

**ANALYSIS OF CONSUMER ADOPTION OF
E-STATEMENT SERVICES OF A SRI LANKAN
ORGANIZATION IN TELECOMMUNICATION
INDUSTRY**

Balapitiya Hewage Thilini Shanika Gunaratne

229106A

Master of Business Administration in IT

Department of Computer Science and Engineering

University of Moratuwa
Sri Lanka

August 2024

ANALYSIS OF CONSUMER ADOPTION OF E-STATEMENT SERVICES OF A SRI LANKAN ORGANIZATION IN TELECOMMUNICATION INDUSTRY

Balapitiya Hewage Thilini Shanika Gunaratne

229106A

Dissertation submitted in partial fulfillment of the requirements for the
degree
Master of Business Administration in IT

Department of Computer Science and Engineering

University of Moratuwa
Sri Lanka

August 2024

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. I retain the right to use this content in whole or part in future works (such as articles or books).

Signature:

Date: 05-Aug-2024

The supervisor should certify the Dissertation with the following declaration.

The above candidate has carried out research for the Master of Business Administration in IT Dissertation under my supervision. I confirm that the declaration made above by the student is true and correct.

Name of Supervisor: Dr. Buddhika Karunaratne

Signature of the Supervisor:

Date: 05/08/2024

DEDICATION

To my unwavering pillar of strength in life, who illuminates every step of my way...

ACKNOWLEDGEMENT

I would like to express my heartfelt appreciation to everyone who supported me in completing this study on "Improving Customer Adoption of e-statement Services of a Sri Lankan Organization in the Telecommunication Industry".

I sincerely appreciate my supervisor, Dr. Buddhika Karunaratne, Senior Lecturer in the Department of Computer Science and Engineering at the University of Moratuwa, for his continued guidance, encouragement, and support until the completion of my studies.

Furthermore, I want to thank all of the lecturers and supervisors who assisted me throughout my study. I'd also want to thank the subject matter experts of the industry, for sharing their expertise and recommendations for the study, as well as all of the questionnaire respondents for providing me with the necessary insights.

ABSTRACT

Consumers' adoption of electronic statements (e-statements) has become increasingly prevalent, especially in the realm of telecommunication services. This research investigates the key factors influencing the adoption of e-statement services within a telecommunication organization operating in Sri Lanka. Drawing upon the theoretical framework of the Technology Acceptance Model (TAM), the study seeks to identify and measure the determinants of consumer adoption behavior towards e-statements. The research relies primarily on quantitative analysis and was undertaken to assess the variables of perceived ease of use, perceived utility, perceived risk, awareness, and behavioral intention affecting the adoption of e-statement services. .

The study's key findings provide insight into the relative impact of these variables in affecting customer attitudes and behaviors toward e-statement adoption. The implications of these findings have been investigated in terms of improving consumer adoption to e-statement services in Sri Lanka's telecommunications industry. The findings contribute to both theoretical advances in technology adoption studies and practical strategies for increasing consumer adoption of e-statement services.

Keywords: consumer adoption, e-statement services, Technology Acceptance Model

TABLE OF CONTENTS

Declaration of the Candidate & Supervisor	i
Dedication	ii
Acknowledgement	iii
Abstract	iv
Table of Contents	v
List of Figures	viii
List of Tables	ix
List of Abbreviations	ix
List of Appendices	xi
1 Introduction	1
1.1 Background	1
1.2 Motivation	2
1.3 Problem Statement	3
1.4 Research Objectives	3
1.5 Research Significance	4
1.6 Outline	4
2 Literature Review	5
2.1 Chapter Introduction	5
2.2 Electronic Invoice Presentment and Payment	5
2.2.1 Definition	5
2.2.2 Development of Electronic Statements and Payment	5
2.3 Compliance and Regulations in Electronic Invoice Presentment and Payment	7
2.4 Benefits of Electronic Invoice Presentment and Payments	8
2.5 Framework on Technology Acceptance	9
2.5.1 Technology Acceptance	9
2.6 Consumer Adoption of Electronic Invoice Presentment and Payments	13

2.6.1	Behavioral Intention	13
2.6.2	Perceived Ease of Use	14
2.6.3	Perceived Usefulness	15
2.6.4	Perceived Risk	16
2.6.5	Awareness	17
2.7	Summary	19
3	Methodology	20
3.1	Chapter Introduction	20
3.2	Research Methodology	20
3.3	Conceptual Framework	21
3.4	Variables Identified on Consumer Adoption of e-statement Service Facilities	22
3.5	Hypothesis Development	23
3.6	Data Collection	24
3.7	Interview Design	25
3.8	The Design of Questionnaire	25
3.9	Target Population	26
3.10	Summary	26
4	Data Analysis	27
4.1	Chapter Introduction	27
4.2	Data Analysis of Interview	27
4.3	Data Preparation for the Study	30
4.4	Reliability Analysis	31
4.4.1	Reliability Test; Cronbach's Alpha value	32
4.4.2	Reliability Test; Inter-item Correlation	33
4.5	Descriptive Analysis	36
4.5.1	Descriptive Analysis of Age	36
4.5.2	Descriptive Analysis of Gender	37
4.5.3	Descriptive Analysis of Geographical Location	37
4.5.4	Descriptive Analysis of Educational Level	38

