

# Critical Success Factors Affecting the Successful Implementation of Industry 4.0 in the Sri Lankan Apparel Manufacturing Industry

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The Sri Lankan apparel manufacturing business, a major contributor to the country's export revenue, has been attempting to adopt industry 4.0. By implementing Industry 4.0, they intend to increase the productivity and efficiency of the shop floor and obtain a competitive edge. Only a few developing nations have been able to capture the maximum benefits of the fourth industrial revolution. The purpose of this study is to identify the critical factors that must be considered for the successful implementation of industry 4.0 in the Sri Lankan apparel manufacturing sector. Throughout the research, a quantitative approach was used. Initially, the six most significant critical factors and two moderating variables were determined by a review of prior research and the opinions of industry professionals. Partial Least Square – Structural Equation Modelling (PLS- SEM) was used to analyze the relationship between the factors. Greater financial investments, organizational strategy, workforce, a dynamic organizational culture, the involvement of top management, and the availability of IT infrastructure have a significant positive impact on the successful implementation of industry 4.0 in the Sri Lankan apparel manufacturing sector, as determined by the final findings of the data analysis. In addition, the availability and accessibility of support services have a significant positive moderating effect on financial investments, when successfully implementing industry 4.0 in the Sri Lankan apparel industry. In addition, the advancement of digital technologies has a significant positive moderating effect on financial investments and, a significant negative effect on organizational strategy and the involvement of top management when successfully implementing industry 4.0 in the Sri Lankan apparel industry. The outcomes of this study assist the managers of the Sri Lankan clothing manufacturing sector in comprehending the critical factors that must be considered when successfully implementing industry 4.0 technologies.

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