

EFFECTIVENESS OF ELECTRONIC WORD OF MOUTH
RECOMMENDATIONS

AN ELABORATION LIKELIHOOD MODEL PERSPECTIVE ON
THE EFFECTIVENESS OF ELECTRONIC WORD OF MOUTH
RECOMMENDATIONS

By HAMED QAHRI SAREMI, M.Sc., B.Sc.

A Thesis Submitted to the School of Graduate Studies in Partial Fulfillment of the
Requirements for the Degree

Doctor of Philosophy in Business Administration

McMaster University © Copyright by Hamed Qahri Saremi, September 2014

McMaster University DOCTOR OF PHILOSOPHY IN BUSINESS
ADMINISTRATION (2014) Hamilton, Ontario, Canada

TITLE: An Elaboration Likelihood Model Perspective on the Effectiveness of
Electronic Word of Mouth Recommendations

AUTHOR: Hamed Qahri Saremi, M.Sc., B.Sc.

SUPERVISOR: Professor Ali Reza Montazemi

NUMBER OF PAGES: xv, 156

ABSTRACT

Electronic word of mouth (eWOM) recommendations are online consumer-generated recommendations posted on the service providers' or the third-party websites, which are expected to affect consumers' perceptions of adopting experience services. In recognition of the increasing significance of eWOM recommendations, this study delves further into this topic by proposing a research model that explains the contingency factors affecting the effectiveness of eWOM recommendations on consumers' perceptions of adopting experience services. We contend that the effectiveness of eWOM recommendations is contingent on the task complexity of evaluating the experience services and consumers' degree of cognitive and sensory innovativeness. We draw on the elaboration likelihood model, cognitive load theory, service adoption process theory, and the two dimensions of consumer's innovativeness (i.e., cognitive innovativeness and sensory innovativeness), as the theoretical underpinnings, to propose nine hypotheses. These hypotheses are empirically tested based on data collected from 263 subjects. To that end, we used a controlled longitudinal laboratory experiment, based on a mixed methods (quantitative – qualitative) research methodology. The results of statistical tests of quantitative data and the content analysis of the qualitative data illustrate that the effectiveness of eWOM recommendations on consumers' perceptions of adopting experience services is contingent on the consumers' prior knowledge of the service context, consumers' level of cognitive and sensory innovativeness, and the consumers' level of experience with the service, which is determined by the stage of the service adoption process (i.e., pre-usage, initial use, and repeated use). Our findings show that the confluence of these factors creates different settings that determine the effectiveness of eWOM recommendations. These findings provide valuable contributions to the theory and practice by ameliorating important gaps in the eWOM literature.

DEDICATION

I dedicate my dissertation work to my loving parents, Morteza Qahri Saremi and Fatemeh Gholami, whose unconditional support and words of wisdom have kept me on track; to my beloved wife, Sara Arabi, whose encouragements for the tenaciousness towards my goals and her belief in me keep my impetus for success strong; to my lovely sister, Haniyeh Qahri Saremi, whose moral support has soothed me in difficult times; and to God for the blessings.

ACKNOWLEDGEMENT

This dissertation would not have been possible without thorough, patient, and gracious mentorship and counselling of my Ph.D. supervisor, Prof. Ali Reza Montazemi, whose fatherly dedication and devotion to help me learning the highest standards of scholarship and teaching have been the most significant inspiration for me in pursuing my career as a faculty member at a university. Prof. Montazemi's dedication to the quality as a mentor was reflected in his unconditional professional and personal support and tutelage that extended beyond his hours of duty as a Ph.D. supervisor, for which I have a special feeling of gratitude. I am also grateful to the other members of my supervisor committee, in particular Dr. Catherine Connelly, who patiently advised and taught me the principles of research design and analysis and her professional and moral supports were critical towards my success; Dr. Sourav Ray, for his encouragements and constructive insights on my work; and Prof. Yufei Yuan, for his critical insights that helped me strengthen my work. I am also grateful to two of my colleagues who made the Ph.D. education an enjoyable process: Dr. Jeffrey Pittaway, whose counselling, intellectual debates, and brotherly support taught me that brotherhood is by heart, not by blood; and Dr. Vahid Assadi, with whom I never felt alone.

THIS PAGE IS INTENTIONALLY LEFT BLANK

TABLE OF CONTENTS

An Elaboration Likelihood Model Perspective on the Effectiveness of Electronic Word of Mouth Recommendations	ii
Abstract	iii
Dedication	iv
Acknowledgement	v
Table of Contents	vii
List of Figures	x
List of Tables	xi
List of All Abbreviations and Symbols	xii
Declaration of Academic Achievement	xiv
1. Introduction.....	1
1.1 Preamble	2
1.2 Online Recommendations.....	3
1.3 The Role of Service Type: Search Service and Experience Service	5
1.4 Service Adoption Process	7
1.5 Factors Affecting the Effectiveness of eWOM Recommendations.....	10
1.6 Research Objectives.....	17
1.7 Research Questions.....	17
1.7.1 Research Question 1 – Task Complexity	17
1.7.2 Research Question 2 – Consumer’s Innovativeness.....	19
1.8 Dissertation Contributions & Structure	20
2. Theory Development	22
2.1 Theoretical Foundations	23
2.2 Hypotheses Development	25
2.2.1 Consumer’s Ability to Evaluate an Experience Service: Consumer’s Prior Knowledge of the Context of the Experience Service	25
2.2.2 Consumers’ Motivation to Evaluate the Service: Consumer’s Innovativeness.....	27
2.2.3 Thinkers and Changers: Consumers with High Need for Cognition and High Need for Change.....	31
2.2.4 Thinkers but Not Changers: Consumers with High Need for Cognition, but Low Need for Change.....	32
2.2.5 Not Thinkers but Changers: Consumers with Low Need for Cognition, but High Need for Change	33
2.2.6 Neither Thinkers Nor Changers: Low Need for Cognition and Low Need for Change	34
3. Research Methodology	36
3.1 Study Design, Context, and Subjects.....	36
3.1.1 Subjects	37

3.1.2	Experimental Manipulation: High/Low Prior Knowledge of the Experience Service Context	37
3.1.3	Experimental Manipulation: eWOM Recommendations	39
3.1.4	Stage of Study: Pre-usage, Initial Use, and Repeated Use	40
3.2	Factors and Measures	40
3.2.1	Dependent Factors	40
3.2.2	Controlled Factors	41
3.2.3	Measures	41
3.3	Pilot Study	44
3.4	Experimental Procedures	44
4.	Results	47
4.1	Preliminary Data Analysis	47
4.1.1	Ensuring Acceptable Reliability for our Factors	47
4.1.2	Ensuring High Validity of our Factors	48
4.1.3	Ensuring Absence of Common Method Bias in our Study	49
4.1.4	Ensuring Absence of Multicollinearity among our Factors	50
4.1.5	Ensuring Adequate Level of Statistical Power in our Analyses	50
4.1.6	Assessing Normality of our Factors	51
4.1.7	Latent Class Analysis (LCA)	51
4.2	Hypotheses Testing Results	54
4.2.1	Combined Effects: Pre-usage Stage	54
4.2.2	Combined Effects: Initial Use and Repeated Use Stages	54
4.2.3	Individual Effects: Pre-usage Stage	55
4.2.4	Individual Effects: Initial Use and Repeated Use Stages	56
4.3	Content Analysis of Qualitative Data	63
4.3.1	Content Analysis for Insights into Subjects' Cognitive Processes	63
4.3.2	Content Analysis for Insights into Factors Influencing Subjects' Perceptions of the Service at the Repeated Use Stage	68
5.	Discussions	71
5.1	Contributions to the Theory	71
5.2	Implications for Practice	74
5.3	Limitations & Future Research	77
5.4	Concluding Remarks	80
	APPENDIX A– Systematic Review of eWOM Literature	82
A.1	Theoretical Foundation	82
A.2	Methodology	83
A.3	Results (Step 5: Present)	85
	APPENDIX B– Procedures for Controlling the Potential Confounding Effects of the Controlled Factors	101
	APPENDIX C– List of Selected Healthcare and Music Websites for our Experiment	107

APPENDIX D– Examples of the eWOM Recommendations about the focal Healthcare and Music Websites	109
APPENDIX E– The Validated Measurement Instruments adapted from the Extant Literature	111
APPENDIX F– Online Consent Form for Experiment, approved by McMaster Research Ethics Board (MREB)	117
APPENDIX G– Descriptive Statistics for the Three Stages of the Service Adoption Process (Pre-usage, Initial Use, Repeated Use)	119
APPENDIX H– Factors’ Discriminant Validity Assessment through Items Loadings and Cross-Loadings.....	120
APPENDIX I– Factors’ Correlations, Square Roots of Average Variance Extracted (AVE), and Variance Inflation Factor (VIF) for Discriminant Validity and Multicollinearity Assessments	122
APPENDIX J– Confirmatory Factor Analysis (CFA) Results.....	123
References.....	126