4.5.5	Descriptive Analysis of Consumer Familiarity and the Engagement with e-statement Services	40
4.5.6	Perceived Ease of Use	43
4.5.7	Perceived Usefulness	44
4.5.8	Perceived Risk	44
4.5.9	Awareness	45
4.5.10	Behavioral Intention	46
4.6	Hypothesis Testing	46
4.6.1	Perceived Ease of Use	46
4.6.2	Perceived Usefulness	47
4.6.3	Perceived Risk	47
4.6.4	Awareness	48
4.6.5	Behavioral Intention	48
4.7	Relationship with Factors Affecting Adoption of e-statement Services	49
4.7.1	Relationship Modelling	49
4.8	Summary	58
5	Discussion and Conclusion	59
5.1	Chapter Introduction	59
5.2	Discussion	59
5.3	Recommendations	64
5.4	Research Limitations	65
5.5	Future Research Directions	66
	References	67
	Appendix A Interview Questions	72
	Appendix B Questionnaire	73
	Appendix C Regression Analysis	80

LIST OF FIGURES

Figure	Description	Page
Figure 1.1	Modes of e-statement service presentment	2
Figure 2.1	The Theory of Reasoned Action (Fishbein et al., 1975)	9
Figure 2.2	The Theory of Planned Behaviour(Chau and Hu, 2002)	10
Figure 2.3	Technology Acceptance Model(Davis, 1989)	11
Figure 2.4	Unified Theory of Acceptance and Use of Technology(Venkatesh et al., 2003)	12
Figure 3.1	Research methodology	21
Figure 3.2	Conceptual framework	22
Figure 4.1	The distribution of age group of survey respondents	37
Figure 4.2	The distribution of gender of survey respondents	38
Figure 4.3	The distribution of geographical location of survey respondents	39
Figure 4.4	The distribution of educational level of survey respondents	39
Figure 4.5	The distribution of occupation of survey respondents	40
Figure 4.6	The distribution of consumer lifespan of using SLTMobitel fixed line services of survey respondents	41
Figure 4.7	The distribution of the user subscription of e-statement services of survey respondents	42
Figure 4.8	The distribution of frequency in accessing e-statement services of survey respondents	42
Figure 4.9	The distribution of method of accessing e-statement services of survey respondents	43
Figure 4.10	The distribution of past frustrating experiences with e-statement services of survey respondents	44
Figure 4.11	The distribution of effectiveness in awareness campaigns of e-statement services of survey respondents	45
Figure 4.12	Visualization of the relationship between the selected variables of the study	51
Figure 4.13	Identified factors of the study	52
Figure C.1	Pearson correlation of independent variables	80
Figure C.2	Multicollinearity coefficients - untreated	81
Figure C.3	Collinearity diagnostics - untreated	81
Figure C.4	Multicollinearity coefficients - treated	81
Figure C.5	Collinearity diagnostics - treated	82

LIST OF TABLES

Table	Description	Page
Table 2.1	Summary of existing studies	18
Table 2.2	Factors influencing the adoption of e-statement services	19
Table 3.1	Variables identified of the e-statement service adoption	23
Table 3.2	Interview design	25
Table 3.3	Questionnaire map to the identified factors	26
Table 4.1	Participant profile.	28
Table 4.2	Reasons for SLTMobitel to facilitate e-statement services	29
Table 4.3	Factors lowering the adoption of e-statement services	30
Table 4.4	Suggestions on enhancing the consumer adoption of e-statement services	31
Table 4.5	Cronbach's alpha values of independent variables.	32
Table 4.6	Cronbach's alpha values of dependent variables variable.	32
Table 4.7	Variation of Inter item correlation of perceived ease of use	33
Table 4.8	Variation of inter-item correlation of perceived usefulness	34
Table 4.9	Variation of inter-item correlation of perceived risk	34
Table 4.10	Variation of inter-item correlation of awareness	35
Table 4.11	Variation of inter-item correlation of behavioral intention	35
Table 4.12	Variation of inter-item correlation of measurement in dependent variable; e-statement services adoption	35
Table 4.13	Pearson correlation - perceived ease of use and e-statement adoption	46
Table 4.14	Pearson correlation - perceived usefulness and e-statement adoption	47
Table 4.15	Pearson correlation - perceived risk and e-statement adoption	48
Table 4.16	Pearson correlation - awareness and e-statement adoption	48
Table 4.17	Pearson correlation - behavioral intention and e-statement adoption	49
Table 4.18	Factor Analysis - Principal Component Analysis	52
Table 4.19	Factor Analysis - The Principal Components Identified	52
Table 4.20	Multiple linear regression - model summary	55
Table 4.21	Multiple linear regression ;ANOVA	55
Table 4.22	Multiple linear regression; coefficients	55
Table 4.23	Pearson correlation coefficients; perceived usefulness	56
Table 4.24	Pearson correlation coefficients; perceived risk	57
Table 4.25	Pearson correlation coefficients; behavioral intention	57

LIST OF ABBREVIATIONS

Abbreviation	Description
ANOVA	Analysis of the Variance
DSP	Digital Services Provider
E-billing	Electronic Billing
E-business	Electronic Business
EBPP	Electronic Bill Presentation and Payment
EDI	Electronic Data Interchange
EIP	Electronic Invoice Presentment
ICT	Information and Communication Technology
KMO	Kaiser-Meyer-Olkin Measure
PCA	Principal Component Analysis
ROI	Return On Investment
SLT	Sri Lanka Telecom
SME	Subject Matter Experts
TAM	Technological Acceptance Model
TPB	Theory of Planned Behaviour
TRA	Theory of Reasoned Action
UTAUT	Unified Theory of Acceptance and Use of Technology
VAT	Value Added Tax

LIST OF APPENDICES

Appendix	Description	Page
Appendix -A	Interview Questions	72
Appendix -B	Questionnaire	73
Appendix -C	Regression Analysis	80