harden and Ahrens, 2010). The paper will focus on the Toyota Production System (TPS) in Japan as exemplar and pioneer of LP (Ohno, 1988). Given that the core principles of lean production are routinely used in managing projects as a set of tools (Mascitelli, 2002; Leach, 2006), an in-depth understanding of the problems of LP provides a clue on why many complex projects do not achieve the triple goals of completion on time, within budget, and good quality.

There are several responses to the problems with LP, such as: