

**DEVELOPING A FRAMEWORK FOR CERTIFICATION  
OF ISO 9001 FOR THE ELECTRICAL EQUIPMENT  
MANUFACTURING INDUSTRY IN SRI LANKA**

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## **Declaration**

I declare that this is my own work and this thesis/dissertation does not incorporate without acknowledgement any material previously submitted for a Degree or Diploma in any other University or Institute of higher learning and to the best of my knowledge and belief, it does not contain any material previously published or written by another person except where the acknowledgment is made in the text. I retain the right to use this content in whole or part in future works (such as articles or books).

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The above candidate has carried out research for the Master's thesis/dissertation under my supervision. I confirm that the declaration made above by the student is true and correct.

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## Abstract

Implementing an effective Quality Management system (QMS) benefits organizations in many ways such as improving customer satisfaction, compliance, cost control, continuous improvement, effective decision-making, employee engagement, boosted revenue, etc. With the records available in the Sri Lanka Standards Institute (SLSI) and the experience gained by the author while conducting audits, it became evident that Sri Lankan electrical equipment manufacturers (EEM) are not geared to get certification for their entire production scope. Therefore, there is a need to encourage electrical equipment manufacturers to obtain ISO 9001 certification by removing the inertia to get the certification for the full production scope. However, no frameworks or similar tools are available to guide the manufacturers to obtain certification for the full scope. Therefore, this research focused on developing a framework to guide electrical equipment manufacturers to obtain 'ISO 9001 certification' for the entire scope of their production.

The information on the study was gathered by conducting a questionnaire survey to find the current implementation status of ISO 9001 certification for EEM and to identify the barriers to implementing such. Descriptive analysis and the Chi-Square test were used to sort significant barriers among 16 previously identified barriers categorized under five topics. The study revealed that all the barriers, that fell under the two categories, unawareness, and organization culture, significantly affect the level of implementation of ISO 9001 certification in EEM. The identified barriers were analyzed separately and a logical framework was developed. The Initial Framework proposed was validated by a questionnaire survey conducted among selected manufacturers before preparing the final framework. The validated framework is proposed to serve as a guideline to overcome the barriers of the EEM industry to obtaining full-scope ISO 9001 certification in Sri Lanka.

*Keywords— Quality management, ISO 9001, Implementation barriers, descriptive analysis, Logical framework*

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## **LIST OF ABBREVIATIONS**

ISO - International Organization for Standardization

EEM– Electrical Equipment Manufacturing

SLS - Sri Lanka Standards

SLSI - Sri Lanka Standards Institution

QMS – Quality Management System

HR – Human Resources

IEC – International Electro Technical Committee

EDB – Export Development Board

BOI - Board of Investment

PUCSL – Public Utilities Commission of Sri Lanka

EU – European Union

CE - The Conformité Européene (conformity with European health, safety, and environmental protection standards)

CENELEC - Commission Européenne de Normalisation Électrique (European Committee for Electrotechnical Standardization)