LIST OF FIGURES

Figure 1.1 – Three Stages of Service Adoption Process.....	8
Figure 1.2 – The 36 Factors representing Six Dimensions of the eWOM Recommendation in our Conceptual Framework	11
Figure 2.1 – Proposed Research Model	22
Figure 2.2 – Eight Segments of Consumers based on Consumers' High/Low Prior Knowledge of the Service Context, Consumers' High/Low Need for Cognition, and Consumers' High/Low Need for Change, Adapted from Wood and Swait (2002)	29
Figure A.1 – Our Conceptual Framework	83
Figure A.2 – Grounded Theory Literature Review Method, Adapted from Wolfswinkel et al. (2013).....	86
Figure J.1 – Confirmatory Factor Analysis Results for our Measurement Model in the Pre-usage Stage	123
Figure J.2 – Confirmatory Factor Analysis Results for our Measurement Model in the Initial Use Stage	124
Figure J.3 – Confirmatory Factor Analysis Results for our Measurement Model in the Repeated Use Stage.....	125

LIST OF TABLES

Table 1.1 – Factors Pertaining to the Receiver of the eWOM Recommendations	13
Table 1.2 – Factors Pertaining to the Source of the eWOM Recommendations ..	13
Table 1.3 – Factors Pertaining to the Focal Services in the eWOM Recommendations and the eWOM Recommendations Platform	14
Table 1.4 – Factors Pertaining to the eWOM Recommendations	14
Table 1.5 – Factors Pertaining to the Response	15
Table 2.1 – Summary of our Nine Proposed Hypotheses	30
Table 3.1 – 2×2 Between Subject Controlled Experiment	36
Table 3.2 – Dependent and Controlled Factors in our Study	42
Table 4.1 – Fit Statistics for Latent Segments Based on Need for Cognition and Need for Change Scales	53
Table 4.2 – Parameter Estimates for the Four-Segment Solution of LCA	53
Table 4.3 – Summary of MANOVA Hypothesis Testing Results	57
Table 4.4 – Summary of Post-hoc ANOVA Results for Hypothesis 1	59
Table 4.5 – Summary of Post-hoc ANOVA Results for Hypotheses 2 to 9	60
Table 4.6 – Coding Scheme for Content Analysis of Qualitative Responses	66
Table A.1 – Factors Pertaining to the Receiver of the eWOM Recommendations	87
Table A.2 – Factors Pertaining to the Source of the eWOM Recommendations .	88
Table A.3 – Factors Pertaining to the Focal Services in the eWOM Recommendations	90
Table A.4 – Factors Pertaining to the eWOM Recommendations Platform	91
Table A.5 – Factors Pertaining to the eWOM Recommendations	92
Table A.6 – Factors Pertaining to the Response	96
Table B.1 – Procedures for Controlling the Possible Confounding Effects of the Controlled Factors	101
Table C.1 – List of Healthcare and Music Websites Selected for Our Experiment	107
Table C.2 – Criteria Used in Selecting our Healthcare and Music Websites	108
Table D.1 – The Fictitious eWOM Recommendations developed for a Healthcare Website, Webmd.com as an example	109
Table D.2 – The Fictitious eWOM Recommendations developed for a Music Website, Grooveshark.com as an example	110
Table E.1 – Adapted Instruments for Measuring Factors at Pre-usage Stage, for the case of Webmd.com as an example	111
Table E.2 – Adapted Instruments for Measuring Factors at Initial Use and Repeated Use Stages, for the case of Webmd.com as an example	115
Table F.1 – Online Consent Form for Our Experiment	117
Table G.1 – Descriptive Statistics for our Factors	119
Table H.1 – Items Loadings and Cross-loadings for our Factors	120
Table I.1 – Factors Correlations, Square Roots of AVEs, and VIFs	122

LIST OF ALL ABBREVIATIONS AND SYMBOLS

A		
AIC	-----	AKAIKE INFORMATION CRITERION
ANOVA	-----	ANALYSIS OF VARIANCE
AVE	-----	AVERAGE VARIANCE EXTRACTED
B		
B2C	-----	BUSINESS TO CONSUMER
BIC	-----	BAYESIAN INFORMATION CRITERION
C		
CAIC	-----	CONSISTENT AKAIKE INFORMATION CRITERION
CFA	-----	CONFIRMATORY FACTOR ANALYSIS
CFI	-----	COMPARATIVE FIT INDEX
E		
E-COMMERCE	-----	ELECTRONIC COMMERCE
ELM	-----	ELABORATION LIKELIHOOD MODEL
EWOM	-----	ELECTRONIC WORD OF MOUTH
G		
GFI	-----	GOODNESS-OF-FIT INDEX
I		
ICC	-----	INTRACLASS CORRELATION COEFFICIENT
INPEU	-----	PERCEIVED EASE OF USE (INITIAL USE)
INPU	-----	PERCEIVED USEFULNESS (INITIAL USE)
INTRUST	-----	TRUST (INITIAL USE)
IT	-----	INFORMATION TECHNOLOGY
ITS	-----	INTELLIGENT TUTORING SYSTEM
L		
LCA	-----	LATENT CLASS ANALYSIS
M		
MANOVA	-----	MULTIVARIATE ANALYSIS OF VARIANCE
MREB	-----	MCMASTER RESEARCH ETHICS BOARD

	N	
NFC	-----	NEED FOR CHANGE
NFG	-----	NEED FOR COGNITION
NFI	-----	NORMED FIT INDEX
	O	
OSL	-----	OPTIMAL STIMULATION LEVEL
	P	
PCA	-----	PRINCIPAL COMPONENTS ANALYSIS
PEOU	-----	PERCEIVED EASE OF USE
PGR	-----	PROVIDER GENERATED RECOMMENDATIONS
PREPEOU	-----	PERCEIVED EASE OF USE (PRE-USAGE)
PREPU	-----	PERCEIVED USEFULNESS (PRE-USAGE)
PRETRUST	-----	TRUST (PRE-USAGE)
PROC LCA	-----	LCA PROCEDURE IN SAS SOFTWARE
PU	-----	PERCEIVED USEFULNESS
	R	
REPPEU	-----	PERCEIVED EASE OF USE (REPEATED USE)
REPPU	-----	PERCEIVED USEFULNESS (REPEATED USE)
REPTRU	-----	TRUST (REPEATED USE)
RMSEA	-----	ROOT MEAN SQUARE ERROR OF APPROXIMATION
	S	
SSL	-----	SECURE SOCKET LAYER
	T	
TRA	-----	THEORY OF REASONED ACTION
	U	
ULMC	-----	UNMEASURED LATENT METHOD CONSTRUCT
	V	
VIF	-----	VARIANCE INFLATION FACTOR

DECLARATION OF ACADEMIC ACHIEVEMENT

My Ph.D. supervisor, Prof. Ali Reza Montazemi, and myself designed the research conducted in this dissertation. In recognition of this fact of dissertation research, I have chosen to use the personal pronoun “we” where applicable throughout the dissertation manuscript and presentation. Nonetheless, this dissertation represents original research that I conducted, as follows. With the advice and guidance of Prof. Montazemi, I conducted systematic review of extant literature, developed the theoretical foundations for the hypotheses, and prepared the ethics approval application for the empirical research protocols, which was subsequently approved. Under Prof. Montazemi’s supervision, I designed and conducted the controlled longitudinal laboratory experiment for quantitative and qualitative data gathering and performed all quantitative and qualitative analyses. I wrote the dissertation manuscript with the editorial advice and supervision of Prof. Montazemi. An earlier draft of a part of this research was presented at an international conference as part of the research development process.

THIS PAGE IS INTENTIONALLY LEFT BLANK

1. INTRODUCTION

Electronic word of mouth (eWOM) recommendations are online consumer-generated recommendations posted on a service providers' or third party's websites (Mudambi & Schuff, 2010). Electronic word of mouth recommendations play an increasingly important role in the popularity and success of electronic commerce (e-commerce) (eMarketer Inc., 2010). Adoption of a recommended service is not a one-time decision, but rather is a process that occurs over time and consists of three stages: pre-usage, initial use, and repeated use (Looney et al., 2008; Montazemi & Qahri Saremi, 2013, 2014; Rogers, 2003). However, the extant literature is silent on the possible effect of eWOM recommendations on consumers' perceptions of adopting services, at different stages of service adoption process. Furthermore, with a few exceptions (e.g., Gupta & Harris, 2010), much of literature assumes implicitly that the effect of eWOM recommendations is the same for all consumers across different stages of service adoption.

Drawing on the elaboration likelihood model (ELM) and service adoption process theory, we contend that the eWOM recommendation effectiveness is contingent on three factors: (1) the task complexity faced by the consumer to evaluate the nature of the online services; (2) the degree of cognitive and sensory innovativeness of the consumer; and (3) the stage of the service adoption process. *Task complexity* represents complexity of the service evaluation task, which is defined as the extent to which a consumer perceives a service as difficult to understand (Mukherjee & Hoyer, 2001; Rogers, 2003). The degree of task complexity of evaluating a service is different from one consumer to the other, depending on their prior knowledge of the service context (Sweller et al., 1998; Van Merriënboer & Sweller, 2005). *Consumers' innovativeness* is defined as consumers' propensities to adopt new services, which comprises two dimensions: *cognitive innovativeness* and *sensory innovativeness* (Hirunyawipada & Paswan, 2006; Park et al., 2010; Srivastava & Sharma, 2012; Venkatraman & Price, 1990; Wood & Swait, 2002). Cognitive innovativeness is the preference for engaging in new experiences with the objective of stimulating the mind, while sensory innovativeness is the preference for engaging in new experiences with the objective of stimulating the senses (Park et al., 2010). In this study, we investigate the effects of the aforementioned factors on the effectiveness of eWOM recommendations across *three stages of the service adoption process* (i.e., pre-usage, initial use, and repeated use). We adopt a mixed methods approach (i.e., both quantitative and qualitative) in our research methodology to empirically test nine hypotheses. The theoretical and empirical foundations of this study are presented in this dissertation, starting from this chapter – “Introduction”, which provides the necessary underlying basis for our investigation.

