A STUDY ON THE VALUE OF MOTIVATION STRATEGIES AND PRACTICES FOR THE PRODUCTIVITY IMPROVEMENT IN THE SRI LANKAN SOFTWARE INDUSTRY

K.K. Sonal Jayawardene

(09/9062)



In

Information Technology

Department of Computer Science & Engineering

University of Moratuwa

Sri Lanka

December 2012

A STUDY ON THE VALUE OF MOTIVATION STRATEGIES AND PRACTICES FOR THE PRODUCTIVITY IMPROVEMENT IN THE SRI LANKAN SOFTWARE INDUSTRY

K.K. Sonal Jayawardene

(09/9062)



Thesis/Dissertation submitted in partial fulfillment of the requirements for the degree

Master of Business Administration in Information Technology

Department of Computer Science & Engineering

University of Moratuwa

Sri Lanka

December 2012

Declaration

I hereby certify that this is my own work and this dissertation does not incorporate without acknowledgement and 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 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.

The research work was done under the guidance of supervisors, Mr. Dhananjaya Rajapaksha, Chief Executive Officer, Brandix Casualwear Ltd and Dr. Chandana Gamage, Head of Department of Computer Science and Engineering, University of



University of Moratuwa, Sri Lanka. Electronic Theses & Dissertations www.lib.mrt.ac.lk

K.K. Sonal Jayawardene

Date:

In my capacity as a supervisor of the candidate's thesis, I certify that the above statements are true to the best of my knowledge.

Research Supervisor Mr. Dhananjaya Rajapaksha Chief Executive Officer, Brandix Casualwear Ltd. Date:

Research Supervisor Dr. Chandana Gamage Head of Department of Computer Science and Engineering, University of Moratuwa. Date:

Acknowledgement

This dissertation would not have been possible without the guidance and the help of several individuals who contributed and extended their valuable assistance in preparation and completion of this research study.

I would like to take this opportunity to convey my heartiest gratitude to my supervisors Mr. Dhananjaya Rajapaksha, Chief Executive Officer, Brandix Casualwear Ltd. and Dr. Chanadana Gamage, Head of Department of Computer Science and Engineering, University of Moratuwa. I am grateful to them for spending their valuable time to guide me throughout this research. Thank you for encouraging and understanding me in very difficult situations, showing the correct path and guiding me towards the end.

I am obliged to many of my colleagues at IFS who supported me in this endeavor. I am indeed thankful for all the participants who sent their responses to my surveys in order to make this research a true success.

Last but not the least, mix teepi appreciation goes warm & to ving twife. Gayathri and my family who have been contraging and supporting Distorgive in the least contribution to complete this research www.lib.mrt.ac.lk

Abstract

The software industry is unique in that it is a highly knowledge intensive industry. Improving the productivity of knowledge workers is one of the major challenges for the present day software development business world. The motivation of workers in software industry is considered to be the factor having the largest impact on productivity of software engineers and continues to be undermined by many of the processes and methodologies in software industry. The management often assumes that all their employees are motivated by the same things, but in reality it is more likely that employees are motivated by a whole range of factors.

If the management does not know what motivates their employees to turn up for work every day, how can they expect their workers to perform well? The purpose of this research is to study the value of motivation strategies and practices for the productivity improvement in the Sri Lankan software industry. For this purpose three surveys were used in this empirical research study.

In the first stage of this research, the most critical motivation strategies and practices used in the Sri Lankan software industry were determined through a survey questionnaire. This data gathering survey also identified the various methods under each motivational strategy with the prioritizations of their usage. The second survey questionnaire was developed on the basis of the first survey observations and it was invented to measure the perceptions the respondent workers have on motivation strategies, practices, line management activities and employee productivity. The final survey was used to get the perception of management on employee productivity to further validate the research results.

The survey results highlighted the fact that fair wages was the top ranked motivating factor and the financial impact of the productivity was the main' focusing area of the employees' productivity in the industry. Further more the research results revealed that there is a strong positive relationship between motivation strategies and the employee productivity and there is a positive relationship between line management activities and the employee productivity.

The research strongly emphasized that there are several areas to be improved for the line management activities and the employees' productivity. It is expected that the research results would be a significant contributution to further emphasize the value of motivation strategies and pracrices for the productivity improvement of employees in the Sri Lankan software industry.

Keywords

Motivation Strategies and Practices

Productivity

Strategic Human Resource Management

Line Management



University of Moratuwa, Sri Lanka. Electronic Theses & Dissertations www.lib.mrt.ac.lk

