

**IDENTIFYING THE FACTORS AFFECTING THE
ADOPTION OF E-COMMERCE IN SRI LANKA:
INTERNET USERS' PERSPECTIVE**

Koswatte Gedera Hashani Navarathna

179124U

Degree of Master of Business Administration in Information Technology

Department of Computer Science and Engineering

University of Moratuwa

Sri Lanka

June 2019

**IDENTIFYING THE FACTORS AFFECTING THE
ADOPTION OF E-COMMERCE IN SRI LANKA:
INTERNET USERS' PERSPECTIVE**

Koswatte Gedera Hashani Navarathna

179124U

The dissertation was submitted to the Department of Computer Science and Engineering of the University of Moratuwa in partial fulfilment of the requirement for the Degree of Master of Business Administration in Information Technology

Department of Computer Science and Engineering

University of Moratuwa

Sri Lanka

June 2019

DECLARATION

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

.....

K.G.H. Navarathna

(Signature of the candidate)

.....

Date

The above candidate has carried out research for the Master's thesis under my supervision.

.....

Dr. H.M.N. Dilum Bandara

Signature of the Supervisor

.....

Date

COPYRIGHT STATEMENT

I hereby grant the University of Moratuwa the right to archive and to make available my thesis or dissertation in whole or part in the University Libraries in all forms of media, subject to the provisions of the current copyright act of Sri Lanka. I retain all proprietary rights, such as patent rights. I also retain the right to use in future works (such as articles or books) all or part of this thesis or dissertation.

K.G.H. Navarathna

ABSTRACT

Electronic commerce brings world economic market into a common portal where buyers and sellers could meet overcoming their economic and geographic barriers. Despite being one of the earliest adopters of the Internet in the region and several initiatives by stakeholders to promote e-commerce, e-commerce adaptation in Sri Lanka appears to be relatively low. Maturity level of e-commerce adoption in Sri Lanka, as well as any obstacles and hindrances preventing the widespread adoption are not clear. The objective of this research is to identify barriers that prevent Internet users from wide-spread adoption of e-commerce in Sri Lanka. We adopted a mix-method research methodology to identify Internet user related adoption factors and to understand e-commerce merchants' view on those factors. First, a preliminary survey was carried out by interviewing stakeholders to identify barriers affecting the adoption of e-commerce. Next, a survey was used to identify customer adoption factors. Survey data were analyzed using Structural Equation Modeling to identify key factors and their relationships. Finally, interviews were conducted with e-commerce merchants to identify their view on those factors and what actions had been taken to enhance the adoption level. Factors such as affordability, knowledge and awareness, and facilities expected from retailers were identified as the most significant factors contributing to the success of e-commerce adoption in Sri Lanka. Government and legal factors, consumer perception, and digital infrastructure are the least significant factors. Smoothing the delivery process, introducing convenient return policies, and enhancing government involvement to promote e-commerce are the key recommendations to enhance the e-commerce adoption.

Keywords: Internet users, e-commerce, e-commerce adoption, Structural Equation Modeling

ACKNOWLEDGEMENT

Initially I would like to thank my thesis supervisor Dr. Dilum Bandara of CSE department at University of Moratuwa. He was always available there to clear my doubts and questions regarding the research or writing. He constantly allowed this to be my own work, while guiding me to the correct direction.

I would also take this opportunity to thank the industry experts who took part in the preliminary survey for this research project. Without their valuable input and ideas, the questionnaire could not have been successfully prepared.

Apart from them, I would also like to thank the professionals who supported in validating the results for this research writing.

I would also like to acknowledge word boutique team as the second reader of this dissertation, for their valuable comments made on this dissertation.

Last but not least, my sincere gratitude goes to my parents and to my husband for providing me constant support and encouragement throughout my postgraduate studies and research. This achievement would not have been possible without them.

Thank you.