To that end, in this chapter, we first define our notion of “service” and discuss its importance for e-commerce, as a preamble. Next, we elaborate on the nature of the eWOM as a type of online recommendations. After that, we explain the two types of services – search and experience services – and discuss the significance of eWOM recommendations for formation of consumers’ perceptions of adopting experience services. Next, we draw on adoption process theory to explain the three stages of the service adoption process (i.e., pre-usage, initial use, and repeated use), which affect the effectiveness of eWOM recommendations. Then, we present a summary of the results of our systematic review of eWOM literature, which will be used in the next chapters to determine the control variables in our study. Finally, we elaborate on our research objectives and present two research questions, followed by a summary of our contributions to the literature.

1.1 PREAMBLE

Due to the rapid growth of e-commerce, consumers' purchase decisions are increasingly made in an online environment (Xiao & Benbasat, 2007). Over the last decade, business to consumer (B2C) e-commerce sales have grown on average 19 percent per year, which is far faster than offline retail sales (Nakache, 2010). Even during the financial crisis of 2009, when offline retail sales shrank two percent, B2C e-commerce grew by 1.4 percent (Nakache, 2010). The growing population of online consumers combined with the providers' innovations and online service improvements will drive B2C e-commerce, as forecasted by eMarketer Inc. (2014), to reach \$2.36 trillion by 2017, up from \$1.25 trillion in 2013. Between 2013 and 2017, B2C e-commerce sales are predicted to grow at an average rate of 17.4 percent per year (eMarketer Inc., 2014). E-commerce appeals to consumers because it offers them great convenience, cost savings, reduced wait times, and immense service choices. Likewise, e-commerce appeals to providers because it can standardize customer service delivery (Curran & Meuter, 2005; Montazemi & Qahri Saremi, 2013), reduce costs (Mahadevan, 2000; Molla & Licker, 2005; Rosen & Howard, 2000), and reach consumers who are unreachable through offline channels (Molla & Licker, 2005; Rosen & Howard, 2000). However, as opposed to offline channels, online consumers encounter a spatial and temporal separation from the online services, which significantly increases their level of uncertainty surrounding their service adoption decisions (Benlian et al., 2010, 2012; Hong & Pavlou, 2010; Park, C. & Lee, T.M., 2009).

The spatial and temporal separation between the online consumers and online services causes online consumers to be uncertain about whether the online services would fit their needs or perform up to their expectations (Weathers et al., 2007). Such uncertainty is a dimension of consumers' risk that results because the actual outcome of an adoption decision can only be known in the future (Weathers et al., 2007). This makes it difficult for online consumers to separate “good” from

“bad” services in situ (Dimoka et al., 2012). In particular, prior research (Dimoka et al., 2012; Dimoka & Pavlou, 2008; Hong & Pavlou, 2010) posits that in the online environment, as compared to the offline environment, consumers are not able to get complete information about the service provider, the service description, how the service will perform in the long term (i.e., service performance), and whether the service matches their needs (i.e., service fit). Therefore, a major challenge in the online environment is persuading consumers to adopt online services.

Service marketing literature (e.g., Arnould, 2008; Bradley & Sparks, 2002; Guiltinan, 1987; Vargo & Lusch, 2004, 2008b) designates the “service” (or “services”, as more frequently used) as the common denominator of all market exchanges, including e-commerce. Based on this perspective, service reflects the process of doing something beneficial for and in conjunction with some entity (e.g., consumers) (Vargo & Lusch, 2008b). Extant marketing literature (e.g., Surprenant & Solomon, 1987; Vargo & Lusch, 2004, 2008a, 2008b) contends that service, as a process, is not separated from goods and other resources of the service provider such as the website and the physical store; rather it employs them as its elements. To that end, we take up this notion in our study and use the term “service” to refer to the process of fulfilling online consumers’ needs, which comprises the online provider’s products and websites. For example, online music service consists of the products (i.e., songs and albums) and the website that delivers those products to the online consumers. As explained earlier, a major challenge facing online service providers is persuading consumers to adopt their services (Benlian et al., 2012). They achieve this through different marketing channels, including online recommendations (e.g., provider-generated recommendations (PGR) and eWOM recommendations) (Benlian et al., 2012). Our objective in this research is assessing contingency factors affecting the effectiveness of eWOM recommendations.

1.2 ONLINE RECOMMENDATIONS

To persuade consumers to adopt services in the online environment, online service providers and third party websites provide online recommendations (Benlian et al., 2010, 2012; Xiao & Benbasat, 2007). Online recommendations recommend services to the consumers based on analyzing their profiles and preferences (e.g., consumers' past buying behaviour), or sharing the experiences of other consumers (e.g., online reviews) (Benlian et al., 2010, 2012; Xiao & Benbasat, 2007). As such, online recommendations are “becoming increasingly available on websites to provide consumers with shopping assistance, improve their decision quality, and help buyers and sellers reduce information overload” (Benlian et al., 2012, p. 238). To this end, major e-commerce providers such as Netflix, Wal-Mart, and eBay have leveraged “big data” analytics tools to deliver

real-time personalized recommendations to their consumers, which have resulted in higher consumers' spending and improved retention rates (eMarketer Inc., 2012). Another case in point is “social advertising” – a \$9.5 billion business accounting for eight percent of digital advertisement spending (Miller & Goel, 2013). Google and Facebook have opted to show consumers' names, photos, ratings, and comments in advertisements across the Web, endorsing different services (Miller & Goel, 2013). Such endorsements, in form of eWOM recommendations, especially from friends and acquaintances, are expected to entice consumers to adopt their services (Coulter & Roggeveen, 2012; Li et al., 2012). Prior research (e.g., Benlian et al., 2010, 2012; Weathers et al., 2007) has described two distinct types of online recommendations with different effects on online consumers' perceptions of adopting a service: (1) PGR using software agent technologies (a.k.a., recommendation agents) – such as shopbots (Xiao & Benbasat, 2007), and (2) eWOM recommendations (a.k.a., consumer-generated recommendations) – such as online reviews (Mudambi & Schuff, 2010).

PGRs are based on software agents that elicit the interests and preferences of consumers for services, either explicitly or implicitly, to make recommendations (Xiao & Benbasat, 2007). The primary function of PGRs, as a type of customer decision support system, is to ameliorate consumers' uncertainty about “service fit” by assisting and advising consumers in selecting appropriate services that best fit their needs (Xiao & Benbasat, 2007). To that end, online providers (e.g., Amazon, Dell, eBay) have adopted PGRs to assist consumers in online service search, selection, and customization.

Different types of PGRs have been developed and are currently used within e-commerce websites. Content-based filtering and collaborative filtering recommendations are the most widely used types of PGRs (Benlian et al., 2012). Content-based filtering PGRs are typically based on a set of algorithms that derive service recommendations for a particular consumer from his/her explicitly indicated preferences or from implicitly taken knowledge about his/her past purchasing and searching behaviour (Benlian et al., 2012). For example, a content-based filtering PGR would recommend a car rental deal to a consumer based on the consumer's expressed preferences about car rentals in his/her profile, or based on the consumer's previous search/purchase history. Alternatively, collaborative filtering PGRs use the buying/searching behaviour of other like-minded consumers to generate recommendations (Xiao & Benbasat, 2007). This type of PGR is extracted from the statistical analysis of patterns and analogies of data drawn from ratings of services given by other consumers, or by implicitly monitoring the behaviour of other consumers in the system (Benlian et al., 2012). For example, a collaborative-filtering-based PGR would recommend a car rental deal to a consumer because other consumers within the same affinity group (i.e., a group of consumers with similar preferences) purchased or searched that deal or rated it highly. PGRs usually include common service descriptions (e.g., brief

description of the car rental deal) and the provision of key service attributes (e.g., price, dates, and the insurance coverage included in the car rental deal).

Electronic word of mouth recommendations, as the other type of online recommendations (Benlian et al., 2010, 2012), are consumer-generated service evaluations posted on the providers' or the third party websites (Mudambi & Schuff, 2010). Unlike PGRs, eWOM recommendations are not based on providers' system-filtered content, rather on original, first-hand content from other consumers, where a software system does not interfere with the recommendation generation process (Benlian et al., 2012). Thus, eWOM recommendations are not generated by ITs; instead, they are mediated by ITs (Benlian et al., 2012). While eWOM recommendations are most often based on text and appear with different text length and number of paragraphs, PGRs are presented in a consistent layout as designed by the provider, including text, pictures, and sometimes multimedia files (i.e., audio or video). Moreover, because eWOM recommendations are directly reported by consumers, the providers have less control over their content and structure, than they do over PGRs. Therefore, eWOM recommendations are perceived to be more reliable, credible, and trustworthy by consumers, as compared to the potentially biased PGRs (Adjei et al., 2010; Fang et al., 2011; Mudambi & Schuff, 2010; Van Hove & Lievens, 2007; Weiss et al., 2008). As a case in point, a recent survey of online consumers shows that online reviews are significantly more trusted – nearly 12 times more – than recommendations that come from the providers (i.e., PGRs) (eMarketer Inc., 2010). As a result, eWOM recommendations have played an increasingly important role in the popularity and success of e-commerce and have been significant in formation of consumers' perceptions towards adopting services (Yin et al., 2014). In recognition of the significance of eWOM recommendations, this study delves further into this topic by investigating the effectiveness of eWOM recommendations on consumers' perceptions *towards adopting* services. To that end, we focus on the *positive* eWOM recommendations for the purpose of this study. Prior research (Benlian et al., 2012; Park, C. & Lee, T.M., 2009; Weathers et al., 2007) have shown that the effects of PGRs and eWOM recommendations in ameliorating consumers' uncertainty towards adopting services differ based on the type of the service – search and experience service, as will be discussed next.

