

**DEVELOPMENT OF A TECHNOLOGY TRANSFER
FRAMEWORK FOR THE BAKERY INDUSTRY IN SRI
LANKA**

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Master of Engineering in Manufacturing Systems Engineering

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DECLARATION

I declare that this is my own work, and this thesis does not incorporate without acknowledgement to any material previously submitted for a degree or diploma in any other university or institute of higher studies, 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.

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Name of the supervisor: Dr. J.R. Gamage

Signature of the supervisor:

Date:

ABSTRACT

In the global manufacturing context, Sri Lanka is still a developing country where the production sector is far behind the technological updates and upgrades compared to other countries. Almost 75% of enterprises in Sri Lanka belong to the small and medium categories and they contribute approximately 52% of the Gross Domestic Product of the Sri Lankan economy. For the timely development of the backbone of the economy of Sri Lanka, the SME sector should be empowered with advanced technologies. The bakery industry in the food manufacturing sector has experienced many obstacles in acquiring suitable technology transferred on time. There is a lack of evidence in research and practice in facilitating or promoting technology transfer in this industry. Thus, this research aims to develop a technology transfer framework for the bakery industry SMEs in Sri Lanka with the intention of uplifting the technologies used in the bakery industry.

A review of the literature and semi-structured interviews were used to gather the required information and develop the framework. This has been built-up to address the barriers to technology transfer in the bakery industry SMEs in Sri Lanka. It is found that around 57% of bakers are not aware of technology transfer. About 69% do not have experience with supportive companies of technology transfer. The research presents a validated technology transfer framework that could be used by the stakeholders in the bakery industry.

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LIST OF ABBREVIATIONS

Abbreviation	Description
TTF	Technology Transfer Framework
TTC	Technology Transfer Center
TTP	Technology Transfer Promoter
SMEs	Small and Medium Enterprises
GDP	Gross Domestic Product
IEEE	Institute of Electrical and Electronic Engineers
PRISMA	Preferred Reporting Items for Systematic Reviews and Meta-Analyses
ICT	Information and Communication Technologies
AHP	Analytic Hierarchy Process
PHI	Public Health Inspector
NHREP	National Human Resources, and Employment Policy
SED	Small Enterprises Development
SLSC	Sri Lanka Standards Certification
ROC	Registry Of Companies
ISO	International Organization for Standardization
GMP	Good Manufacturing Practices
RvA	Raad voor Accreditatie
ROI	Return on Investment
IDB	Industrial Development Board
SMED	Small Enterprise Development Board
KPI	Key Performance Indicator

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