

**EVALUATION OF THE EFFECTIVENESS OF ERP  
SYSTEMS USED IN CONSTRUCTION CONTRACTOR  
ORGANIZATIONS IN SRI LANKA**

R.M.D.S. Rathnayake

179031 G

Degree of Master of Science in Project Management

Department of Building Economics

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Thesis/Dissertation submitted in partial fulfillment of the requirements  
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## **DECLARATION**

I declare that this is my own work and this 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 acknowledgement is made in the text.

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The above candidate has carried out research for the Masters Dissertation under my supervision.

Name of the supervisor: Ch.QS P.A.P.V.D.S. Disaratna

Signature of the supervisor:

Date:

## **ABSTRACT**

Enterprise resource planning (ERP) systems are getting increasingly popular in Sri Lanka and throughout the world due to the inherent benefits, they provide to corporate organizations in dealing with global challenges and market rivalry.

The purpose of this study was to make recommendations to improve the effectiveness of the ERP systems utilized in Sri Lankan construction contractor organizations. To fulfill the research aim, six objectives were established.

A complete literature survey and review was conducted by referring to journal articles, publications, and e-Journals to examine past research on ERP systems. An E Questionnaire was used to collect data. Quantitative data gathered using a convenient sampling approach were statistically analyzed. Engineers, project managers, architects, quantity surveyors, and accountants were the intended audience. Respondents were chosen from contractor organizations that had used ERP systems in the past. Using the Microsoft Excel program, data were analyzed and characteristics were prioritized in terms of criticality using the Relative Importance Index (RII).

Manual data collection, manual report creation, and access limits to important modules might all be highlighted as significant constraints to ERP use in construction contractor organizations in Sri Lanka.

To reap the full benefits of an ERP system, the system should be chosen after a thorough evaluation and analysis of the products on the market, including the cost of the product, license and maintenance fees, and the flexibility in changes/modifications and troubleshooting. Furthermore, ERP vendors should have a thorough awareness of the processes and procedures involved in Sri Lankan construction projects. Furthermore, all transactions linked to construction processes/activities must be completed using the ERP system rather than manual data gathering, and the ERP system must make it easy to acquire all relevant reports. Furthermore, consulting services need to be established to aid in the selection and deployment of ERP systems in Sri Lankan construction organizations.

Key words: Enterprise Resource Planning System, Benefits, Sri Lankan construction

## **DEDICATION**

This study is sincerely dedicated to my lovely family, my parents, my devoted wife, and my son, who have been a continual source of inspiration in my life. They have given me the motivation and discipline to undertake this work with enthusiasm and commitment. This endeavor would not be viable without their love and support.

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## **LIST OF ABBREVIATIONS**

ERP	- Enterprise Resource Planning
RII	- Relative Importance Index
IS	- Information Systems
KM	- Knowledge Management
ES	- Enterprise Systems
MRP	- Material Requirement Planning
IT	- Information Technology
ICT	- Information and Communication Technology
PMIS	- Project Management Information System
EV	- Earned Value
BPR	- Business Process Re-engineering
CE	- Concurrent Engineering
SMEs	- Small and Medium-Sized Enterprises