1.3 THE ROLE OF SERVICE TYPE: SEARCH SERVICE AND EXPERIENCE SERVICE

Services can be classified as “search” or “experience” (Arnold et al., 1989; Guiltinan, 1987; Mitra et al., 1999; Nelson, 1970; Nelson, 1974). Search services are characterized by attributes that can be *objectively* evaluated based on the values attached to their attributes, without the need for the consumers to experience them directly prior to their adoption (Xiao & Benbasat, 2007).

Examples of search services include a chequing account (Mitra et al., 1999) or an online ticket for a concert (Hsieh et al., 2005). Unlike search services, experience services are characterized by the attributes that cannot be objectively evaluated, rather need to be *experienced* and *subjectively* evaluated by the consumers prior to adoption (Xiao & Benbasat, 2007). Examples of experience services include music (Bhattacharjee et al., 2006; Bhattacharjee & Sanford, 2006; Nelson, 1970), and healthcare (Dranove, 2000, 2009; Franke et al., 2004; Sloan & Kasper, 2008). Prior research (e.g., Benlian et al., 2012; Lee & Shin, 2014) has argued that the effects of PGRs and eWOM recommendations in ameliorating consumers' uncertainty to adopt a service differ for search and experience services. According to Nelson (1970), perceived quality of a search service involves attributes of an objective nature, whereas perceived quality of an experience service depends on subjective attributes that are a matter of personal experience. The evaluation of search services is primarily associated with a fact-gathering, information-seeking stance that is typically outcome-oriented, impersonal, and objective (Nelson, 1974). However, the evaluation of experience services is, rather, comparable to an engaging expedition that is process-oriented, personal, and subjective (Benlian et al., 2012; Schlosser, 2003). PGRs most often provide a well-organized information design with *objective* key service attributes and statistical data about other consumers' buying behaviour being at the center of their recommendations (e.g., "customers who bought this item also bought" feature on Amazon). Thus, compared to eWOM recommendations, they are more effective at providing an objective overview of key service attributes.

Given that search services, as opposed to experience services, require that objective attributes be evaluated in an outcome-oriented and impersonal fashion, PGRs better match the information needs of search services (Benlian et al., 2012). As a case in point, findings by Benlian et al. (2012) demonstrate that PGRs have stronger effects on consumers' perceived usefulness, ease of use, and trust in the search services, than eWOM recommendations. On the other hand, subjective evaluations of service attributes play a key role in assessment of the experience services (e.g., healthcare or music), than in assessment of the search services (Huang et al., 2009). Given that eWOM recommendations include the experiences and opinions of other consumers, they better match the information required for ameliorating consumers' uncertainty towards evaluating experience services in terms of providing a transparent reasoning process underlying the service adoption. Therefore, eWOM recommendations can act as a surrogate for the consumers' direct experience of experience services, prior to adoption (Fang et al., 2011). Benlian et al. (2012) have found that eWOM recommendations have stronger effects on consumers' perceived usefulness, ease of use, trust in the experience services, than PGRs. Park, C. and Lee, T.M. (2009) have also demonstrated that the effects of eWOM recommendations on consumers' purchase decisions are greater for experience services than for search services. Furthermore, Ghose and Ipeiritis (2011) have analyzed actual online reviews on

Amazon and have found that highly subjective reviews were rated as less helpful when they concerned search services, but such negative effect of review subjectivity was significantly attenuated in the case of online reviews for experience services, such as music. These findings clearly show that eWOM recommendations are more effective for the experience services, than the search services. Therefore, our focus in this research is to assess the effects of the three aforementioned contingency factors on the effectiveness of eWOM recommendations on consumers' perceptions of adopting *experience* services

1.4 SERVICE ADOPTION PROCESS

Consumers' adoption of services occurs in three stages of pre-usage, initial use, and repeated use (Montazemi & Qahri Saremi, 2013). As such, adoption of a service is not a one-time decision, but rather a process that occurs over time and consists of a series of actions and decisions occurring at each of three stages (Rogers, 2003; Xia & Lee, 2000). In this process, a consumer moves from the initial awareness and information about a service, to forming favourable or unfavourable perceptions towards the service, to an initial decision to adopt or reject the service, to putting the service to use for the first time, and to finally confirm or reverse the initial adoption decision. At any stage, the consumer may decide to stop the adoption process or to discontinue using the service (Rogers, 2003; Xia & Lee, 2000). Consumers in different stages of the service adoption process may hold different perceptions towards the service, which may be influenced by different antecedent factors (Xia & Lee, 2000). Agarwal and Prasad (1997) have reported that the same information technology (IT) innovation characteristics impact consumers' perceptions differently in different stages of the adoption process. Karahanna et al. (1999) have also found significant differences in users' perceptions towards an IT usage in the pre-adoption stage and the post adoption stage. Likewise, Venkatesh and Davis (2000) have found that the same external factor has different impacts on consumers' adoption of an IT in different stages of the adoption process. Consequently, Karahanna et al. (1999) have called for a longitudinal research that tracks the same consumer over time through the different stages of the adoption process. Similarly, Xia and Lee (2000, p. 373) argue that "without identifying the specific [adoption process] stage, the empirical results might have been confounded by the temporal dimension of the adoption process". To this end, we adopt the traditional six-step *adoption process theory* (Looney et al., 2008; Meuter et al., 2005; Rogers, 2003), depicted in Figure 1.1, to accurately capture the service adoption process.

According to adoption process theory, adoption of a service by consumers involves a process that consists of three stages: (1) pre-usage, (2) initial use, and (3) repeated use. Pre-usage stage of the adoption process begins with the awareness about the service that leads to its mental evaluation, which in turn may

lead to consumers' initial use (Looney et al., 2008). Initial use consists of trial, which may lead to repeated use of the service, where consumers persist in continue using the service after the trial (Looney et al., 2008). Next, we elaborate on each of the three stages of the adoption process and their pertinent steps, as depicted in Figure 1.1.

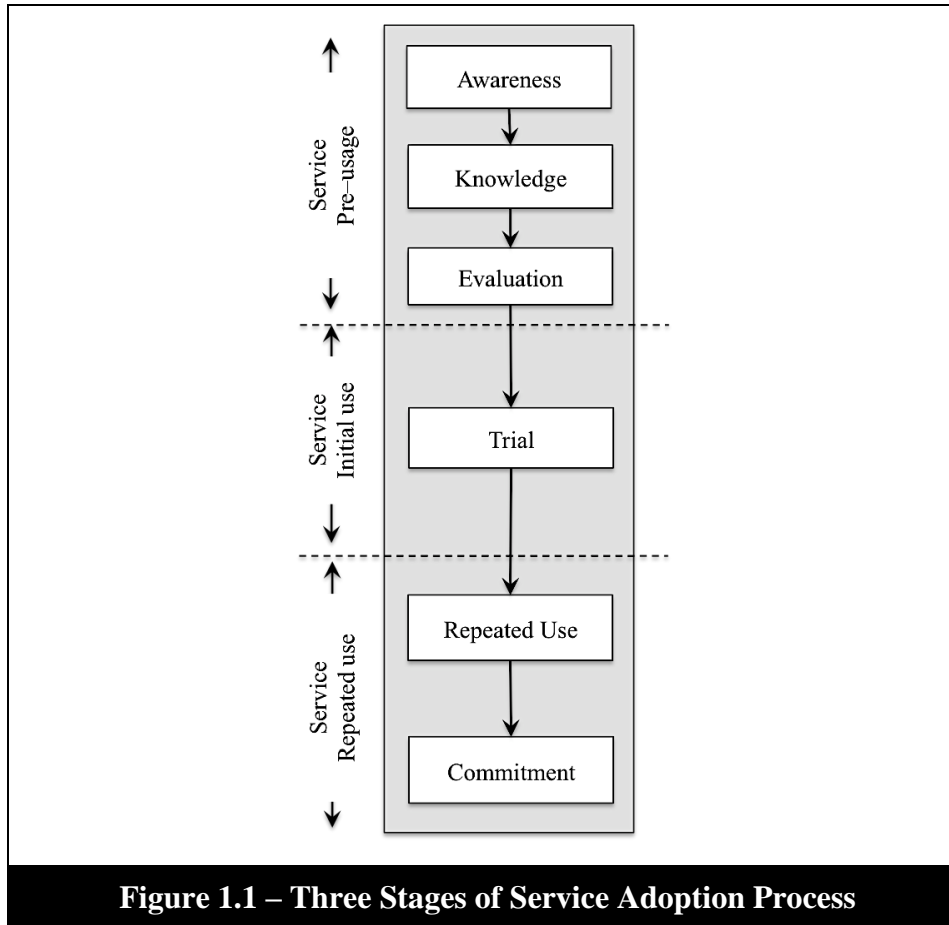


Figure 1.1 – Three Stages of Service Adoption Process

Pre-usage stage of service adoption process is mental, comprised of three steps: (1) awareness, (2) knowledge, and (3) evaluation (Looney et al., 2008; Meuter et al., 2005; Rogers, 2003). In the first step, awareness, consumers are exposed to the existence of the service. For instance, eWOM recommendations could introduce consumers to the existence of an online healthcare website. Once consumers are aware of the service offered, they proceed to the second step, knowledge, where they gain an understanding of the service. In particular, consumers seek to understand the attributes and the interdependence among the attributes of the service. As a result of this understanding, consumers evaluate the service, which is the third step in the pre-usage stage of adoption process. In particular, consumers evaluate how the service would fit their needs and whether

