LB/DON/78/09

EVALUATING THE DETERMINANTS OF E-COMMERCE USAGE IN SRI LANKAN HOTEL INDUSTRY

By

T. I. Warnakulage

UNIVERSITY LIBRARY
MORATUWA, SRI LANKA

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

The Dissertation was submitted to the Department of Computer Science & Engineering of the University of Moratuwa in partial fulfilment of the requirement for the Degree of Master of Business Administration.

Department of Computer Science and Engineering
University of Moratuwa
December 2007

004"07"
004(043)

TH

93362

University of Moratuwa
93362

93362

Declaration

This thesis is a presentation of my original research work. Wherever contributions of others are involved, every effort is made to indicate this clearly, with due reference to the literature, and acknowledgement of collaborative research and discussions.

The work was done under the guidance of Dr. Chathura De Silva, at the University of Moratuwa, Sri Lanka as a fulfilment of MBA in IT programme.

T. I. Warnakulage

31/01/2009
Date

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

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

UOM Verified Signature

Dr. Chathura De Silva

31/01/09
Date

Dedication

For my beloved wife
who has been with me and supporting all the way
towards the end of this
research exercise.

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

Acknowledgement

The success of this thesis would never be accomplished merely by the author. There are many individuals who have contributed all the way to the success of it in many ways. The author gratefully acknowledge the valuable contributions made by the following, whom among others, provided the guidance, encouragement and support during the six months long research endeavour which lead to the preparation of this research report.

First of all I would like thank my supervisor, Dr Chathura De Silva, for his guidance and support throughout the research project to make it a success.

Also I would like to thank all the lectures who taught me during the two years of MBA programme. Their way of lecturing, the knowledge and experiences they shared during the lecturing are indeed valuable to the success of this thesis as well as for my future endeavours.

A word of gratitude should definitely go for the staff at the University of Moratuwa, specially the computing department for their support and coordination during the MBA programme.

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

It is my pleasure to acknowledge my friends who have been supporting all the way throughout the MBA programme and during the research.

Last, but definitely not the least, I would like to thank my wife and all family members who have been there and supporting me throughout the MBA programme.

Abstract

Hotel industry can be considered as one of the main service oriented industries in the world. With the growth of the world tourism, many hotels are adopting internet and related technologies for the purpose of marketing, communicating and transacting. But this adoption of internet is not uniform and there are variations from region to region, country to country and also from hotel to hotel.

These variations can be due to many factors. These factors can be related to the external environment or internal environment of the hotel. These variations can be seen in Sri Lankan hotel industry as well. Sri Lanka is in the early stage of adopting internet and e-Commerce related technologies and various industries and businesses are realizing the benefits of utilizing internet and e-Commerce. Hotel industry in Sri Lanka also needs to focus on benefiting from internet an e-Commerce since foreign travellers represent a considerable percentage from the total visitors to Sri Lanka.

Purpose of this research is to analyse the impact of various factors affecting towards the usage of e-Commerce in Sri Lankan hotel industry. These factors are mainly categorized into three broader areas, namely; factors related to the External Environment, Technology and Internal to the hotel. Total of seven factors are identified. Age of the hotel, Star Rating, Perception of the Management, Size of the Hotel, Influence from Hotel Chain, ICT Adoption Level, Competition Level are the factors considered.

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

Total of twenty nine hotels were participated in the research and questionnaire based approach were utilized to gather information. Multiple Regression was used as the main statistical analysis technique. Research results revealed that Age of the hotel and Competition Level are negatively affecting the e-Commerce usage while other factors are affecting positively. Also the usage of software systems at different levels of hotels and a guideline to successfully adopt Internet and e-commerce in a hotel haven been presented.

Key Words: Internet, E-Commerce, Hotel Industry, Environmental Factors, Organization Factors, Technology Factors, Sri Lanka, ICT & Tourism.