TABLE O	DF CONTENTS
---------	--------------------

DeclarationI
AcknowledgementII
AbstractIII
KeywordsIV
Table of ContentsV
List of FiguresVIII
List of TablesX
List of AbbreviationsXII
CHAPTER 01 INTRODUCTION1
1.1 Background and Motivation11.2 Problem Statement31.3 Research Objectives51.4 Importance and Benefits of the Study61.5 Chapter Summary Iversity of Moratuwa, Sri Lanka.6
CHAPTER 12 LITERATURE REVIEW WWW.lib.mrt.ac.lk 2.1 Exploring Motivation Strategies and Practices
2.2 Motivation in Software Industry 19 2.3 Multicultural Workforce 20
2.4 Productivity
2.5 Productivity Measurements 22 2.5.1 Physical Productivity 23 2.5.2 Functional Productivity 24 2.5.3 Economic Productivity 24
2.6 Organizational Productivity 24 2.6.1 Balanced Scorecard (BSC) 25 2.6.2 Key Performance Indicators (KPI) 25
2.7 Measuring Employee Productivity 26 2.8 Motivation and Productivity 30 2.9 Workplace Productivity 33
 2.10 Human Resource Management Practices on Employee Productivity
2.15 Chapter Summary

CHAPTER 03 RESEARCH DESIGN4	42
3.1 Nature of the Study	42
3.2 Research Approach	
3.3 Conceptualizing of Variables	
3.3.1 Selection of Independent Variables	
3.3.2 Selection of Dependent Variables	
3.3.3 Selection of Intervening Variables	
3.4 Theoretical Framework	
3.5 Operationalizing of Variables	
3.5.1 Dimensions of Independent Variable - Motivation Strategies and Practices	
3.5.2 Dimensions of Dependent Variable - Employee Productivity	
3.5.3 Dimensions of Intervening Variable - Line Management Activities	
3.5.4 Aggregation Strategy for Variables	
3.6 Hypothesis Development	
3.7 Sampling Design	
3.8 Methodology	
3.9 Method of Data Analysis	
3.10 Nature and Form of the Results	
3.11 Facilities and Resources Required	
3.12 Chapter Summary	52
CHAPTER 04 DATA COLLECTION AND ANALYSIS	63
11 Introduction	()
4.1 Introduction	33 (1
4.2 Stages of Data Analysis Process Another and Dispute firms	54 66
4.3 Motivation Strategies and Practicesses & Dissertations	36 - 4
4.4 Employee Productivity ib mrt. ac.1k 4.5 Line Management Activities	/1 72
4.6 Characteristics of the Sample	72
4.6.1 Designation	72
4.6.2 Level of Educational Qualification7	
4.6.3 Organization Experience	
4.6.4 Industry Experience	
4.6.5 Age	
4.6.6 Gender	77
4.6.7 Marital Status	78
4.7 Analysis of Motivation Strategies and Practices on Employee Productivity	
4.7.1 Observations on Motivation Strategies and Practices	
4.7.2 Interpretation on Motivation Strategies and Practices	
4.8 Analysis of Line Management Activities on Employee Productivity	
4.8.1 Observations on Line Management Activities	
4.9 Analysis of Employee Productivity	
4.10 Integrity of the Variables	
4.10 Discussion of the Variable: Employee Productivity	
4.11 Discussion of the Variable. Employee Floductivity	
4.12 Association between Eine Management Activities and Employee Productivity10 4.13 Association between Motivation Strategies, Practices and Employee Productivity10	
4.13 Association between worvation strategies, ractices and Employee Froductivity10 4.14 Chapter Summary	

CHAPTER 05 DISCUSSION	112
5.1 Motivation Strategies and Practices in Software Industry	112
5.2 Critical Motivation Strategies and Practices in the Sri Lankan Software Industry	
5.3 Line Management Activities	115
5.4 Employee Productivity	
5.5 Association between Line Management Activities and Employee Productivity	
5.6 Association between Motivation Strategies, Practices and Employee Productivity.	119
CHAPTER 06 CONCLUSION AND RECOMMENDATIONS	120
6.1 Conclusion	120
6.2 Recommendations	121
6.3 Limitations of the Study	122
6.4 Directions for Future Research	122
REFERENCES AND BIBLIOGRAPHY	124
APPENDIX A: Survey 1 – Motivation Strategies and Practices and Employee	
Productivity in the Sri Lankan Software Industry	128
APPENDIX B: Survey 2 – Motivation Strategies and Practices for the	126
Productivity Improvement in the Sri Lankan Software Industry	136
APPENDIX C: Reliability and Factor Analysis of Survey 2	146
APPENDLY Descriptive Statistics of Survey 2. Electronic Theses & Dissertations	151
APPENDIX E: Survey 3 Employee Productivity in the Sri Lankan Software	
Industry	154
APPENDIX F: Reliability and Factor Analysis of Survey 3	163
And LANDIAN I CAMPBINING and Factor Amarysis of Survey Summersmanning	103
APPENDIX G: Descriptive Statistics of Survey 3	165

