Factors Determining the User Adoption of Biometric Authentication in Sri Lankan Payment Channels

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Table of Contents

Table of Contents 2
List of Figures 4
List of Tables 5
Abstract 6
Chapter 1 Introduction 7
1.1 Background of the Study 7
1.2 Problem Statement 8
1.3 Research Objective 8
1.4 Research Questions 8
1.5 Document Structure 8
Chapter 2 Literature Review 10
2.1 Payment Channels 10
2.2 Current State of Authentication Controls 10
2.2.1 The Importance of Identification and Verification 10
2.3 Biometric Technologies as a Potential Security Solution 12
2.4 Biometric Weakness 14
2.5 Impact of Privacy and Security 15
2.6 Impact of Usefulness and Ease of Use 16
2.7 Impact of Reliability 17
2.8 Chapter Summary 18
Chapter 3 Research Methodology 19
3.1 Introduction 19
3.2 Conceptual Framework 20
3.3 Development of Hypotheses 21
3.4 Operationalisation 22
3.5 Research Design 24
3.5.1 Population 24
3.5.2 Sample Selection 24
3.6 Data Collection and Analysis 25
3.6.1 Data Collection 25
3.6.2 Data Analysis 25
Chapter 4 Data Presentation and Analysis 27
4.1 Introduction 27

4.2 Reliability Analysis 27
4.2.1 Reliability of Items Related to Independent Variable 1 27
4.2.2 Reliability of Items Related to Independent Variable 2 28
4.2.3 Reliability of Items Related to Independent Variable 3 28
4.2.4 Reliability of Items Related to Independent Variable 4 29
4.2.5 Reliability of Items Related to Dependent Variable 29
4.3 Survey Results 30
4.3.1 Demographic Information 30
4.3.2 User Perception on Security and Privacy 31
4.3.3 User Perception on Reliability 32
4.3.4 User Perception on Usefulness 33
4.3.5 User Perception on Ease of Use 34
4.3.6 User Perception on Biometric Authentication in Sri Lankan Payment Channels 35
4.4 Statistical Data Analysis 36
4.4.1 Relationship between Security and Privacy and Biometric Adoption 36
4.4.2 Relationship between Reliability and Biometric Adoption 39
4.4.3 Relationship between Usefulness and Biometric Adoption 42
4.4.4 Relationship between Ease of Use and Biometric Adoption 45
4.4.5 Relationship between Security and Privacy, Reliability, Usefulness, Ease of Use and Biometric Adoption 48
4.5 Chapter Summary 50
Chapter 5 Discussion and Conclusion 51
Chapter 6 References 52
Appendix 57
Appendix 1: Questionnaire 57

List of Figures

Figure 2.1 Technology Acceptance Model 16
Figure 3.1 Conceptual Framework 20
Figure 4.1 Gender analysis 30
Figure 4.2 Age analysis 30
Figure 4.3 Response analysis of questions on security and privacy 31
Figure 4.4 Response analysis of questions on reliability 32
Figure 4.5Response analysis of questions on usefulness 33
Figure 4.6 Response analysis of questions on ease of use 34
Figure 4.7 Response analysis of questions on biometric adoption 35
Figure 4.8 Security and Privacy and Biometric Adoption graph 38
Figure 4.9 Reliability and Biometric Adoption graph 41
Figure 4.10 Usefulness and Biometric Adoption graph 44
Figure 4.11 Ease of Use and Biometric Adoption graph 47

List of Tables

Table 3.1 Hypotheses of the research 21
Table 3.2 Operationalisation of the research 22
Table 4.1 Reliability test of IV1 27
Table 4.2 Reliability test of IV2 28
Table 4.3 Reliability test of IV3 28
Table 4.4 Reliability test of IV4 29
Table 4.5 Reliability test of DV 29
Table 4.6 Correlation (Security and Privacy and Biometric Adoption) 36
Table 4.7 Model summary (Security and Privacy and Biometric Adoption) 37
Table 4.8 ANOVA table (Security and Privacy and Biometric Adoption) 37
Table 4.9 Coefficients (Security and Privacy and Biometric Adoption) 38
Table 4.10 Correlations (Reliability and Biometric Adoption) 39
Table 4.11 Model summary (Reliability and Biometric Adoption) 39
Table 4.12 ANOVA table (Reliability and Biometric Adoption) 40
Table 4.13 Coefficients (Reliability and Biometric Adoption) 40
Table 4.14 Correlations (Usefulness and Biometric Adoption) 42
Table 4.15 Model summary (Usefulness and Biometric Adoption) 42
Table 4.16 ANOVA table (Usefulness and Biometric Adoption) 43
Table 4.17 Coefficients (Usefulness and Biometric Adoption) 43
Table 4.18 Correlations Ease of Use and Biometric Adoption 45
Table 4.19 Model summary (Ease of Use and Biometric Adoption) 45
Table 4.20 ANOVA table (Ease of Use and Biometric Adoption) 46
Table 4.21 Coefficients (Ease of Use and Biometric Adoption) 46
Table 4.22 Model summary (all independent variables against the dependent variable) 48
Table 4.23 ANOVA table (all independent variables against the dependent variable) 48
Table 4.24 Coefficients (all independent variables against the dependent variable) 49
Table 4.25 Hypothesis test results 50

Abstract

Payment channels have become an essential element in people's lives. There are many emerging payment channels in Sri Lanka such as EDC (Electronic Data Capture)/ POS (Point of Sale)/ kiosks/ Internet Payment Gateway/ Mobile based payment solutions. With the emergence of new payment channels individuals have shown keenness on moving to digital payment channels instead of traditional methods because of its convenience. Despite its popularity it has become a source for financial frauds. The main reason being the lack of security and privacy of payment channels. Most payment channels use traditional authentication methods such as passwords, PIN (Personal Identification Number), OTP (one-time password), or digital cards. These authentication methods are vulnerable, and they are quite often compromised by fraudsters. There financial organisations are now looking at a more user/customer centric authentication method. Biometric is a user/customer centric authentication method where the authentication happens using a biometric trait of the user/customer.

Since most Sri Lankans are not tech-savvy it is somewhat of a challenge to make customers use payment channels that has biometric authentication. Therefore, this study looks at the factors that will determine the user adoption of biometric authentication.

In order to identify potential factors that could affect biometric adoption a comprehensive literature review was conducted. What previous researchers around the world have discovered were useful in deciding the potential factors; security and privacy, reliability, usefulness, and ease of use.

To quantify the impact of each factor on biometric adoption a quantitative research study which had 390 respondents was conducted by the author. After a thorough analysis of the responses, it was identified that security and privacy, reliability, usefulness, and ease of use influences the user adoption of biometric authentication in Sri Lankan payment channels.

The author believes this report will be beneficial to various stakeholders in the financial industry and the information technology industry in Sri Lanka as well as similar demographic segments.