

**ORGANIZATIONAL FACTORS AFFECTING
E- COMMERCE ADOPTION IN SMALL AND MEDIUM
ENTERPRISES IN COLOMBO DISTRICT**

Don Kannangarage Shehani Malsha Dissanayake

(179057P)

Thesis/Dissertation Submitted in Partial Fulfillment of the Requirements for the
Degree Master of Science in Business Statistics

Department of Mathematics

University of Moratuwa
Sri Lanka

JUNE 2023

DECLARATION

To the best of my knowledge and belief, this dissertation does not contain any previously published or written by another person material, except where the acknowledgement is made in the text. I hereby declare that this is my own work, and that 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.

In addition, I hereby provide University of Moratuwa the non-exclusive right to print, electronically distribute, and otherwise use my thesis or dissertation in whole or in part. I reserve the right to include all or part of this content in my future works (such as articles or books).

Signature: D.KS.M.A.Dissanayake

Date: 24/06/2023

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

Name of the supervisor: Ms. Ravindi Jayasundara

Signature of the supervisor:

Date:

ABSTRACT

Modern world organizations need to maintain some sort of Electronic Commerce (EC) utilization in order to ensure the long-term sustainability of the organization. Not only the large-scale businesses but also the Small and Medium Enterprises (SMEs) which is the target group of this study practice it. The usage of EC in SMEs has grown in significance as a research area in information systems. Governments have paid a lot of attention to encourage SMEs to use E-Commerce, but few research has been conducted to evaluate the optimal E-commerce adoption strategies for Small and Medium Scale Enterprises in developing countries, notably Sri Lanka. This study's primary objective was to assess the correlation between organizational elements and the EC adoption. Quantitative methods were taken into consideration in this research in order to figure out the major elements that contribute EC adoption in Small and Medium enterprises. The information used in the study was acquired through a survey of 150 SMEs in the Colombo District. The sample was chosen using a stratified random selection technique based on SME-businesses. Results of this study, which were based on correlation and Consistent Partial Least Square Method. Some factors were illuminating and made it easier to comprehend some organizational characteristics that affect the degree of EC adoption. Top management support was the biggest factor found. The findings of this research lend empirical evidence to the idea that organizational characteristics and SMEs' adoption level of E-commerce are positively associated. The degree of EC adoption in SMEs and employee gender were also found to be negatively correlated. It might be argued that a gender that encourages creativity and risk-taking would offer the necessary support for greater adoption of new technology. The firm's business practices are influenced by the top management's views on innovation.

Key Words: SMEs, Factors, E-Commerce, Adoption, Colombo District, Organization

ACKNOWLEDGEMENT

In addition to my personal efforts, the support and direction of many people are essential to the success of this dissertation. I would like to take this opportunity to thank everyone who has helped to make my dissertation a success.

I would like to express my sincere gratitude to Ravindi Jayasundara, Senior Lecturer and Course Coordinator for the M.Sc./Post Graduate Diploma in Business Statistics at the University of Moratuwa, for her essential guidance and counsel. Sincere thanks to all the small and medium-sized business owners in the Colombo district for sharing information about their operations.

Last but not least, I truly need to thank my family and friends for their support and encouragement in getting this dissertation done.

TABLE OF CONTENT

Declaration.....	I
Abstract.....	II
Acknowledgement.....	III
List of Tables.....	VII
List of Figures.....	VIII
List of Abbreviations.....	IX
Chapter 01: Introduction.....	01-07
1.1. Background of the study	01-02
1.2. Research problem background.....	03
1.3. Hypothesis.....	04
1.4. Research Objectives.....	04-05
1.5. Significance of the study.....	05
1.6. Methods.....	05-06
1.7. Limitations	06
1.8. Structure of the research report.....	07
Chapter 02 : Literature Review	08-22
2.1. Importance of SMEs toward the development of the economy	08
2.2. Introduction to E- Commerce (EC).....	08-10
2.3. Factors affecting on E- Commerce	10-11
2.4. Organizational Factors	11-15
2.4.1 Top Management Support.....	12-13
2.4.2 Availability of IT Skills of the Employees	13