it could perform up to their expectations (Looney et al., 2008). Due to the subjective and experiential nature of the experience services, online consumers face significant uncertainty in evaluating their attributes and their expected performance in the pre-usage stage of adoption process (Benlian et al., 2012). EWOM recommendation is expected to reduce this uncertainty; thereby enabling consumers to better understand and evaluate the experience services. Upon favourable evaluations of the service, consumers move to try it out for the first time, in the initial use stage of the adoption process (Looney et al., 2008).

Initial use stage of service adoption process starts with trial, in which consumers transition from mental processing to actual use by trying out the service for the first time. After the consumers put the service into practice, the ease of use, usefulness, and trustworthiness of the service can be determined and the decision can be made whether to continue using the service. If consumers choose to adopt the service, they proceed to the repeated use stage, where they persist in using the service after the trial (Looney et al., 2008).

Repeated use stage of service adoption process is comprised of two steps: repeated use and commitment. In the repeated use, consumers determine their overall satisfaction with the service by weighing the future consequences of continued use or discontinued use, as well as the associated advantages and disadvantages of each action. When consumers are satisfied with using the service, it is likely they continue (rather than discontinue) its use (Looney et al., 2008; Massey et al., 2007). In the second step, commitment, consumers seek reinforcement for committing to the adoption decision made in the first step. If weak or no reinforcement is found, consumers may opt to discontinue using the service. Similar to the first step, in the commitment step, consumers consider the future consequences, as well as the advantages and disadvantages of committing to or switching from the service being utilized (Looney et al., 2008).

Despite the importance of the three stages of service adoption process (pre-usage, initial use, and repeated use stages), no study has investigated the effectiveness of eWOM recommendations over the three stages. To this end, we adopt the three stages of service adoption process in our study. In particular, we investigate the contingency factors affecting the effectiveness of eWOM recommendations on consumers' perceptions of adopting experience services over pre-usage, initial use, and repeated use stages.

Given the focus of our study, it is essential to gain a better understanding of the factors identified in the extant literature that affect the effectiveness of eWOM recommendations. To this end, we conducted a systematic review of the extant eWOM literature, presented next.

1.5 FACTORS AFFECTING THE EFFECTIVENESS OF EWOM RECOMMENDATIONS

Prior eWOM research has demonstrated the effects of different factors on the effectiveness of eWOM recommendations. We followed the recommendations in the literature (e.g., Boote & Beile, 2005; Hart, 1998; Webster & Watson, 2002) to conduct a systematic review of the eWOM literature, as presented in Appendix A. This review enabled us to identify 36 factors that affect the effectiveness of eWOM recommendations on consumers' perceptions of adopting services, across the three stages of the service adoption process (i.e., pre-usage, initial use, and repeated use). The 36 factors identified comprise six different dimensions, as depicted in Figure 1.2: (1) the communicator (source) who transmits the eWOM recommendation, (2) the eWOM recommendation as a form of social communication content transmitted by the eWOM source, (3) the consumer who receives and responds to the eWOM recommendation (eWOM receiver), (4) the responses made to the eWOM recommendation by the receiver, (5) the focal services in the eWOM recommendation, and (6) the eWOM recommendation platform. Here we provide an overview of the factors pertaining to each dimension, as follows.

Factors pertaining to the Receiver of the eWOM Recommendations represent the characteristics of the consumer who receives and responds to the eWOM recommendation. We have identified four factors that represent this dimension in the eWOM literature (see Table 1.1 for definitions): consumer's prior knowledge of the service context, consumer's need for cognition, consumer's involvement, and consumer's demographics. Results of our literature review show that these factors significantly affect the effectiveness of eWOM recommendations on consumers' perceptions of adopting services.

Factors pertaining to the Source of the eWOM Recommendations represent the characteristics of the source of eWOM recommendation. We have identified six factors that represent this dimension in the eWOM literature (see Table 1.2 for definitions): source knowledge, source credibility, source type, source identity, source tie strength, and source homophily. These factors have been shown to influence the effectiveness of eWOM recommendations on consumers' perceptions of adopting services.

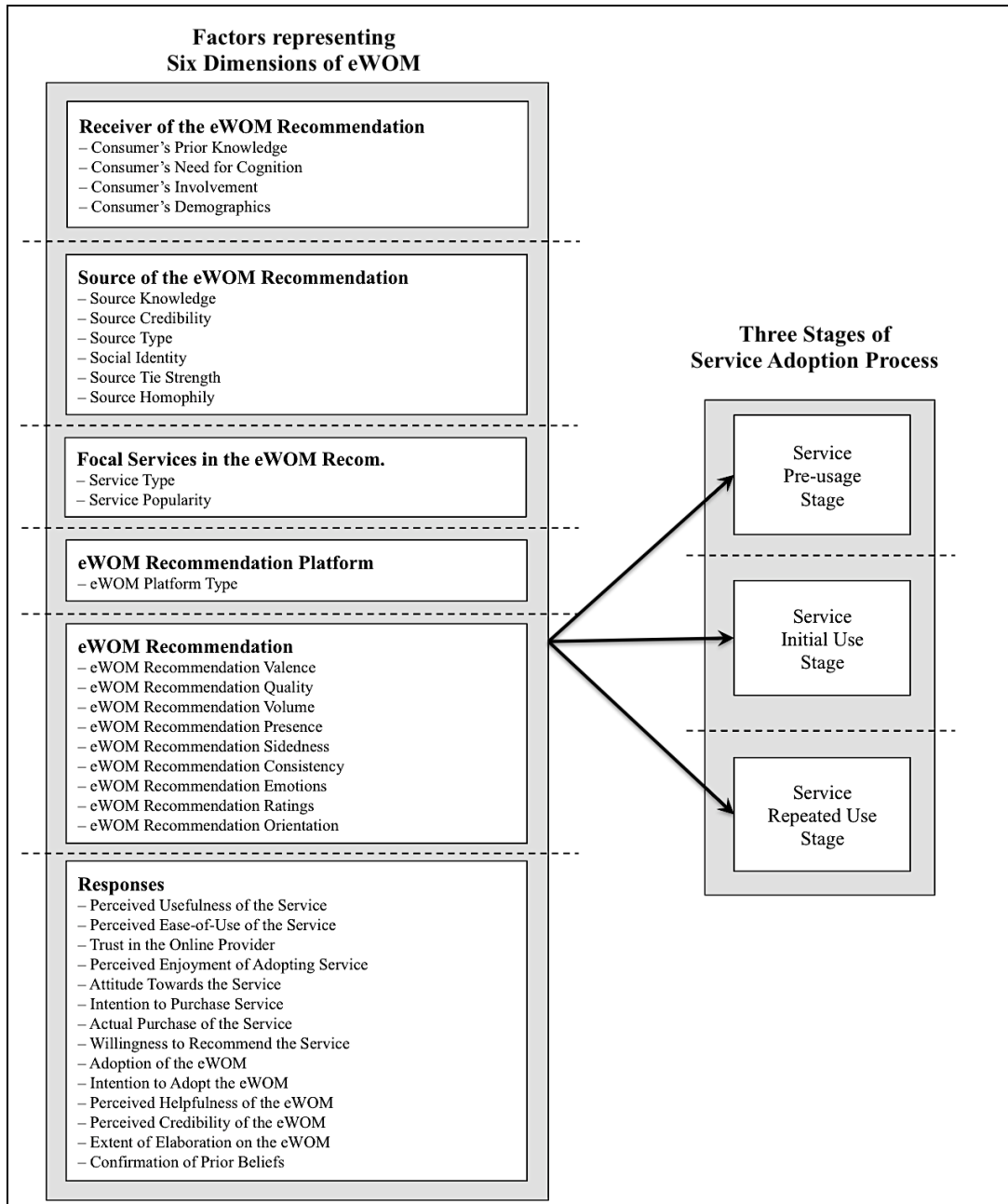


Figure 1.2 – The 36 Factors representing Six Dimensions of the eWOM Recommendation in our Conceptual Framework

Factors pertaining to the Focal Services in the eWOM Recommendations include service type: search and experience services, and service popularity (see Table 1.3 for definitions). The extant eWOM literature (e.g., Benlian et al., 2012; Park et al., 2009) contend that the effectiveness of eWOM recommendations on consumers' perceptions of adopting services is stronger for experience services than for search services. Furthermore, prior research (e.g., Duan et al., 2009) show that the service popularity moderates the effectiveness of eWOM recommendations on consumers' perceptions of adopting services.