Table of Contents

Declaration 2

Dedication 3

Acknowledgement 4

Abstract 5

Contents 6

List of Tables 9

List of Figures 10

1 Introduction 11

1.1 Problem 11

1.2 Research Objectives 12

1.2.1 Identify the Affect of Various Factors Towards E-Commerce Usage 12

1.2.2 Identify the IT/e-Commerce Adaptation Level in Various Levels of Hotels 12

1.2.3 Provide Guideline and Recommendations for E-Commerce Implementation 12

1.3 Importance / Benefits of the Research 13

1.4 Research Methodology 13

2 Literature Review 14

2.1 Hotel Industry 14

2.2 Internet and Its Global Usage 15

2.3 E-Commerce 15

2.4 E-Commerce & Hotel Industry 17

2.5 Sri Lanka's Tourism Statistics 19

3 Research Methodology 20

3.1 Factor Categorization 20

3.1.1 Organization 20

3.1.2 Technology 20

3.1.3 Environment 20

3.2 Factors Considered 20

3.2.1 Age of the Hotel 20

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

3.2.2 Hotel Rating 20
3.2.3 Perception of the Management Towards Technology 21
3.2.4 Size of the Hotel 21
3.2.5 Hotel Belong to a Large Hotel Chain 21
3.2.6 ICT Adoption Level 21
3.2.7 Competition Level in the Location 21
3.3 Hypothesis 22
3.4 Operationalizing 24
3.5 Data Collection Method 25
3.6 Organization of the Questionnaire 25
4 Sample Characteristics 26
4.1 Star Rating Wise Distribution 26
4.2 Hotel Size Wise Distribution 26
4.3 City Wise Distribution 27
4.4 Having a Own Website 27
5 Reliability of the Statistical Analysis 28
5.1 Defining Scales 28
5.2 Reliability of One-Way ANOVA 28
5.3 Reliability of Multiple Regression Model 29
5.3.1 Multicollinearity Analysis 29
5.3.2 Multiple Coefficient of Determination & P-value Analysis 31
5.3.3 Residual Plots 32
5.3.4 Normal Probability Plot 35
6 Statistical Analysis 36
6.1 Age of the hotel 36
6.2 Star Rating 37
6.3 Perception of the Management 37
6.4 Size of the Hotel 37
6.5 Influence from Hotel Chain 38

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

6.6 ICT Adoption Level 38
6.7 Competition Level in the Location 38
6.8 Stepwise Regression 39
7 Qualitative Analysis 40
7.1 Analysis of the Effectiveness of Current Hotel Websites 40
7.1.1 Content 40
7.1.2 Look and Feel 40
7.1.3 SEO Friendly Website 41
7.1.4 Website Usability & Accessibility 41
7.2 Adaptation of IT System at Different Level of the Hotels 42
7.3 Guideline when Adopting Internet and e-Commerce 44
7.3.1 Initiation 44
7.3.2 Planning 44
7.3.3 Implementation 47
7.3.4 Maintenance 47
8 Conclusion 48
References 50
Appendix 1 – Questionnaire 53

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

List of Tables

Table No	Description
Table 2.1	World Internet Usage and Population Statistics [23]
Table 2.2	Reservation Sources for Major Global Hotel Brands [25]
Table 2.3	Internet Source Breakdown for Major Site Brands [25]
Table 2.4	Top Ten Source Markets of Tourist Arrivals in Sri Lanka [26]
Table 3.1	Independent variables & Dependent Variable
Table 3.2	Hypothesis for each Independent & Dependent Variable Combination
Table 3.3	Operationalizing of Dimensions
Table 4.1	Sample distribution – City Wise
Table 5.1	Reliability of Factors Based on Multiple Variables
Table 5.2	Correlation Matrix for the Regression Model
Table 5.3	Variance Inflation Factors of the Regression Model
Table 5.4	Multiple Regression – Model Summary
Table 5.5	Multiple Regression – ANOVA
Table 6.1	Multiple Regression - Effects of Factors
Table 6.2	Multiple Regression – Stepwise Regression
Table 6.3	Multiple Regression – Stepwise Regression - Coefficients
Table 8.1	Summary of the effects of various factors on the intensity of E-Commerce usage

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

List of Figures

Figure No	Description
Figure 4.1	Sample distribution – Star rating wise
Figure 4.2	Sample distribution – Hotel size
Figure 4.3	Sample distribution – Having a Website
Figure 5.1	Residual Plot – Size of the hotel
Figure 5.2:	Residual Plot – Management Perception
Figure 5.3	Residual Plot – Chain Influence
Figure 5.4	Residual Plot – Competition Level
Figure 5.5	Residual Plot – ICT Adoption Level
Figure 5.6	Residual Plot – Star Rating
Figure 5.7	Normal Probability Plot
Figure 7.1	Usage of Software Packages

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