List of Figures

Figure 1-1: Software Workforce in Sri Lanka
Figure 1-2: Estimated Exports in Sri Lanka
Figure 2-1: Categorization of Motivation Strategies
Figure 2-2: Motivation Strategies with Management
Figure 2-3: Productivity Formula
Figure 2-4: Simple Model of Productivity
Figure 2-5: Porter and Lawler's Model of Motivation and Performance
Figure 2-6: Motivating Factors for Environmental Performance
Figure 2-7: A Simple Model of HRM and Performance
Figure 3-1: Research Approach
Figure 3-2: Theoretical Framework
Figure 4-1: Stages of Data Analysis Process
Figure 4-2: Designation
Figure 4-3: Level of Education Qualification
Figure 4-4: Organization Experience
Figure 4-5: Industry Experiencesity of Moratuwa, Sri Lanka
Figure 4-6 Age Group Electronic Theses & Dissertations 77
Figure 4-7: Cender www.lib.mrt.ac.lk 77
Figure 4-8: Marital Status
Figure 4-9: Responses for Motivation Strategies and Practices
Figure 4-10: Responses on Fair Wage
Figure 4-11: Responses on Rewards and the Promotional Opportunities
Figure 4-12: Responses on Recognition
Figure 4-13: Responses on Relationship with the Supervisor
Figure 4-14: Responses on Management Support
Figure 4-15: Responses on Performance Feedback
Figure 4-16: Responses on Appreciation
Figure 4-17: Responses on Career Path
Figure 4-18: Responses for Line Management Activities
Figure 4-19: Responses on Line managers' Awareness
Figure 4-20: Responses on Performance Evaluation
Figure 4-21: Responses on Providing Technical Expertise
Figure 4-22: Responses on Credibility and Accountability of Line Manager

Figure 4-23: Responses for Employee Productivity	96
Figure 4-24: Responses on Saving Time	96
Figure 4-25: Responses on Productivity from a Financial Perspective	97
Figure 4-26: Responses on Loyalty	98
Figure 4-27: Responses on Motivation to Work	99
Figure 4-28: Scatter Plot for Line Management Activities vs. Employee Productivity 1	.05
Figure 4-29: Scatter Plot for Motivation Strategies, Practices vs. Employee Productivity . 1	10



University of Moratuwa, Sri Lanka. Electronic Theses & Dissertations www.lib.mrt.ac.lk

List of Tables

Table 3-1: Selection of Independent Variables	15
Table 3-2: Selection of Dependent Variables	45
Table 3-3: Dimensions of Independent Variable	48
Table 3-4: Dimensions of Dependent Variable	51
Table 3-5: Dimensions of Intervening Variable	54
Table 3-6: Aggregation Strategy for Variables	56
Table 3-7: Sample Design	58
Table 3-8: Employee Survey-Structure of the Questionnaire	59
Table 4-1: Observations: Motivation Strategies and Practices	56
Table 4-2: Observations: Rewards and Pay	57
Table 4-3: Observations: Provide Better Working Environment	57
Table 4-4: Observations: Type of Work	58
Table 4-5: Observations: Sense of Responsibility and Ownership	58
Table 4-6: Observations: Recognition	59
Table 4-7: Observations: Top Management Support	59
Table 4-8: Observations: Freebackity of Moratuwa, Sri Lanka.	59
Table 4-9: Observations Redesigning Jobseses & Dissertations	
Table 4-10: Observations: Career Development and Opportunity	70
Table 4-11: Observations: Flexibility	71
Table 4-12: Observations: Subjective Productivity Measurement Type	72
Table 4-13: Designation 7	72
Table 4-14: Level of Education Qualification	74
Table 4-15: Organization Experience	75
Table 4-16: Industry Experience 7	76
Table 4-17: Age Group 7	77
Table 4-18: Gender	78
Table 4-19: Marital Status 7	78
Table 4-20: Survey Questions: Motivation Strategies and Practices	30
Table 4-21: Item Statistics: Motivation Strategies and Practices	32
Table 4-22: Survey Questions: Line Management Activities 8	39
Table 4-23: Item Statistics: Line Management Activities) 0
Table 4-24: Survey Questions: Employee Productivity) 4
Table 4-25: Item Statistics: Employee Productivity) 5

Table 4-26: Variable Integrity Levels 100
Table 4-27: Descriptive Statistics: Perception on Employee Productivity 101
Table 4-28: First Hypothesis 102
Table 4-29: Correlations for Line Management Activities and Employee Productivity 102
Table 4-30: Regression for Line Management Activities and Employee Productivity 103
Table 4-31: Coefficients of Line Management Activities vs. Employee Productivity 104
Table 4-32: Second Hypothesis 106
Table 4-33: Correlations for Motivation vs. Employee productivity 107
Table 4-34: Regression for Motivation vs. Employee Productivity
Table 4-35: Coefficients for Motivation vs. Employee Productivity
Table 5-1: Critical Motivation Strategies and Practices 113



University of Moratuwa, Sri Lanka. Electronic Theses & Dissertations www.lib.mrt.ac.lk

List of Abbreviations

BSC	- Balanced Scorecard
HR	- Human Resource
HRM	- Human Resource Management
ICT	- Information and Communication Technology
ICTA	- Information and Communication Technology Agency
IEC	- International Electrotechnical Commission
IEEE	- Institute of Electrical and Electronics Engineers
ISO	- International Organization for Standardization
IT	- Information Technology
KPI	- Key Performance Indicators
SHRM	- Strategic Human Resource Management
SLICTA	Sri Lanka Information and Communication Technology Association
SPSS	Statificar package Theses can Dissertations
SD	- Strongly Disagree
D	- Disagree
Ν	- Natural
А	- Agree
SA	- Strongly Agree