

125540

R.

# The Efficacy of the Management Information System on Performance of Tea Estates of the Regional Plantation Companies (RPC)

Signature of the Candidate

W.M.G.K.B. Weerasinghe



W.M.G. K. B. Weerasinghe

RJT/MBA/2014(A)/16



Research Thesis submitted to the Rajarata University of Sri Lanka in Partial Fulfilment for the Degree of Master of Business Administration, Faculty of Management Studies  
Rajarata University of Sri Lanka.

## ABSTRACT

The use of the management information systems has become necessary for any organization to improve efficiency, productivity, and improve performance in general. Although some of the Regional Plantation Companies have invested huge amount of money on introducing Management information Systems to their estates no proper study has been conducted to find out effect of Management Information Systems on the estate performance. The main objective of this study is to find out the efficacy of Management information systems success factors; Technology (System Quality, Information quality, Service Quality) organization (Top Management Support, User Training and Staff Support) people (Computer Self-Efficacy, and User Experience) on tea estate performance of Regional Plantation Companies in both Badulla and Nuwaraeliya district.

Primary data were collected through a self-developed structured questionnaire. Secondary data were collected through text books, journals, periodicals, and magazines. The Judgment sampling method was adopted to select 100 estate superintendents covering 10 Regional Plantation Companies who have converted their management information systems from manual to computer based information systems. Five-point Likert Scale Questionnaire was distributed among the sample selected.

The data obtained using questionnaires were entered in the SPSS 20.0 package for the purpose of statistical analysis. Descriptive statistic, Reliability test, Kaiser Meyer Were performed to analysis the collected data. Relationship between independent and dependent variable were tested by using correlation analysis test and Multiple Regression Analysis.

The test results indicated that there is positive correlation between technology, organization and people factor on estate performance. Findings of this study will be useful for the decision makers of the Regional Plantation Companies to identify the issues related to information systems and find solution to improve the systems by aligning Information technology strategy with business strategy, using data mining techniques to improve business intelligence and using data warehousing technique to aid business decision making. Regional Plantation Companies should develop strong information develop team to facilitate Manager and Staff to using the Information systems and training has to be provided in regular basis improve the skills and ability of both manager and Staff to use the system effectively.

## **Contents**

ABSTRACT .....	i
ACKNOWLEDGEMENTS .....	ii
TABALE OF CONTENT .....	iii
LIST OF ANNEXURES .....	vii
LIST OF TABLES .....	viii
LIST OF FIGURES .....	ix

## **Table of Contents**

CHAPTER ONE - INTORDUCTION .....	1
1.1 Introduction .....	1
1.2 Background of the Problem .....	1
1.3 Problem Statement .....	2
1.4 Research Questions .....	6
1.5 Research Objectives.....	6
1.5.1 General objective.....	6
1.5.2 Specific objectives.....	7
1.6 Research Method.....	7
1.6.1 Sampling Frame .....	7
1.6.2 Methods of Data Analysis .....	8
1.7 Significance of the Study .....	8
1.8 Limitation of the study.....	8
1.9 Chapter Organization .....	9
1.9.1 Chapter Two: Literature Review.....	9
1.9.2 Chapter 3: Methodology.....	9
1.9.3 Chapter Four: Result and Data Presentation .....	9
1.9.4 Chapter Five: Conclusion and Recommendation.....	9
CHAPTER TWO - LITERATURE REVIEW .....	10
2.1 Chapter Introduction .....	10
2.2 Historical Background of Tea Industry.....	10

2.2.1 Contributions to the National Economy by the Tea Industry .....	11
2.2.2 Sri Lanka Tea Export .....	12
2.2.3 Sri Lanka's Position in World Tea Production .....	12
2.2.4 Changes in Management of Plantations .....	13
<b>2.3 Management of the Plantation .....</b>	<b>13</b>
2.3.1 Muster Chit.....	16
2.3.2 Check roll .....	16
2.3.3 Labour Registers.....	17
2.3.4 Field Diary.....	17
2.3.5 Amalgamation Book.....	18
2.3.6 Holiday Pay Register.....	18
2.3.7 Factory Tea Book .....	18
2.3.8 Cycle Yield Book .....	18
2.3.9 Annual Estimate .....	18
2.3.10 Financial Accounts.....	19
<b>2.4 Management Information Systems .....</b>	<b>19</b>
2.4.1 Dimensions of Information Systems .....	19
<b>2.5 Information System Evaluation Frameworks .....</b>	<b>21</b>
2.5.1 Technology Acceptance Model.....	21
2.5.2 Information System Success Model .....	22
2.5.3 Task Technology Fit.....	29
<b>2.6 Models of information systems.....</b>	<b>34</b>
2.6.1 Impact of management information system adoption in managerial decision making .....	34
	36
2.6.2 The Respective and Combined effect of Information System, System Quality, Information Quality and Service Quality on Organizational Impact .....	36
2.6.3 The Relationship Between Technology Factor, Organizational Factor and People Factor with Organizational Performance.....	37
<b>2.7 Empirical Evidence .....</b>	<b>39</b>
2.7.1 System Quality-Net Benefits.....	39
2.7.2 Information Quality-Net Benefits .....	40
2.7.3 Service Quality-Net Benefits.....	41
2.7.4 Use-Net Benefits .....	42

