HAPTIC TOUCH, PERCEIVED RISK, AND COMPENSATORY FACTORS: AN EMPIRICAL INVESTIGATION IN ONLINE SHOPPING CONTEXT

A THESIS
SUBMITTED IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE FELLOW PROGRAMME IN MANAGEMENT
INDIAN INSTITUTE OF MANAGEMENT INDORE

BY

JYOTI PANDEY

January, 2018

THESIS ADVISORY COMMITTEE

PROF. ASHISH SADH
[Chairperson]

PROF. ADITYA BILLORE
[Member]

PROF. MANOJ MOTIANI
[Member]

ABSTRACT

Touch is one of the five senses of human being that influences their behavior, emotion, interaction, and product encounter. Its role has been studied in areas like communication, interpersonal interaction, and marketing. The importance of touch in the evaluation of product properties at the time of purchase decision has been discussed in the literature.

Touch and Haptics have been used synonymously in the literature. The term haptics is used to describe the active use of hands for obtaining product information, which involves the movement of hands or arm to gather information about product's texture, softness, weight, and temperature. A framework of haptic information by Peck and Childers (2003b) provides three factors, namely, product, individual, and situations; all these factors interact to identify the motivation for obtaining haptic information prior to buying a product. The preference to touch a product differs according to product's properties, for instance, consumers want to touch a blanket than a pen drive. Further, there exists an individual difference in need for touch (NFT), i.e., some consumers have high-NFT while others may have low-NFT during product evaluation. Lastly, the situations vary in terms of an individual's ability to touch a product like the traditional offline stores offer tangible interaction with product however; physical inspection is not possible in case of online stores.

India is one of the fastest-growing markets for online shopping. Many e-commerce start-ups have flourished in the recent years and are trying hard to capture the market by offering various schemes, discounts, coupons, etc. Despite many promotional schemes, consumers are hesitant to buy through online channels because of their inherent desire to touch a product before buying.

We aim to understand the role of touch in the online context. There is limited literature about the risk perceptions of individuals based on their haptic orientation and the compensatory factors for the inability to touch. Thus, two studies have been conducted to extend the knowledge of NFT in the online context.

The aim of the first study is twofold: 1) To provide a holistic conceptualization of perceived risk in internet shopping construct by considering both the components (probability of loss and importance of loss) under its dimensions with the formative approach, and 2) To identify the risk perceptions of individuals based on haptic motivation. It is important to identify the difference in various dimensions of perceived risk in online shopping based on haptic motivation because the inability to physically examine a product acts as a barrier in online shopping.

The result of the first study suggests that for high-NFT product category, the individuals with high-NFT perceive more product performance risk and financial risk than their counterparts. Further, individual difference in NFT moderates the relationship between perceived risk in internet shopping and online purchase intention for both high-NFT and low-NFT product category. The study has implications related to the distribution and promotional strategies for the products offered through online channels.

The second study proposes two important compensatory factors for the inability to touch a product, namely, e-tailer's brand and return policy fairness. The findings indicate that the e-tailer's brand is an important cue for high-NFT customers. In addition, return policy fairness is found to directly affect the online purchase intention. The study discussed the implications for both theory and practice.

Key words: Haptics, Need for touch, Perceived risk in internet shopping, E-trailer's brand, and Return policy.

Flow Chart of the Dissertation Work

Introduction
Industry Information

Scope
Motivation

Literature Review

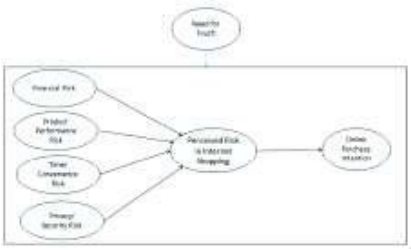
Research Gap
Research objectives

To explore whether high and low-NFT individuals have different level of risk perception for various dimensions of perceived risk in case of high and low-NFT product category.

