EMPLOYEE PERCEPTION ON LEAN PRACTICES IN THE INTERNAL SUPPLY CHAIN PERFORMANCE

FONG SOON OON

DOCTOR OF BUSINESS ADMINISTRATION
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EMPLOYEE PERCEPTION ON LEAN PRACTICES IN THE INTERNAL SUPPLY CHAIN PERFORMANCE

By

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ABSTRACT

In today's highly competitive world where most businesses focus on cost and quality, organizations with efficient and effective supply chains are able to stand out with inherent competitive advantages. To achieve this, many organizations adopt lean practices which fundamentally stress on the elimination of non-value added tasks (such as unwanted transportation, extra processing, excess motion, repairs on defects, over production, excess inventory and incidents of waiting or delays). Nevertheless, the introduction of lean practices in any organization is often accompanied by changes in the working environment. These changes influence the people working there. This dissertation looks into the perceptions of the workers, in a case study site (a Japanese Multi-National Corporation situated in Penang, Malaysia producing semi-conductor devices), on the lean practices implemented in the internal supply chains. The study compared the perceptions using a self-administered questionnaire. Perceptions of those highly exposed to lean practices were compared against the perceptions of those with low exposure. A significant difference, in the perceptions of those who had high exposures to lean practices as compared to those with low exposures pertaining to the internal supply chain performances, was found. The perceptions obtained proved useful as empirical studies showed negative implications such as the deteriorations in employee emotions, attitudes, behaviors, commitments and turnovers. Moreover, the perceptions of the employees and the employers also did not match. Observations and interviews carried out are displayed in the paper to support and explain the findings. The body of knowledge from the empirical data collected in this study and its interpretation should prove useful for both academics exploring similar fields or leverages and practitioners keen on implementing lean practices or planning to learn from others. Actual cases of how lean practices affect the internal supply chains are quoted. These cases complement the many academic articles discussed throughout the dissertation. Useful recommendations have been put forth which could be used for improving the internal supply chain performances of other organizations. The recommendations encompass areas such as resource allocations, mind-set changes, trainings, personnel and lean practice implementation strategies.

Keywords: Lean Practices, Internal Supply Chain Performance, Lean Manufacturing
ABSTRAK


Kata kunci: Amalan Berhemat, Prestasi Rantaian Bekalan Dalaman, Pembuatan Berhemat

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<th>Full Form</th>
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<td>ANOVA</td>
<td>Analysis of Variance</td>
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<tr>
<td>CEO</td>
<td>Chief Executive Officer</td>
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<td>CFM</td>
<td>Cut Mark Form</td>
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<tr>
<td>df</td>
<td>Degree of Freedom</td>
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<td>EMP</td>
<td>Electronic Marketplaces</td>
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<tr>
<td>EOL</td>
<td>End of Line</td>
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<tr>
<td>ERP</td>
<td>Enterprise Resources Planning</td>
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<tr>
<td>FIFO</td>
<td>First in First out</td>
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<tr>
<td>FVI</td>
<td>Final Visual Inspection</td>
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<td>FOL</td>
<td>Front of Line</td>
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<td>ICT</td>
<td>Information and Communication Technology</td>
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<tr>
<td>iPS</td>
<td>Innovative Production System</td>
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<tr>
<td>ISO 9000</td>
<td>International System Organization 9000</td>
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<tr>
<td>IT</td>
<td>Information Technology</td>
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<tr>
<td>JIT</td>
<td>Just in Time</td>
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<tr>
<td>KIT</td>
<td>Kaizen Innovative Team</td>
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<tr>
<td>KPI</td>
<td>Key Performance Indicator</td>
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<tr>
<td>LCD</td>
<td>Liquid Crystal Display</td>
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<td>LSPS</td>
<td>Low Stage Power Supply</td>
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<tr>
<td>MD</td>
<td>Managing Director</td>
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<tr>
<td>MES</td>
<td>Manufacturing Execution System</td>
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<td>MIDA</td>
<td>Malaysian Industrial Development Authority</td>
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<td>MOL</td>
<td>Middle of Line</td>
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<td>MNC</td>
<td>Multi National Corporation</td>
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<td>MTBC</td>
<td>Mean Time Between Chokotei (&quot;Chokotei&quot;-Japanese word for Reset)</td>
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<td>NVA</td>
<td>Non-value adding</td>
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<td>NNVA</td>
<td>Necessary but non-value adding</td>
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<td>n</td>
<td>Sample Size</td>
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<td>OEE</td>
<td>Overall Equipment Efficiency</td>
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<td>OTRS</td>
<td>Operation Time Research Software</td>
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<td>Project</td>
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<td>PwTRS</td>
<td>Power Transistor</td>
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<td>QCC</td>
<td>Quality Control Circle</td>
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<td>RENESAS</td>
<td>Renaissance Semiconductor for Advanced Solutions</td>
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<td>RFID</td>
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<td>ROE</td>
<td>Return on Equity</td>
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<td>ROI</td>
<td>Return on Investment</td>
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<td>SGA</td>
<td>Small Group Activities</td>
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<td>Small and medium enterprises</td>
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<td>SMED</td>
<td>Single Minute Exchange of Die</td>
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<td>SPSS</td>
<td>Statistical Packages for the Social Sciences</td>
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<td>ST</td>
<td>Standard Time</td>
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<td>TAT</td>
<td>Turn around Time</td>
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<td>TPM</td>
<td>Total Preventive Maintenance</td>
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<td>TPS</td>
<td>Toyota Production System</td>
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<td>UOM</td>
<td>Unit of Measurement</td>
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<td>UK</td>
<td>United Kingdom</td>
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<tr>
<td>USA</td>
<td>United States of America</td>
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<tr>
<td>VA</td>
<td>Value Added</td>
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<td>VSM</td>
<td>Value Stream Mapping</td>
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<td>WIP</td>
<td>Work in Process</td>
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<td>ZD</td>
<td>Zero Defects</td>
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CHAPTER ONE: INTRODUCTION

1.1 Background of the Study

In today's level of unprecedented global competition, companies must stay competitive through improved manufacturing operations. To do so, the organizations need use its resources (such as human, machines etc) efficiently and effectively, which in literature is commonly known as lean manufacturing. Apart from this the organization need to not only use existing resources more efficiently, but creatively (Ahmed, 2009). Lean manufacturing (applying lean practices) has been used to improve the operational performance through eliminating waste or "muda" (in Japanese) where waste is anything other than the minimum amount of equipment, material, parts and working time, which are absolutely vital to production. The focal point of lean manufacturing is cost reduction through the elimination of waste, thereby improving profitability (Lynch, 2005). Despite wide knowledge and resources, many companies are struggling to become or stay lean (Taj & Morosan, 2011). As such companies need to evaluate or assess their current state of operations to see if the mutual beliefs, perceptions and informal obligations between the stakeholders are aligned or otherwise (Kickul, Scott & Belgio, 2004). Being aligned will give the organization a significant source of competitive advantage (Clutterbuck, 2005) in contrast to the negative effect of not being aligned. In fact empirical studies have shown the downward adjustments in various employee emotions, attitudes and behaviours, including organizational commitment (Lester, Turnley, Bloodgood & Bolino, 2002), increased turnover (Maertz & Griffeth, 2004), and increased deviant behaviors (Kickul, 2001) when there is misalignment.
The contents of the thesis is for internal user only
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Lee, C.W., Kwon, I.G., Severance, D., (2007)."Relationship between supply chain performance and degree of linkage among supplier, internal integration, and


*Journal of Systems and Information Technology*. 12 (3) 210-221.