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**THE CONTRIBUTION OF SHARED
KNOWLEDGE AND
INFORMATION TECHNOLOGY TO
MANUFACTURING PERFORMANCE**

**A STUDY AMONG MANUFACTURING, QUALITY AND
R&D GROUPS IN SRI LANKAN ENTERPRISES**

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DECLARATION

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ABSTRACT

Knowledge has been recognized long ago as an important asset for sustaining competitive advantage. Recently, many companies have identified the use of information technologies within an organization, as an important tool for managing or sharing organizational knowledge in order to improve business performance.

This research tests a conceptual model that evaluates the contribution of Shared Knowledge and Information Technology to the Manufacturing Performance, through a study among Manufacturing and Quality groups in the Sri Lankan manufacturing industry. Theoretically, this research stands upon the 'knowledge-based theory of the firm' (Sveiby, 1992) adapted by the rapidly growing knowledge-based services and knowledge-intensive industries. Survey data collected from 30 medium to large size industrial companies with a total of 60 manufacturing and quality groups, representing industrial sectors like ceramics, food and beverages, tyres, FMCG, chemical, electrical consumables, plastics, cables, tea etc., were analyzed to test the model.

As Shared Knowledge and Information Technology (IT) are central points of the investigation, Knowledge Management (KM) and specific IT Systems for supporting collaboration and knowledge-based work has been focused. The aim of the research is to connect both Shared Knowledge and Information Technology to the Manufacturing Performance.

Finally, conclusions are presented together with a reference to the research limitations and some managerial implications. Two main findings of the study –the contributions of (a) Shared Knowledge to the Manufacturing group performance, and (b) Information Technology to the Manufacturing group performance and Sharing Knowledge, are demonstrated. Manufacturing and Quality groups have the opportunity to increase shared knowledge and, in this manner, to positively affect Manufacturing Performance by developing Mutual Trust through IT-based communication, social interaction and common goal accomplishment.



LIST OF ABBREVIATIONS

ADSL	Asymmetric Digital Subscriber Line
ATM	Asynchronous Transmission Mode
APQC	American Production and Quality Centre
BP	Business Process
BPMS	Balanced Performance Measurement Systems
BPR	Business Process Re-Engineering
CEO	Chief Executive Officer
CBE	Comprehensive Benefit Estimation
COI	Cost of Information
COP	Community of Practice
DSS	Decision Support Systems
EDP	Electronic Data Processing
EDI	Electronic Data Interchange
EVA	Economic Value Added
IC	Intellectual Capital
IS	Information Systems
I-WAN	Internal – Wide Area Network
KM	Knowledge Management
KMP	Knowledge Management Processing
KSN	Knowledge Sharing Networks
LAN	Local Area Network
MT	Mutual Trust
MIS	Management Information Systems
OL	Organizational Learning
MP	Manufacturing Performance
PC	Personal Computer
QA	Quality Assurance
SK	Shared Knowledge
TQM	Total Quality Management

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