

Lean Practices Pertaining Hard and Soft Factors in Service Sectors

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Abstract

Many of Lean manufacturing tools and practices are being implemented in the different sectors with and without being realized nowadays. This research objective is double folded. Employing 10 predictor variables, the relationship and impact of Lean practices on Lean performance was identified. The second objective was conducted to identify the significance disparity in the impact of soft and hard factors; whether to give priority to either one or equal priority. A lean performance model was built with soft predictor variables comprising of quality leadership, group problem solving, training, worker empowerment and multi-skilling developing and hard predictor variables comprising of standardized operations, 5S, reorder point, supplier development and continuous flow. Although this study failed to find enough support for some of the factors, a few factors find enough evidence to be part of lean performance predictors.

Keywords: total quality, acceptance, lean performance, lean tools.

1. Introduction

The term 'Lean' has been mentioned and talked about by many management professionals and academicians for decades. It is even doubtful if there could be any personnel in the industrial world who do not know or at least have heard of the lean practices. This concept or practices which we now recognize as Lean was not a concept derived from any thesis or university at core. It was what Toyota has had been molding for the betterment of its organization and eventually later on ended up as an idol practice for the rest of the operational or rather precisely production entities in the world to comprehend. It is a generic process management philosophy derived from the Toyota Production System (TPS). However it is not because of Toyota that this term 'Lean' or the practices have got the fame it has now. It wasn't Toyota who threw the light upon this management philosophy we're used to today to the rest of the world.

John Krafcik is the man who actually coined the term 'Lean' in the year 1988 in his article 'Triumph of The Lean Production System' and also his master thesis at the MIT Sloan School of Management. Prior to this, even Toyota's counterparts in the United States and Europe were not much aware of this practice the Japan counterpart was culturing. Upon the revelation by John Krafcik, Toyota Company's (Japan counterpart) trial and error learning have evolved into a major management philosophy. After approximately 20 years, as the fruit for these remarkable production practices, Toyota Motor Corporation stood as the world's largest automobile manufacturer with \$220 billion in annual sales for over 9 million cars and trucks. On their journey to success, they've also shone the success path to many other companies and researchers indirectly via John Krafcik's revelation. It wasn't exactly Lean yet that propelled Toyota up to this distance towards success in the beginning; Just-in-Time (JIT) and Toyota Production System (TPS) which very much build the foundation of the Lean operations were the pillars held on by Toyota in the verge of beginning. Lean operations or management was then built up with all these

operational fragments they conceptualize and realize later on with time and experience (Krafcik and John, F. 1998).

Lean is too frequently being mentioned but somehow many do not mean it the way it purports to have been defined as. Some refers to JIT, Pull Manufacturing, Total Quality Management (TQM) as Lean. These are not what Lean actually is; these are some tools of Lean. People tend to define Lean itself based on the tools and importance or benefits of implementing the Lean practices: eliminate waste; reduce cycle and flow time; increase capacity; reduce inventories; increase customer satisfaction; eliminate bottlenecks; and improve communications. One of the good definitions of Lean, taken from the MainStream Management (Lean Consulting company) is "Lean is a systematic approach that focuses the entire enterprise on continuously improving quality, cost, delivery and safety by seeking to eliminate waste, create flow, and increase the velocity of the system's ability to meet customer demand" (Plenert G., 2007). The definition basically covers most of the need of an organization to grasp on efficiency and effectiveness also increases the degree of leanness.

Lean thinking is to identify the processes or functions in which lean practices could be implemented or to introduce some changes or alteration in the entire organization or operation. There are five simple principles which can be used as a guide to culture Lean thinking (Wu. Y. C., 2003).

1. Value; 2. Value Stream; 3. Flow; 4. Pull; 5.Perfection

After and during all these five principles are employed, tools are needed to ensure that the efforts are invested in the right manner to the right track. These tools are called as Lean tools which are used to reduce waste, increase quality; effectiveness and efficiency also increase in safety. Lean tools can be categorized into two based on its nature; hard tools and soft tools. Technical tools are called as the hard or tool factors whereas the soft tools are the cultural or human factors.

However, only a small fragment of the whole Lean implementation is about the technical implementation whereas the rest of it is about the acceptance by the organizational members. Industrialists and researchers have so far designed