To identify some factors that compensate for inability to touch in the online context.

Study 1

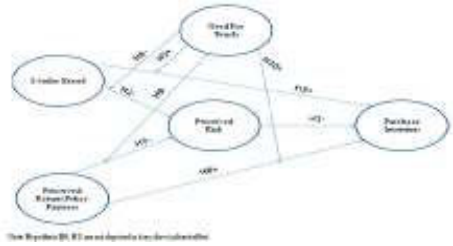
Conceptual Framework



Theories
1. Need for touch theory
2. Theory of perceived risk
3. Cue utilization theory

Study 2

Conceptual Framework



Research Methodology
Pre-test for product category
Pre-test for the scales
Data collection
Analysis (PLS SEM)
Tetrad analysis
MICOM approach
Multigroup analysis

Result
Discussion
Contribution
Managerial implication
Limitation and future research

Research Methodology
Pre-test for the E-tailer
Data collection
Analysis (SPSS Process macro)
Mediation analysis
Moderation analysis
Moderated mediation analysis

Result
Discussion
Contribution
Managerial implication
Limitation and future research

Conclusion

*NFT: Need for touch

Table of Contents

1. INTRODUCTION 13
1.1 E-tailing landscape 15
1.1.1 Overview 15
1.1.2 Online retailing: a Global perspective 15
1.1.3 E-tailing: Indian Scenario 18
1.2 Scope of the study 22
1.3 Motivation for the study 23
2. LITERATURE REVIEW 24
2.1 Touch 24
2.1.1 Conceptualization of touch 24
2.1.2 Touch in interpersonal interaction 26
2.1.3 Touch in marketing 27
2.1.4 Touch and vision 28
2.2 Need for touch framework 29
2.2.1 Product factors 30
2.2.2 Individual factors 31
2.2.3 Situational factors 32
2.3 Compensatory factors 41
2.4 Perceived risk 42
2.4.1 Components of perceived risk 42
2.4.2 Perceived risk in online context 43
2.4.3 Additive and multiplicative models of perceived risk 44
2.4.4 Dimensions of risk 47
2.4.5 Reflective Vs. formative conceptualization 54
3. RESEARCH GAPS AND RESEARCH OBJECTIVES 56
3.1 Research gaps 56
3.2 Research objectives 57

3.3 Dissertation structure 57
4. STUDY- 1 59
4.1 Hypotheses development 59
4.1.1 NFT and perceived risk 59
4.1.2 Product category 60
4.1.3 Financial risk 62
4.1.4 Product performance risk 63
4.1.5 Time/convenience risk 64
4.1.6 Privacy/ Security Risk 65
4.1.7 Overall perceived risk in internet shopping 66
4.2 Methodology 67
4.2.1 Control variables 68
4.2.2 Pre-test for product category 68
4.2.3 Pre-test for scales 69
4.2.4 Partial Least Square SEM 69
4.3 Data collection 70
4.3.1 Common method bias 71
4.3.2 Need for Touch: 71
4.4 Data analysis 72
4.4.1 Tetrad analysis 72
4.4.2 Measurement Model 73
4.4.3 Structural Model 76
4.4.4 MICOM approach 79
4.4.5 Multi-group Analysis 81
4.5 Result 86
4.6 Discussion 86
4.6.1 Higher-order conceptualization 86
4.6.2 Dual component conceptualization 87
4.6.3 Formative approach 87

4.6.4 A higher-order, dual component, multi-facet formative conceptualization of PRIS 88
4.6.5 Moderating role of need for touch 89
4.7 Theoretical contribution 91
4.8 Managerial implications 93
4.9 Limitations and future research 94
5. STUDY-2 95
5.1 E-tailer's brand as a compensatory factor 95
5.1.1 Cue utilization theory 98
5.1.2 Development of hypotheses 101
5.2 Return policy as a compensatory factor 103
5.2.1 Development of hypotheses 106
5.3 Conceptual model 108
5.4 Survey design 110
5.4.1 Pre-test 111
5.5 Analysis 112
5.5.1 Need for touch 114
5.5.2 Psychometric properties of scales 114
5.5.3 Hypothesis testing 115
5.6 RESULT 122
5.7 Discussion 124
5.8 Theoretical contributions 126
5.9 Managerial implications 126
5.10 Limitation and future research direction 127
6. CONCLUSION 128