Factors pertaining to the eWOM Recommendations Platform include the platform type: provider-generated website versus third party website (see Table 1.3 for definitions). Lee and Youn (2009) show that the type of eWOM recommendation platform significantly affects the effectiveness of eWOM recommendations on consumers' perceptions of adopting services.

Factors pertaining to the eWOM Recommendations represent the characteristics of the eWOM recommendations as a form of social communication content. We have identified nine factors that represent this dimension in the eWOM literature (see Table 1.4 for definitions): eWOM recommendation valence, eWOM recommendation quality, eWOM recommendation volume, eWOM recommendation presence, eWOM recommendation sidedness, eWOM recommendation consistency, eWOM recommendation emotions, eWOM recommendation ratings, and eWOM recommendation orientation. Extant eWOM literature shows that these factors influence the effectiveness of the eWOM recommendations on consumers' perceptions of adopting services.

Factors pertaining to the Response represent the responses made to the eWOM recommendations by the receiver. Extant eWOM literature has identified 14 different factors to represent the consumers' responses to the eWOM recommendations (see Table 1.5 for definitions): perceived usefulness of services, perceived ease of use of services, trust in the online provider, perceived enjoyment of adopting services, attitude towards the services, intention to purchase services, actual purchase of services, willingness to recommend the services, adoption of the eWOM recommendation, intention to adopt the eWOM recommendation, perceived helpfulness of eWOM recommendation, perceived credibility of eWOM recommendation, extent of elaboration of eWOM recommendation, and confirmation of prior beliefs.

Table 1.1 – Factors Pertaining to the Receiver of the eWOM Recommendations	
Factors	Definitions
Consumer’s prior knowledge of the service context	Receiver’s prior knowledge or pertinent experience to the eWOM recommendation (Cheung & Thadani, 2012; Martin & Lueg, 2013)
Consumer’s need for cognition	The eWOM recommendation receiver’s innate desire to think about and process information (Gupta & Govindarajan, 2000; Gupta & Harris, 2010)
Consumer’s involvement with the eWOM	Relevance of eWOM recommendation to the eWOM recommendation receiver (Cheung et al., 2012)
Consumer’s demographics	Demographical attributes of eWOM recommendation receiver (e.g., Gender).

Table 1.2 – Factors Pertaining to the Source of the eWOM Recommendations	
Factors	Definitions
Source knowledge of the service	Source’s prior knowledge or pertinent experience to the eWOM recommendation (Cheung et al., 2008; Senecal & Nantel, 2004).
Source credibility	Consumers’ perception about the trustworthiness of the source of eWOM recommendation (Cheung et al., 2008; Senecal & Nantel, 2004).
Source type	Type of the source of eWOM recommendation (e.g., provider versus consumer) (Benlian et al., 2010, 2012).
Source identity	Source disclosure of his/her identity (Racherla & Friske, 2012).
Source tie Strength	The level of intensity of a social relationship between the source of eWOM recommendation and the consumer (Cheung & Thadani, 2012; Steffes & Burgee, 2009).
Source homophily	The degree of similarity between the source of eWOM recommendation and the consumer (Cheung & Thadani, 2012; Steffes & Burgee, 2009).

Table 1.3 – Factors Pertaining to the Focal Services in the eWOM Recommendations and the eWOM Recommendations Platform	
Factors	Definitions
Service type	Search versus Experience attributes of the focal service in the eWOM recommendation (Mudambi & Schuff, 2010).
Service popularity	The reputation or ranking of the focal service in the eWOM recommendation (Duan et al., 2009).
The eWOM recommendation Platform Type	Type of online platform for sharing the eWOM recommendations (i.e., provider-generated website versus independent website) (Lee & Youn, 2009).

Table 1.4 – Factors Pertaining to the eWOM Recommendations	
Factors	Definitions
eWOM recommendation valence	The valence of an eWOM recommendation shows that whether it is positive or negative (Cheung & Thadani, 2012).
eWOM recommendation quality	The eWOM recommendation quality refers to the persuasive strength of arguments embedded in an eWOM: <ul style="list-style-type: none"> – Timeliness concerns whether the eWOM recommendation is current, timely, and up-to-date – Accuracy concerns reliability of the eWOM recommendation. It also represents a user's perception that the eWOM recommendation is correct – Comprehensiveness of eWOM recommendation refers to their completeness – Explaining language refers to the extent of justifications in eWOM recommendation in support of its claims (Cheung & Thadani, 2012).
eWOM recommendation volume	Number of eWOM recommendations (Cheung & Thadani, 2012).
eWOM recommendation presence	Whether there is any eWOM recommendation available about the service (Gupta & Harris, 2010).
eWOM recommendation sidedness	A one-sided eWOM recommendation presents either the positive or negative arguments, but not both. A two-sided eWOM recommendation includes both positive and negative arguments (Cheung & Thadani, 2012).

Table 1.4 – Factors Pertaining to the eWOM Recommendations	
Factors	Definitions
eWOM recommendation consistency	The eWOM recommendation congruence to others' opinions about the focal service (Cheung & Thadani, 2012; Cheung et al., 2009)
eWOM recommendation emotions	Extent and/or type of emotional expressions used in the eWOM recommendation (Yin et al., 2014).
eWOM recommendation ratings	The overall ratings given by other consumers for an eWOM recommendation (Lee & Lee, 2009).
eWOM recommendation orientation	Attribute-centric versus simple eWOM recommendations (Cheung & Thadani, 2012; Park & Kim, 2008; Park & Lee, 2008).

Table 1.5 – Factors Pertaining to the Response	
Factors	Definitions
Perceived usefulness of the service	Consumers' perceived usefulness of the service (Cheung & Thadani, 2012).
Perceived ease of use of the service	Consumers' perceived ease of use of the service (Lee et al., 2006).
Trust in the online provider	Consumers' trust in online vendor (Awad & Ragowsky, 2008; Liu, 2006).
Perceived enjoyment of adopting the service	An individual's affective reactions to using service (Benlian et al., 2010, 2012).
Attitude towards the service	Consumers' overall evaluations of the service (Cheung & Thadani, 2012).
Intention to purchase the service	Consumers' willingness to pay for or purchase the service (Cheung & Thadani, 2012).
Actual use/purchase of the service	Consumer's actual use/purchase of the service (Ye et al., 2011).
Willingness to recommend the service	Consumers' willingness to recommend the service in the future (Gauri et al., 2008; Lee & Youn, 2009).
Adoption of the eWOM recommendation	A process in which consumers purposefully engage in using eWOM recommendation (Cheung et al., 2008; Cheung & Thadani, 2012).
Intention to adopt the	Consumers' willingness to adopt the eWOM recommendation (Benlian et al., 2012).

Table 1.5 – Factors Pertaining to the Response	
Factors	Definitions
eWOM recommendation	
Perceived helpfulness of the eWOM recommendation	Consumers' perception of the helpfulness of eWOM recommendation (Cheung & Thadani, 2012; Sen & Lerman, 2007).
Perceived credibility of the eWOM recommendation	The perceived degree to which an eWOM recommendation provides accurate and trustworthy information (Cheung et al., 2009; Park, C. & Lee, T.M., 2009).
Extent of elaboration on the eWOM recommendation	Consumers' extent of cognitive elaborations about the eWOM recommendation (Cheung & Thadani, 2012; Chu & Kamal, 2008).
Confirmation of prior beliefs	Consumers' confirmation of prior beliefs about the focal services (Cheung & Thadani, 2012; Cheung et al., 2009).

1.6 RESEARCH OBJECTIVES

The objectives of this study are two-fold. As our first objective, we investigate the effects of *task complexity* on the effectiveness of eWOM recommendations on consumers' perceptions of adopting experience services. Prior research (e.g., Xiao & Benbasat, 2014; Xu et al., 2014) contends that services differ along an important dimension: the complexity of the service evaluation task (a.k.a., task complexity), which significantly affects how consumers evaluate and decide on the adoption of the services. For example, Jiang and Benbasat (2007) have found that task complexity influences the effectiveness of PGRs on the consumers' adoption of services. Notwithstanding the contributions of prior eWOM studies, little is known about the effects of task complexity on the effectiveness of eWOM recommendations on consumers' perceptions of adopting experience services. As our second objective, we examine the effects of *consumer's innovativeness* on the effectiveness of eWOM recommendations on consumers' perceptions of adopting experience services. Consumer behaviour researchers (e.g., Hirschman, 1980; Manning et al., 1995; Midgley & Dowling, 1978; Venkatraman & Price, 1990; Wood & Swait, 2002) have identified innovativeness as a personality construct that predicts which consumers are more likely to evaluate and adopt services. Furthermore, research findings (e.g., Wang & Doong, 2010; Xiao & Benbasat, 2014) show that consumers' innovativeness is significantly and positively related to consumers' deliberation on the PGRs. Yet little is known about the effects of consumers' innovativeness on the effectiveness of eWOM recommendations on consumers' perceptions of adopting experience services. Hence, research is needed to shed light on the effects of these two factors on the effectiveness of eWOM recommendations. To this end, we devise two research questions, presented next.