2.7.5 User Satisfaction-Net Benefits .....	43
2.7.6 Effect of MIS Quality on Information Quality, Perceived Usefulness, and Decision Maker's Satisfaction.....	43
2.7.7 Effect of Top Management Support on Perceived Usefulness, and Decision Makers' Satisfaction.....	44
2.7.8 Effect of Decision Maker's Satisfaction on Managerial Decision Making.	44
2.7.9 Information System and its Impact on User's Job and Task Performance .	45
2.7.10 Information System Impact and User Performance .....	46
2.7.11 User Satisfaction and User Performance.....	46
2.7.12 Factor Affecting and User Performance.....	46
2.7.13 Measuring Information System Impact on User Performance.....	47
2.7.14 Approach Used to Measure Information System Impact on User Performance.....	48
2.8 Chapter summary .....	48
<b>4.2 Demographic Variables and their Impact Factor.....</b>	49
<b>CHAPTER THREE - METHODOLOGY .....</b>	49
3.1 Introduction to the chapter .....	49
3.2 Conceptual Framework .....	49
3.3 Hypotheses .....	50
3.4. Operationalization of the Variables .....	51
3.5 Data Source .....	53
3.6 Research Design.....	54
3.6.1 Population and Sampling.....	54
3.7 Instrument Development.....	55
3.7.1 System Quality .....	56
3.7.2 Information Quality.....	56
3.7.3 Service Quality .....	56
3.7.4 Top Management Support.....	57
3.7.5 User Training.....	57
3.7.6 Staff Support and Assistance.....	58
3.7.7 Computer Self-Efficacy.....	58
3.7.8 User Characteristic .....	58
3.7.9 Net Benefit .....	59
3.7.10 Quality of Managerial Decision Making.....	59

3.7.11 Productivity .....	60
3.8 Reliability of Scales and Validity of Data .....	60
3.9 Reliability Test for Pilot Test.....	61
3.10 Kaiser-Meyer-Olkin (KMO) Test for Sampling Adequacy .....	61
3.11 Descriptive statistics .....	61
3.12 Correlation Analysis .....	62
3.13 Multiple Regression Analysis .....	62
3.14 Chapter summary .....	63
<b>CHAPTER FOUR - RESULT AND DATA PRESENTATION .....</b>	<b>64</b>
4.1 Introduction.....	64
4.2 Kaiser-Meyer-Olkin (KMO) Test for Sampling Adequacy .....	65
4.3. Demographic Statistics for Demographic factor.....	66
4.3.1 Company wise response rate .....	66
4.3.2 District Wise Response Rate .....	66
4.3.3 Demographic Data - Position .....	67
4.3.4 Demographic Data - Age.....	68
4.3.5 Demographic Data - Experience .....	69
4.3.6 Demographic Data - Educational Level .....	70
4.4 Correlation analysis between Technology Factors, Organizational Factors and People Factors and Estate Performance .....	70
4.4.1 Correlation analysis between Technology Factor and Estate Performance	71
4.4.2 Correlation analysis between organizational factor and estate performance .....	72
4.4.3 Correlation analysis between People factor and estate performance .....	72
4.5 Multiple regression analysis.....	73
4.6 Chapter summary .....	75
<b>CHAPTER FIVE - CONCLUSION AND RECOMANDATION .....</b>	<b>76</b>
5.1 Introduction.....	76
5.2 Key finding and Discussion .....	76

5.2.1 Technology factor and estate performance .....	76
5.2.2 Organizational factor and estate performance.....	77
5.2.3 People factor and estate performance.....	77
5.3 Recommendations.....	78
5.4 Recommendations for Future Studies .....	79

**Table 2.3 Sri Lanka's Potential in Level of the Production** ..... 13

### **List of Annexure**

Table 2.1 District and Sector wise Response Rate at District Level .....	16
--------------------------------------------------------------------------	----

Annexure 1 Covering Letter .....	xxv
Annexure 2 Questionnaire .....	xxvi
Annexure 3 Frequency Tables .....	xxix

**Table 4.1 Reliability Test** ..... 65

**Table 4.2 Kuder - May / Oliff (KMO) Test for Sampling Adequacy** ..... 66

**Table 4.3 District wise Response Rate** ..... 67

**Table 4.4 Demographic Analysis** ..... 67

**Table 4.5 Correlation Analysis between Technology Factors, Organisational Factors, People Factors and Estate Performance** ..... 71

**Table 4.6 Hypothesis testing result for Estate Performance and Technology Factor** ..... 72

**Table 4.7 Hypothesis Testing Result for Organisational Factor and Estate Performance** ..... 72

**Table 4.8 Hypothesis Testing Results for People Factor and Estate performance** ..... 73

**Table 4.9 Multiple Regression Analysis** ..... 74