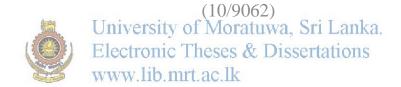
MANAGEMENT APPROACHES TO IMPROVE RETURNS ON INVESTMENT IN IT INFRASTRUCTURE IN THE INSURANCE INDUSTRY IN SRI LANKA

Weligama Palliya Guruge Drilishiya Priyadalshi Jayawardena



Thesis/Dissertation submitted in partial fulfillment of the requirements for the Master of Business Administration in Information Technology

Department of Computer Science & Engineering

University of Moratuwa Sri Lanka

March 2014

DECLARATION

I declare that this is my own work and this thesis/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.

Also, I hereby grant to University of Moratuwa the non-exclusive right to reproduce and distribute my thesis/dissertation, in whole or in part in print, electronic or other medium. I retain the right to use this content in whole or part in future works (such as articles or books).

W.P.G.D.P.Jayawardena
MBA/IT/109962
University of Moratuwa, Sri Lanka.
Electronic Theses & Dissertations
www.lib.mrt.ac.lk

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

Dr. Chandana Gamage (Supervisor)

Head of the department

Department of Computer Science and Engineering

University of Moratuwa

ABSTRACT

This study is focused on the current level of adoption of management approaches in the insurance sector in order to increase ROI in Information Technology (IT) infrastructure and the possibility of improving ROI by increasing the level of adoption of management approaches. The individual organizational context in which such adoption takes place can be described as a dichotomous environment: one characterized by a higher level of investment but poor returns (ROI) while other is characterized by a lower level of investment and no or lower returns. It is against this backdrop that this study seeks to investigate both the strategic and non-strategic significance of adopting management approaches to improve ROI. A combination of both strategic and non-strategic management approaches would be the most ideal for the achievement of long term organizational objectives. The insurance sector in Sri Lanka has been experiencing poor ROI concerning their investments in IT infrastructure. This study has found out a stronger correaltion between ROI and IT

adoption; and ROI and adoption of good management strategies.
University of Moratuwa, Sri Lanka
Electronic Theses & Dissertations

www.lib.mrt.ac.lk

ACKNOWLEDGEMENT

First and foremost, my sincere thanks go to my supervisor Dr. Chandana Gamage, Head of the department, Department of Computer Science and Engineering, University of Moratuwa, for his tireless efforts in supervising and guiding me from inception until my work is fully completed.

My sincere gratitude goes to Mrs. Vishaka Nanayakkara, Course Coordinator, Department of Computer Science and Engineering, University of Moratuwa for the inspiration given to her students which would remain with them for the rest of their lives.

I further extend my gratitude to the Department of Computer Science and Engineering, University of Moratuwa for giving me the opportunity to pursue a renowned MBA which indeed expanded the horizons of my knowledge, research capacity and analytical skills sity of Moratuwa, Sri Lanka.

Electronic Theses & Dissertations www.lib.mrt.ac.lk

W.P.G.D.P.Jayawardena MBA/IT/10/9062

TABLE OF CONTENT

DECLA	RATION	i
ABSTRA	ACT	iii
ACKNO	WLEDGEMENT	iv
TABLE	OF CONTENT	V
LIST OF	F FIGURES	viii
LIST OF	TABLES	ix
LIST OF	F ABBREVIATIONS	X
CTT DET		
	ER 1: INTRODUCTION	
1.1.	Background to the Study	
1.2.	Motivation for the Study	
1.3.	Research Problem	
1.4.	Research Objectives	
1.5.	Significance of the Study	
1.6.	Methodology	6
1.7.	Methodology University of Moratuwa, Sri Lanka. Nature and Form of the Results & Dissertations	7
1.8.	Scope and Research Limmitations	7
1.9.	Chapter Summary	8
CHAPT	ER 2: LITERATURE REVIEW	9
2.1.	Return on Investment and Related Concepts	9
2.1.1.	Contingency Theoretical Framework for ROI on IT	10
2.1.2.	Information Technology and ROI Correlation	12
2.2.	Strategic Management Approaches	12
2.3.	ROI on IT Infrastructure	12
2.3.1.	The Balanced Score Card	17
2.3.2.	IT Infrastructure in Sri Lanka's Insurance Sector	19
2.4.	Types of IT Infrastructure Development	20
2.4.1.	Infrastructure for Strategic Agility	22
2.4.2.	Information Technology and Productivity	23
2.4.3.	Business Organizational Value and IT	
2.5	Organizational Culture	24

