

Impact of Lean and Agile on improving Business Performance: A Study on Sri Lankan Apparel Manufacturer

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Abstract

Revenue generated from apparel exports of Sri Lanka has steadily grown annually. Therefore the apparel industry needs to be further developed through new manufacturing process, strategies, and thoughts. Lean manufacturing (LM) and Agile manufacturing (AM) are fulfilling these requirements. Through the reviewed literature the investigations of impacts of both LM and AM on improving business performance using the balanced score card in an apparel manufacturing plant were rear to find. Hence the findings of this study would be benefited for the apparel manufactures which used both LM and AM for improving their business performances and to select a suitable method from either. The study has used secondary data which were collected from single plant to analyze the impact of the independent variables of production cycle time (delivery), defects per lot (quality), manufacturing cost per lot (cost), and changing product style (flexibility) on the dependent variable of business performance which was measured using the indicators of total production, customer complaints, and Return on Investment in both LM and AM environments. Findings were revealed that there was no significant difference of the average total production in LM and AM environments. Since AM can maintain the identical in the average total production while satisfying the customer requirements with wide selection of production quantities, moving towards it may increase the business performance. Moreover, the chance of making defects in a garment was low in AM environment as multi skilled workers and innovative machines were used in there. The average defects per lot were low in AM environment compared to LM environment. Also it was found that there was no difference between manufacturing cost between LM and AM environments. Finally it can conclude that the selected apparel manufacturer can improve its business performance by moving to AM. Furthermore, by producing flawless apparel to suit the changing needs of the customer and delivering it in a short period of time, the manufacturer would be able to enhance the business performance by delivering higher customer satisfaction.

Keywords: Agile Manufacturing, Apparel, Business Performance, Lean Manufacturing

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