K.G. Hashani Navarathna

TABLE OF CONTENTS

DECLARATION	I
COPYRIGHT STATEMENT	II
ABSTRACT	III
ACKNOWLEDGEMENT	IV
TABLE OF CONTENTS	V
LIST OF FIGURES	VII
LIST OF TABLES	VIII
LIST OF ABBREVIATIONS	IX
1. INTRODUCTION	1
1.1. Background	1
1.2. Problem statement	2
1.3. Research objective	2
1.4. Research significance	3
1.5. Outline	3
2. LITERATURE REVIEW	4
2.1. Organizational-level challenges in e-commerce adoption	4
2.2. Factors affecting online transaction and shopping behavior	8
2.3. e-commerce adoption in developing countries	9
2.4. Summary	11
3. RESEARCH METHODOLOGY	12
3.1. Research process	12
3.2. Conceptual framework	12
3.3. Structural equation modeling	17
3.4. Population and sample selection	18
3.5. Data collection	19
3.6. Summary	19
4. DATA ANALYSIS AND DISCUSSION	22
4.1. Analysis of pre-survey interviews	22
4.2. Data preparation for analysis	23
4.3. Demographic analysis	24

4.4.	Questionnaire analysis	30
4.5.	Validity and reliability of the data	31
4.6.	Relationship with factors affecting successful e-commerce adoption	33
4.7.	Factor analysis of different demographics	36
4.8.	Analysis of expert feedback	38
4.9.	Summary	39
5.	RECOMMENDATIONS AND CONCLUSION	40
5.1.	Conclusion	40
5.2.	Research limitations	42
5.3.	Future work	42
	REFERENCES	44
	APPENDIX A: PRE- SURVEY QUESTIONNAIRE	49
	APPENDIX B: SURVEY QUESTIONNAIRE	51
	APPENDIX C: HISTOGRAMS FOR LIKERT SCALE QUESTIONS	57
	APPENDIX D: FACTOR ANALYSIS BASED ON DEMOGRAPHIC CHARACTERISTICS	60

LIST OF FIGURES

Figure 3.1: Research approach.	13
Figure 3.2: Conceptual framework.	15
Figure 4.1: Gender distribution of the sample.	24
Figure 4.2: Age distribution of survey responders.	25
Figure 4.3: Educational qualification distribution of participants.	26
Figure 4.4: Employment status of the sample.	27
Figure 4.5: Summary of the employment sector (no of samples = 378).	27
Figure 4.6: Income level distribution of the sample.	28
Figure 4.7: Online purchasing frequency distribution.	28
Figure 4.8: Estimated online transaction or purchases value distribution.	29
Figure 4.9: Estimated percentages of online purchases.	30
Figure 4.10: Structural model.	33
Figure 4.11: Estimated model with bootstrapping.	34

LIST OF TABLES

Table 3.1: Pre-identified factors.	14
Table 3.2: Definitions of constructs.	15
Table 3.3: Sub-factors and indicators used to measure the constructs.	20
Table 4.1: Summary of company profiles.	22
Table 4.2: Criteria for validity and reliability or smart PLS 3.0.	31
Table 4.3: Critical considerations regarding validity and reliability.	32
Table 4.4: Discriminant validity values of the constructs.	32
Table 4.5: Path coefficients.	34
Table 4.6: Corresponding weight and ‘p’ value for each indicator.	36

LIST OF ABBREVIATIONS

AF	Affordability
AVE	Average Variance Extracted
CP	Consumer Perception
BOI	Board of Investment
CEO	Chief Executive Officers
CIO	Chief Executive Officers
DI	Digital Infrastructure
DV	Dependent variable
DW	Durbin-Watson
e-commerce	electronic commerce
e-economy	electronic economy
e-readiness	electronic readiness
e-marketing	electronic marketing
ERI	Electronic Readiness Index
FR	Facilities expected from retailers
GCE	General Certificate of Education
GDP	Gross Domestic Product
GLS	Government and Legal Support
GOF	Goodness of Fit
ICT	Information and Communication Technology
IT	Information Technology
IV	Independent Variable
KAF	Knowledge and Awareness Factors
LSA	Level of Success in e-commerce Adoption
LV	Latent Variable
ME	Micro Enterprises
NRI	Network Readiness Index
PLS	Partial Least Square
ROI	Return on Investment
SEM	Structural Equation Modeling
SME	Small and Medium-sized Enterprises