2.6.	Organizational Change Management	26
2.7.	Porter's Value Chain Model for Insurance Industry	28
2.8.	Chapter Summary	30
СНАРТЕ	ER 3: METHODOLOGY	311
3.1.	Introduction	31
3.2.	Research Process	31
3.3.	Theoretical Research Framework	32
3.3.1.	Description of Variables	34
3.3.2.	Analysis of Variables	35
3.3.3.	Explanations of Relationships	36
3.3.4.	Analysis of Important Measures	37
3.4.	Conceptual Model for IT Infrastructure and ROI	37
3.4.1.	Hypothesis Development	38
3.5.	Research Strategy	40
3.6.	Primary Research	40
3.6.1.	Interviewing	41
3.6.2.	Preparation of Questionnaire	42
3.6.3.	Preparation of Questionnaire University of Moratuwa, Sri Lanka. dministration of Questionnaire Electronic Theses & Dissertations Survey Method in Administering the Questionnaire Www.llb.mrt.ac.lk	42
3.6.4.	Survey Method in Administering the Questionnaire	42
3.6.5.	Questionnaire Approach	43
3.7.	Qualitative Research	44
3.8.	Data Analysis Methods.	47
3.9.	Chapter Summary	47
СНАРТЕ	ER 4: DATA ANALYSIS AND RESULTS	48
4.1.	Introduction	48
4.2.	Reliability and Validity of the Data Set	48
4.2.1.	Cronbach's Alpha Outcomes	48
4.3.	Weight Analysis of Measurements of Variables	52
4.4.	Hypothesis Testing	56
4.4.1.	Analysis of Correlations	56
4.4.2.	Analysis of Variance or ANOVA	60
4.4.3.	Summary of Hypothesis Testing	63
4.5	Chanter Summary	65

CHAPTE	R 5: CONCLUSION AND RECOMMENDATIONS	66
5.1.	Introduction	66
5.2.	How far the Objectives of the Research have been Realized?	66
5.3.	Recommendations	68
5.3.1.	Recommendations to Insurance Organisations	68
5.3.2.	Recommendations to Industry	69
5.3.3.	Recommendations to Government	70
5.4.	Limitations and Future Directions	71
REFEREI	NCES	72
	IX I- OUESTIONNAIRE	



LIST OF FIGURES

Figure 2.1. Contingency Theoretical Framework for ROI on IT	10
Figure 2.2. ROI on IT Infrastructure in the SL Insurance Industry	15
Figure 2.3. Balanced Score Card Framework	18
Figure 2.4. Distribution of IT Initiatives at the Organisational Level	23
Figure 2.5. Porter's Value Chain Model for Sri anka's Insuarance Sector	30
Figure 3.1. Research Process	33
Figure 3.2. Theoretical Research Framework	34
Figure 3.3. Conceptual Model for IT Infrastructure and ROI	38



LIST OF TABLES

Table 3.1. Description of Variables	5
Table 3.2. Analysis of Variables	6
Table 3.3. Explanations of Relationships	7
Table 3.4. Analysis of Important Measures	8
Table 3.5. Hypothesis	\mathcal{O}
Table 4.1. Reliability Test Results	1
Table 4.2. Case Processing Summary-Return on Investment	2
Table 4.3. Reliability Statistics-Return on Investment	2
Table 4.4. Case Processing Summary-Customer Satisfaction	3
Table 4.5. Reliability Statistics-Customer Satisfaction	
Table 4.6. Case Processing Summary-Management Strategies	3
Table 4.7. Reliability Statistics- Management Strategies	3
Table 4.8. Case Processing Summary-Expenditure on IT Infrastructure	4
Table 4.9. Reliability Statistics-Expenditure on IT Infrastructure	4
Table 4.10. Case Processing Summary-IT Adoption	4
Table 4.11. Reliability Statistics-IT Adoption	4
Table 4.12 Case Processing Summary-Integration of IT Policies	5
Table 4.11. Reliability Statistics-IT Adoption University of Moratuwa, Sri Lanka. Table 4.12 Case Processing Summary-Integration of IT Policies Electronic Theses & Dissertations Table 4.13. Reliability Statistics-Integration of IT Policies WWW.lib.mrt.ac.lk	5
Table 4.14. Weightages for computing an aggregate value for Profits	5
Table 4.15. Weightages for computing an aggregate value for Company Revenue	
56	
Table 4.16. Weightages for computing an aggregate value for Productivity 5	7
Table 4.17. Weightages for computing an aggregate value for Expenditure on Infrastructure	
Table 4.18. Weightages for computing an aggregate value for Service Quality58	
Table 4.19. Weightages for computing an aggregate value for Change in Communication	n
Table 4.20. Correlations of Customer Satisfaction and ROI	ე
Table 4.21. Correlations of Adoption of Management Strategies and ROI 60	
Table 4.22. Correlations of Expenditure on IT Infrastructure and ROI	
Table 4.23. Correlations of IT Adoption and ROI	2
Table 4.24. Correlations of Integration of IT Policies and ROI	3
Table 4.25. One Way ANOVA Results64	
Table 4.26. Summary of Hypothesis Testing	

LIST OF ABBREVIATIONS

BSC Balance Score Card

CASIC Computer-Assisted Survey Information Collection

CIM Computer Integrated Manufacturing

CSR Corporate Social Responsibility

DIS **Digital Information Systems**

ERP Enterprise Resource Planning

HRM Human Resource Management

ICT Information and Communication Technology

IRR Internal Rate of Return

IS **Information System**

IT Information Technology

MPL Marginal Productivity of Labor

MRP Material Requirements Planning

Return On Capital Employed **ROCE**

University of Moratuwa, Sri Lanka.

Return On Investment
Electronic Theses & Dissertations
Strategic Human Resource Management ROI

SHRM

SRSM Simple Random Sampling Method

Value, Rarity, Inimitability and Organization **VRIO**