1.7 RESEARCH QUESTIONS

1.7.1 Research Question 1 – Task Complexity

Task complexity represents complexity of the service evaluation task, which is defined as the extent to which a consumer perceives a service as difficult to understand (Mukherjee & Hoyer, 2001; Rogers, 2003). Prior research has characterized task complexity along three dimensions: number of service attributes, variability of each service attribute, and interdependence of the service attributes (Fu & Elliott, 2013; Jahng et al., 2000; Jahng et al., 2007; Johnson & Sohi, 2013; Xiao & Benbasat, 2007; Xu et al., 2014). As the number of attributes of a service, the level of variation of each attribute, and the degree of interdependence among the attributes increase, it is more likely that a consumer perceives the service as more difficult to understand, hence more complex to

evaluate (i.e., higher task complexity). Online services comprise a wide range of task complexity, ranging from those with relatively few and simple to understand service attributes (i.e., low task complexity), such as online music (Xu et al., 2014), to those with many and relatively more difficult to understand attributes (i.e., high task complexity), such as online healthcare (Fan et al., 2013; Hanif et al., 2009; Lambert & Loiselle, 2007; Liu et al., 2013). Prior research has demonstrated the impact of task complexity on consumers' decision quality and search behaviour (Bettman et al., 1998; Keller & Staelin, 1987). For example, Keller and Staelin (1987) have developed an analytical model, which shows that higher number of service attributes results in decreased decision quality. Bettman et al. (1998) show that task complexity increases consumers' cognitive load, resulting in decision biases. Furthermore, Benbasat and colleagues (Jiang & Benbasat, 2007; Xiao & Benbasat, 2007) contend that the effectiveness of PGRs on consumers' decisions is greater when the task complexity is higher. Nonetheless, little is known about the effects of task complexity on the effectiveness of eWOM recommendations.

According to Wood (1986), task complexity is a function of the number of distinct information cues about the attributes of the task-related stimulus object that an individual has to process when performing a task. Prior research on task complexity (Speier & Morris, 2003; Zigurs & Buckland, 1998) shows that high task complexity can increase information-processing requirements and demand more cognitive resources in form of schemata from task executors. Schema is a cognitive structure that represents the *prior knowledge* about a given concept (Johnson & Sohi, 2013). Schema, which contains both the attributes of the concept and the relationship among those attributes, enables one to make inferences and simplify the information processing (Johnson & Sohi, 2013). Thus, when faced with a highly complex task of evaluating an experience service, such as an online healthcare service (Fan et al., 2013) that requires considerable information processing, consumers without the required prior knowledge (e.g., specialized medical knowledge for evaluating the healthcare service) are not able to handle the complex task (Sweller et al., 1998; Van Merriënboer & Sweller, 2005). Given their limited *ability* to handle the complex task, consumers tend to seek advice from other sources, such as eWOM recommendations (Adjei et al., 2010). To this end, we draw on cognitive load theory and the ELM as our theoretical underpinnings to investigate the following research question:

Research Question 1: Does the task complexity in evaluating an experience service affect the effectiveness of eWOM recommendations on consumers' perceptions of adopting the experience service?

1.7.2 Research Question 2 – Consumer’s Innovativeness

Prior studies (e.g., Wood & Swait, 2002) contend that consumers’ propensities to adopt services (consumer’s innovativeness) play an important role in consumers’ behaviour, in terms of increasing their motivation to evaluate and seek information about the services. “Few concepts in the behavioural sciences have as much immediate relevance to consumer behaviour as innovativeness” (Hirschman, 1980, p. 283). If there were no such characteristic as innovativeness, consumers’ behaviour would consist of a series of routinized attitudes towards adoption of a static set of services. It is the inherent willingness of a consuming population to look for and adopt services that gives the service providers opportunities to innovate, which creates the dynamic nature of the marketplace (Hirschman, 1980).

Prior research (Hirunyawipada & Paswan, 2006; Venkatraman & Price, 1990; Wood & Swait, 2002) has recognized two dimensions that determine the consumer’s level of innovativeness: cognitive innovativeness and sensory innovativeness. Cognitive innovativeness is the preference for engaging in experiences with the objective of stimulating the mind, while sensory innovativeness is the preference for engaging in experiences with the objective of stimulating the senses (Park et al., 2010). Some innovative people have a preference for either cognitive, or sensory stimulation, but other innovative people may seek both (Park et al., 2010; Wood & Swait, 2002). Prior research on PGRs (e.g., Wang & Doong, 2010; Xiao & Benbasat, 2014) contends that consumers’ innovativeness is an important factor affecting the effectiveness of PGRs on consumer’s adoption of services. Nonetheless, there is a paucity of research examining the effects of consumers’ innovativeness on the effectiveness of eWOM recommendations. To this end, as explained in the next chapter, we draw on the ELM and the two dimensions of consumer’s innovativeness (i.e., cognitive innovativeness and sensory innovativeness) to investigate the following research question:

Research Question 2: Does the consumers’ level of innovativeness affect the effectiveness of eWOM recommendations on their perceptions of adopting an experience service?

Given the importance of the stage of the service adoption process (i.e., pre-usage, initial use, and repeated use) in adoption of services (see Figure 1.1), the foregoing two research questions are investigated across all the three stages of the adoption process, detailed in Chapter 3.

1.8 DISSERTATION CONTRIBUTIONS & STRUCTURE

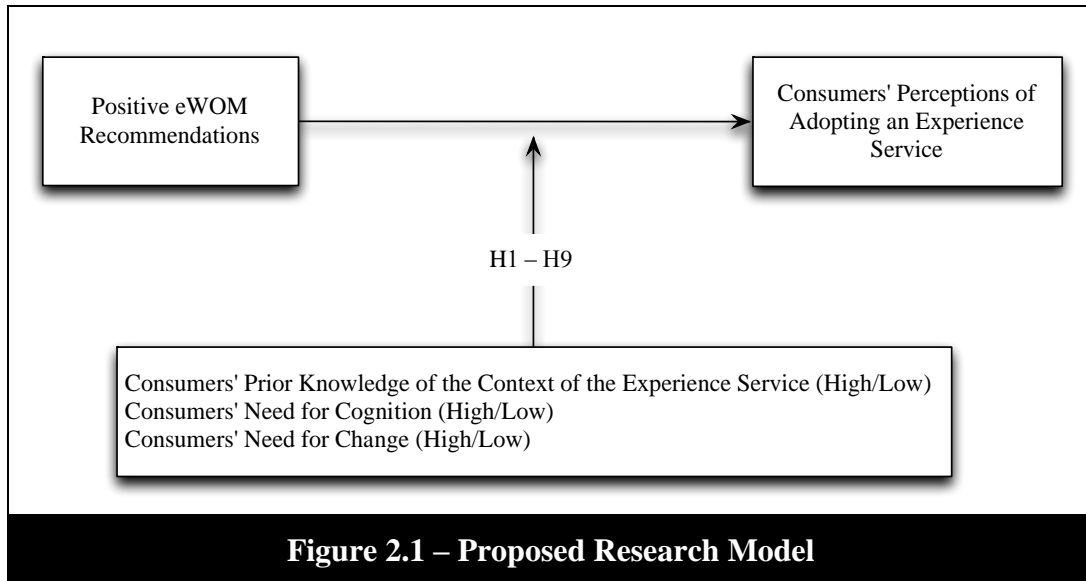
This study makes three major contributions to the literature. Firstly, it illuminates the effect of task complexity on the effectiveness of eWOM recommendations on consumers' perceptions of adopting experience services. Secondly, it assesses the effect of consumers' innovativeness on the effectiveness of eWOM recommendations on consumers' perceptions of adopting experience services. Thirdly, it reveals the moderating effect of stage of the service adoption process (i.e., pre-usage, initial use, and repeated use) on the effectiveness of eWOM recommendations.

The rest of this dissertation is structured as follows. In Chapter 2, we develop our theoretical model and propose nine hypotheses. Chapter 3 describes our mixed methods methodology (i.e., quantitative and qualitative) for collecting data in order to test the nine stated hypotheses. In Chapter 4, we present the preliminary data analyses, the results of statistical tests of our nine hypotheses, and findings from content analysis of our qualitative data. Chapter 5 discusses insights from our findings in terms of contributions to the theory and implications for practice. In Chapter 5, we also conclude our study by explaining its limitations and devising avenues for future research.

THIS PAGE IS INTENTIONALLY LEFT BLANK

2. THEORY DEVELOPMENT

As discussed in Chapter 1, the objective of this study is to assess the contingency factors affecting the effectiveness of eWOM recommendations on consumers' perceptions of adopting experience services. To that end, we investigate two research questions: (1) Does the task complexity in evaluating an experience service affect the effectiveness of eWOM recommendations on consumers' perceptions of adopting the experience service? (2) Does the consumers' level of innovativeness affect the effectiveness of eWOM recommendations on their perceptions of adopting an experience service? To respond to these two research questions, we draw on the ELM, cognitive load theory, and two dimensions of consumer's innovativeness (i.e., cognitive innovativeness and sensory innovativeness), as our theoretical foundations, to propose a research model (depicted in Figure 2.1) and propose nine hypotheses, detailed next.



