

**INTEGRATING CIRCULAR ECONOMY PRINCIPLES
INTO FASHION DESIGN: STRATEGIES,
CHALLENGES AND OPPORTUNITIES IN THE SRI
LANKAN APPAREL INDUSTRY**

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Master of Science in Textile & Clothing Management

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DECLARATION

I declare that this is my own work and this thesis/dissertation/project report does not incorporate without acknowledgment 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 in part in future works (such as articles or books).

November 2025

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Date:

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

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Signature of the Supervisor:

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Name of Supervisor: Dr. R P. Abeysooriya

Signature of the Supervisor:

Date:

DEDICATION

I would like to dedicate this thesis to my lecturers and supervisors, who have been my great source of support and inspiration throughout my academic journey. I would also like to express my gratitude to my thesis advisors, who provided valuable guidance and advice throughout this research thesis. This thesis would not have been possible without their support and guidance. Finally, I would like to dedicate this research work on behalf of all the participants who generously contributed their time and insights to this research. Their willingness to share their experience and expertise has been critical to the success of this research.

ACKNOWLEDGMENT

I would like to express my sincere appreciation to my supervisors and coordinators for their valuable support and guidance throughout this research project. Their expertise and insights have been instrumental in shaping the direction and scope of this research. I appreciate their patience, encouragement, and willingness to share their knowledge and experience. Their comments and suggestions were invaluable in the process of analyzing the project, presenting information research, and interpreting the results. I would like to thank them for allowing me access to the necessary resources and facilities to conduct this research. Without their support and encouragement, this work would not have been possible.

ABSTRACT

This study focuses on the strategic integration of Circular Economy (CE) principles into design and development stages of the export-oriented Fashion and Apparel manufacturing sector in Sri Lanka. This research focuses on approaches to sustainable design, including modularity, End-Of-Life management, design for disassembly, and the use of Biodegradable and recycled materials. It highlights the transition of manufacturing systems from linear to circular, as well as the impact of marketing strategies and supply chain alignments or constraints on these circular initiatives.

This study consists of 11 cases representing different apparel companies (denoted as cases A to K), which have been filtered to represent key actors in Sri Lanka's export apparel industry who are following the sustainable design approaches. The study employed a qualitative research design. For data collection, semi-structured interviews were conducted through 42 interviews with industry experts, including designers, developers, sourcing merchants, and officers in charge of sustainability. Following Braun and Clarke's (2006) framework, deductive thematic analysis was applied to detect cross-case patterns and linkages through themes in designing, supply Chain, and marketing Dimensions, referring to the sustainable design context.

Especially when considering export apparel manufacturing, this research will focus on the practical implementation of circular economy principles in developing nations such as Sri Lanka. Implementation of circular design strategies in apparel products requires stakeholder collaborations, consumer participation, new technology and the readiness of infrastructure. Furthermore, the study explores ways to facilitate sustainable design methods through marketing strategies and transparent sourcing practices. These insights aim to assist industry stakeholders and policymakers in establishing circular fashion systems in Sri Lanka and other relevant contexts.

Keywords: *Circular Design strategies, Supply chain collaborations, Sri Lankan Apparel Industry, Sustainability*

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LIST OF ABBREVIATIONS

Abbreviation	Description
CAD	Computer-Aided Design
CBM	Circular Business Models
CE	Circular Economy
EOL	End Of Life
PaaS	Product as a Service
RM	Raw Materials
SC	Supply Chain
SCM	Supply Chain Management

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