THE INFULENCE OF COMPLEXITIES OF ERP FOR EFFECTIVE IMPLEMENTATION AT MEDIUM SIZED COMPANIES IN SRI LANKA

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February 2012

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The Dissertation submitted to the Department of Civil Engineering of University of Moratuwa in partial fulfillment of the requirement for the Degree of Master of Business Administration in Project Management.

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Declaration

I hereby certify that this dissertation does not incorporate any unacknowledged or previously submitted material for a degree or diploma in any university, to the best of my knowledge and it does not contain any material previously published, written or orally communicated by another person except where due reference is made in the text.

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Abstract

Enterprise resource planning (ERP) software plays a critical role in today's cutting-edge business world. By bringing a company's different functions together into one large integrated system, an ERPsystem creates a plethora of opportunities for growth and increased productivity. Medium sized enterprises in the developed world are well ahead in their usage of ERP systems. However, the available studies pertaining to the use of ERP systems in developing countries reveal that, the medium scaled businesses in Sri Lanka are far behind in adaptation of ERP systems. Literature reveals that there are many significant factors contributing towards the said low level of adaptation. Out of the many factors identified, the complexity of ERP systems is one of a key contributing factor for the low adaptation of ERP systems in medium scaled enterprises in Sri Lanka.

The main objectives of this research are to identify the influencing factors that contribute towards the complexity of ERP for effective implementation, and to establish an ERP complexity index for the advancement of mid-sized companies in Sri Lanka.Further this research established some important recommendations for the acquisition and implementation of ERP systems for medium sized enterprises.

The research methodology used was quantitative data gathered via questionnaire surveys of ERP users in medium scaled enterprises in Sri Lanka.Secondary data was gathered from trusted internet sources and from previous researches carried out for information systems applications in Sri Lanka.For the survey 120 ERP users were selected from medium scaled enterprises and from IT experts who possess ERP knowledge and experience. Primary data constituted 91 responses gathered via the online survey published, face to face interviews, telephone interviews and printed copies of the survey, which was used for the sample validation.

Outcome of the research identified that the key contributing factors for the complexity of ERP systems are product dimension, people factor, project dimension and company business processes and there is a strong correlation among variables. Complexity analysis survey results revealed that SAP and Oracle records higher complexity index and Microsoft Dynamics and Web ERP records lower complexity indexes. Further secondary data revealed that SAP and Oracle records highest ERP per user cost. ERP's such as IFS Applications, Dynamics GP, and Sage Accpacc, Web ERP records less ERP per user cost compared to SAP and Oracle. As per the research analysis, customization of ERP system is another key concern apart from the above mentioned complexity and cost analysis in the ERP selection process for medium scaled businesses.

Key Words: Enterprise Resource Planning, Medium Scale Business, Complexity Index, SAP, Oracle, IFS Application, Dynamics GP, Sage Accpac, Cost Analysis.

Acknowledgement

I wish to express my gratitude to my research supervisor Prof. A.A.D.A.J. Perera, Professor, Department of Civil Engineering, University of Moratuwa for his continuous encouragement, guidance and support rendered during the period of this dissertation.

I deeply express my sincere gratitude and indebted thanks to all lecturers and academic staff members who provided the necessary assistance during the academic period. Further, my extended thanks go to the non-academic staff members who supported throughout the period.Also I express my sincere gratitude to Mr.Ahamed Shihan and Mr.Rifcky Jabbar general mangers from Dialog Telekom for making my path easy.

Also I wish to convey my highest appreciation and gratitude towards the ERP users who contributed to the survey by sacrificing their precious time and energy. Further I would like to convey my special gratitude to all friends and colleagues who helped me to gather information and helped me to find the contacts for ERP companies for this research.

In addition, I would like to thank my family members, my husband and my dear parents for fulfilling most of my responsibilities while I was attending to this most important task of my MBA course. Finally, my gratitude and deepest apologies are to my two little daughters, for the time I have stolen from them. Thank you very much Sandithmi and Janumi for bearing pains with me during past 2 years.

Thank You,

L S Ratnayake

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List of Abbreviations

ACM	:	Association for Computing Machinery
EDB	:	Export Development Board
ERP	:	Enterprise Resource Planning
FDCCI	:	Federation of Chambers of Commerce and Industry
IDB	:	Industrial Development Board
IS	:	Information Systems
IT	:	Information Technology
JIT	:	Just- in-Time
LOC	:	Lines of Code
MRP	:	Material Requirement Planning
NDB	:	National Development Bank
ROI	:	Return on Investment
SME	:	Small and Medium sized Enterprises
TCF	:	Technical Correction Factors
TCO	:	Total Cost of Ownership
UFP	:	Unadjusted Function Points