REFERENCES 130

ANNEXURES 150

List of Figures

Figure 1.1 Global Online sector value: $ billion 2014-2019 16
Figure 1.2 Global Online sector value $ billion, 2015-2020 17
Figure 1.3 E-commerce Growth in India (in billions) 19
Figure 1.4 Projection of Ecommerce in India 20
Figure 1.5 Breakup of Indian E-commerce 21
Figure 1.6 Market Share of Major players in year 2016 22
Figure 4.1 Conceptual model 67
Figure 4.2 Structural Model 79
Figure 5.1 Conceptual Model -Study 2 108
Figure 5.2 Empirically tested Model 117
Figure 5.3 Moderated mediation 118
Figure 5.4 Moderated mediation effect on purchase intention 121

List of Tables

Table 1.1 Global online sector value 2010-2014 16
Table 1.2 Ecommerce market in 2015, Ranked by no. of buyers 18
Table 2.1 Definitions of Haptics/Touch 24
Table 2.2 Review of literature 34
Table 2.3 Compensatory Factors 41
Table 2.4 Definitions of perceived risk 45
Table 2.5 Conceptualization of risk components 46
Table 2.6 Models of perceived risk 46
Table 2.7 Previous studies (Dimensions of perceived risk) 49
Table 2.8 Recent studies (Dimensions of perceived risk) 52
Table 2.9 Overview of perceived risk construct 55
Table 4.1 Properties of NFT product categories 61
Table 4.2 Measures 68
Table 4.3 Characteristics of the sample 70
Table 4.4 Common method bias 71
Table 4.5 Tetrad Analysis 72
Table 4.6 Measurement models results 73
Table 4.7 Assessment of Discriminant Validity (correlation AVE table) 74
Table 4.8 Cross loading Matrix 74
Table 4.9 Formative constructs outer weights significance testing results 76
Table 4.10 Estimation of R2 76
Table 4.11 Estimation of f2 77
Table 4.12 Estimation of Q2 77
Table 4.13 Estimation of q2 78
Table 4.14 Structural Model 78
Table 4.15 MICOM approach Jacket (High vs low NFT) 80
Table 4.16 MICOM approach Hard disk (High vs. low NFT Product category) 81
Table 4.17 High NFT Vs Low NFT Multi-group analysis for Jacket 84
Table 4.18 High NFT Vs Low NFT Multigroup analysis for Hard disk 85
Table 4.19 Results 86
Table 5.1 Key research findings in branding literature 99
Table 5.2 Literature review of return policy 104

Table 5.3 Proposed hypotheses 109
Table 5.4 Measures 111
Table 5.5 Demographic details 113
Table 5.6 Mean and S.D. 114
Table 5.7 Reliability analysis 114
Table 5.8 Discriminant Validity 115
Table 5.9 Analysis 116
Table 5.10 Mediation analysis 117
Table 5.11 Moderation Effects 119
Table 5.12 Index of Moderated Mediation 121
Table 5.13 Result 123

List of Annexures

Annexure 4.1 Questionnaire for pretest for product category 150
Annexure 4.2 Questionnaire for main Study 1 151
Annexure 4.3 Assessment of measurement model for the two groups 157
Annexure 4.4 ANOVA for the two product categories……. 159
Annexure 5.1 Questionnaire for pre test for e-tailer…….……160
Annexure 5.2 Questionnaire for main Study 2 162
Annexure 5.3 Syntax for the moderated mediation graph 166