2.4.3	Availability of Financial Resources and Associated Costs.....	14
2.4.4	Profitability & the Perceived Usefulness of the New Platform.....	15
2.5	Barriers towards EC	16-17
2.6	Technology Acceptance Models	17-18
2.7	Concluding Remarks	19
Chapter 03: Materials and Methods		20-30
3.1.	Introduction	20
3.2.	Conceptual Framework	20-21
3.3.	Methods of Measurements	21-23
3.4.	Point Allocation for Statements.....	23-24
3.5.	Research Method	24-25
3.6.	Sampling	25-26
3.7.	Reliability and Validity	27
3.8.	Data Analysis.....	27
3.8.1	Multivariate Analysis.....	27-28
3.8.2	Discriminant Analysis and Validity.....	28
3.8.3	Structural Equation Model and Partial Least Square.....	29-30
3.9	Ethical Consideration.....	30
3.10.	Concluding Remarks.....	30
Chapter 04: Data Presentation and Analysis.....		31-46
4.1.	Introduction.....	31
4.2.	Demographic Background	31-37
4.2.1.	Gender Composition of the Sample.....	31
4.2.3.	Business Composition of the Sample	32
4.2.4.	Status of Credit Card Registration of SMEs.....	32

4.2.5.	Employee Composition.....	33
4.2.6.	Monthly Revenue Composition of SMEs.....	34
4.2.6	Composition of Online Pay through Website.....	34-35
4.2.7	Reasons for not using Credit Card.....	35
4.2.8	Main Challenges of E-Commerce.....	35-36
4.2.9	Expecting Sales Revenue from Website.....	36
4.2.10	Likelihood of E-Commerce using in Future.....	37
4.3	Relationship between Top Management Support, Employee Skills, Availability of Financial Resources and E- Commerce Adoption.....	38-46
4.3.1.	Multivariate Normality.....	38
4.3.2.	Conceptual Hypothesis Testing.....	38-39
4.3.3.	Internal Consistency & the Reliability.....	40
4.3.4.	Discriminant Validity.....	40-42
4.3.5.	Collinearity Diagnosis.....	42
4.3.6.	Model Evaluation.....	43-44
4.3.7.	PLS Path Diagram.....	44-45
4.4.	Concluding Remarks.....	46
Chapter 05:	Discussion, Conclusion and Recommendations.....	47-52
5.1.	Introduction.....	47
5.2.	Discussion.....	47-49
5.3.	Recommendation.....	49-51
5.4.	Conclusion.....	51-52
Bibliography	53-60
Annexures	61-65

LIST OF TABLES

Table 1.1 SME definitions	1
Table 3.1 Concept, Variables and Indicators	22-23
Table 3.2 Point Allocation for Positive / Negative Statements.....	24
Table 3.3 Sample Break Down	26
Table 4.1 Multivariate Normality	38
Table 4.2 Hypothesis in the Conceptual Framework.....	39
Table 4.3 Internal Consistency & Reliability.....	40
Table 4.4 Discriminant Validity	41
Table 4.5 Path Coefficient	41
Table 4.6 Model Coefficient	42
Table 4.7 Inner VIF Values.....	42
Table 4.8 Model Fit Indices	43
Table 4.9 Adjusted R Square	44

LIST OF FIGURES

Figure 2.1 Domain Matrix for E- Commerce	9
Figure 2.2 Theory of Reasoned Actions	16
Figure 2.3 Original Technology Acceptance Model [TAM]	17
Figure 3.1 Conceptual Framework.....	20
Figure 3.2 Sources of Data Collection	31
Figure 4.1 Gender Composition.....	31
Figure 4.2 Business Types of SMEs	32
Figure 4.3 Credit Card Registration of SMEs.....	33
Figure 4.4 Number of Employees in the Organization	33
Figure 4.5 Monthly Revenue of SMEs	34
Figure 4.6 Status of Online Pay	34
Figure 4.7 Reasons of Not using Credit Cards	35
Figure 4.8 Main Challenges Implement EC	36
Figure 4.9 Expecting Sales Revenue.....	36
Figure 4.10 Likelihood Practicing EC in Future.....	37
Figure 4.11 Path Diagram	39

LIST OF ABBREVIATION

- SMEs** - Small and Medium Enterprises
- EC** - Electronic Commerce
- TRA** - Theory of Reasoned Action
- TAM** - Technology Acceptance Model
- GDP** - Gross Domestic Production
- PLS** - Partial Least Squares
- PLS- SEM** - Partial Least Squares Structural Equation Model
- VIF** - Variance Inflation Factor
- TMS** - Top Management Support
- ES** - Employee Skills
- AFR** - Availability of Financial Resources
- LEC** - Level of E- Commerce Adoption
- B2B** - Business to Business
- B2C** - Business to Consumer