2.1 THEORETICAL FOUNDATIONS

The ELM enables us to gain a better understanding of how task complexity and consumers' level of innovativeness affects the effectiveness of eWOM recommendations on consumers' perceptions of adopting experience services. The ELM (Petty & Cacioppo, 1986; Petty & Wegener, 1998, 1999; Petty et al., 2003) provides a theoretical perspective about the processes responsible for the formation of people's perceptions about objects, such as services. There is substantial empirical support for the explanatory power of the ELM in a variety of behavioural domains, including IS (e.g., Angst & Agarwal, 2009; Bhattacharjee & Sanford, 2006; Meservy et al., 2013; Sussman & Siegal, 2003; Tam & Ho, 2005).

The ELM explains that different processes can lead to perceptions formation in different circumstances (Petty & Wegener, 1998). Some of these processes require diligent and effortful information processing, whereas others proceed with relatively little mental effort (Petty & Wegener, 1998). A key construct in the ELM is the elaboration likelihood continuum (Petty & Wegener, 1998; Ranganath et al., 2010). On the one hand, when the elaboration likelihood is high, people evaluate the object-relevant information based on their prior knowledge about the object, which would result in the formation of perceptions about the object that are well articulated and bolstered by their prior knowledge, referred to as *central route*. On the other hand, when the elaboration likelihood is low, the information scrutiny is significantly reduced and people's perceptions about the focal object are formed as a result of less resource demanding heuristics (a.k.a., "simple evaluative thoughts") that do not require effortful evaluation of the object-relevant information, referred to as *peripheral route* (Petty & Wegener, 1998). The ELM posits that as the impact of central route process on the formation of perceptions increases, the impact of peripheral route process decreases (a.k.a., "trade-off hypothesis"). The ELM emphasizes that this trade-off is not in the occurrence of central and peripheral processes, but in the impact of these processes on the formation of people's perceptions about the object (Petty & Wegener, 1998).

For example, under low elaboration conditions (peripheral route), the presence of an eWOM recommendation from a credible source about a service can invoke simple evaluative thoughts such as "credible sources provide high-quality knowledge" (Meservy et al., 2013, p. 19) or "credibility implies correctness" (Zhang & Watts, 2008, p. 75), which can be used as the basis for formation of consumer's perceptions about the recommended service, without careful evaluation of the service attributes. However, under high elaboration conditions, the eWOM recommendation from the credible source would be subjected to careful scrutiny, just as the attributes of the recommended service are subjected to careful evaluations (central route). If the eWOM recommendation is found to lack merit for supporting the advocated view, or does not provide much information over and above the consumer's prior knowledge of the recommended service,

then it has little impact on consumer's perceptions about the service. This scrutiny of the recommendation for merit would be less likely under low elaboration conditions, where the mere invocation of the aforementioned simple evaluative thoughts would be sufficient for formation of perceptions about the recommended service. Therefore, the ELM holds that movement in either direction along the elaboration likelihood continuum (i.e., central route process versus peripheral route process) would tend to enhance the relative impact of the pertinent processes on the formation of perceptions (e.g., effortful evaluation of the service attributes versus reliance on simple evaluative thoughts based on an eWOM recommendation from a credible source). Extrapolating this to the context of eWOM recommendations, we contend that under peripheral route conditions, the presence of eWOM recommendations from a credible source about an online experience service would result in invocation of some simple evaluative thoughts for the consumers, which can be used as the basis for their adoption of the service. However, under central route conditions, the eWOM recommendations and the attributes of the recommended service are subjected to careful evaluations by the consumers, based on their prior knowledge of the service context (Petty & Wegener, 1998). To better understand how task complexity and consumer's innovativeness affect the effectiveness of eWOM recommendations from the ELM perspective, we need to first understand what factors cause a consumer to move one direction versus the other along the elaboration likelihood continuum (i.e., central route process versus peripheral route process).

The ELM explains that in order for the central route process to influence perceptions formation, people must have the *ability* (i.e., the necessary prior knowledge to engage in thought) and *motivation* (i.e., the desire to exert a high level of mental effort) to engage in an effortful processing of the object-relevant information (Nah & Benbasat, 2004; Petty & Wegener, 1998). Extrapolating this to the context of service adoption, Keller (1993) argues that in order for the central route process to form a consumer's perceptions of adopting a service, the consumer must have the ability and motivation to evaluate the service attributes (Keller, 1993). Based on cognitive load theory (Kirschner, 2002; Sawicka, 2008; Sweller, 1988; Sweller, 1994; Sweller & Chandler, 1991; Sweller et al., 1998; Van Merriënboer & Sweller, 2005), task complexity of evaluating a service reduces the consumer's ability to evaluate the service. Cognitive load theory also explains that consumer's prior knowledge of the context of the service reduces the task complexity, hence determines consumer's ability to evaluate the service. Furthermore, prior research (Hirunyawipada & Paswan, 2006; Park et al., 2010; Srivastava & Sharma, 2012; Venkatraman & Price, 1990; Wood & Swait, 2002) shows that two dimensions of consumer's innovativeness (i.e., cognitive innovativeness and sensory innovativeness) are important factors in determining consumer's motivation to evaluate a service. We elaborate on these factors in the following section.

2.2 HYPOTHESES DEVELOPMENT

2.2.1 Consumer's Ability to Evaluate an Experience Service: Consumer's Prior Knowledge of the Context of the Experience Service

Prior research on task complexity (e.g., Speier & Morris, 2003; Sweller et al., 1998; Xu et al., 2014; Zigurs & Buckland, 1998) shows that higher task complexity increases information-processing requirements, which can increase the cognitive load for the task executor. The cornerstone of human's information processing is the working memory (a.k.a., short-term memory), which is used to organize, contrast, compare, evaluate, and learn the incoming information (Kirschner, 2002; Sweller et al., 1998). Cognitive load theory (Kirschner, 2002; Sweller et al., 1998; Van Merriënboer & Sweller, 2005) argues that working memory is limited in its capacity to process information and the duration of keeping the information. In particular, cognitive load theory describes a limited working memory that stores about seven elements and is able to deal with information for no more than a few seconds with almost all information lost after about 20 seconds (Van Merriënboer & Sweller, 2005). Therefore, complex tasks that require a large number of information cues to be stored and processed in working memory can contribute to a high cognitive load (Jiang & Benbasat, 2007; Sweller et al., 1998; Van Merriënboer & Sweller, 2005; Xu et al., 2014). If working memory is overloaded, an individual's ability to execute the task deteriorates (Sweller, 1988). Extending this to the context of evaluating a service, we expect that as the complexity of the service evaluation task increases the amount and complexity of information cues that consumers should process in their working memory will increase as well. This would increase the cognitive load in the consumers' working memory. If the amount of cognitive load exceeds the working memory capacity, consumers will not be able to process the service attributes, which would negatively affect the quality of their service evaluation task (Kamis et al., 2008). Once individuals are faced with a complex task, they attempt to simplify the task by resorting to simple evaluative thoughts (Hadjimarcou & Hu, 1999), such as relying on the experience of other individuals (Fang et al., 2011; Ye et al., 2011) in order to reduce the cognitive load. Prior research contends that eWOM recommendations are effective in reducing consumer's cognitive load. For example, Ye et al. (2011) found that online reviews serve to reduce the cognitive load of consumers in online hotel booking context. Furthermore, Fang et al. (2011, p. 192) contend that "when a[n experience] product is difficult to evaluate before purchase, people actively seek out the experience of relatives and friends who have already used the product".

Cognitive load theory emphasizes that the working memory capacity limitations only apply to novel information and it has no known limitations when dealing

with information retrieved from long-term memory (Van Merriënboer & Sweller, 2005). In contrast to working memory, the long-term memory is the repository for more permanent knowledge and skills, with an unlimited storage capacity (Kirschner, 2002). Long-term memory can hold an unlimited number of cognitive schemata that vary in their degree of complexity (Kirschner, 2002). A schema is a cognitive structure that represents the *prior knowledge* about a given concept (Johnson & Sohi, 2013). These schemata provide a basis for interpreting new information while forming subsequent judgments (Xu et al., 2013). Prior research shows that schemata are effective tools for interpreting the world around us and play an important role in value judgments across multiple fields, including IS applications (Armstrong & Hardgrave, 2007; Dou et al., 2010; Montazemi & Conrath, 1986; Xu et al., 2014; Xu et al., 2013). Cognitive load theory argues that the schemata stored and organized in the long-term memory reduce working memory load, because even a highly complex schema can be dealt with as only one element in the working memory (Kirschner, 2002). In effect, long-term memory can alter the characteristics of working memory through these schemata (Van Merriënboer & Sweller, 2005).

In this sense, schemata act as a central executive, organizing the information cues that need to be processed in working memory. It is under these circumstances that there are no limits to working memory (Nah et al., 1999; Van Merriënboer & Sweller, 2005). Through the lens of the ELM (Petty & Wegener, 1998), for a consumer who does not have the required prior knowledge of the context of a service, the task of evaluating the service will be cognitively overloading, hence highly complex. Therefore, based on the ELM, the consumer will not be able to evaluate the service through central route processes. As a result, in order to reduce the complexity, the consumer resorts to the peripheral route processes for evaluating the service. For example, a person without any prior medical education cannot evaluate the reliability and applicability of a complex medical operation through central route processes (Fan et al., 2013; Liu et al., 2013). This is because when dealing with a complex experience service, such as medical operations (Dranove, 2009; Fan et al., 2013), for which no prior knowledge is available, consumer's working memory would be overloaded. Therefore, such consumers would resort to peripheral route processes for evaluating the medical operations. Based on the above justifications, we propose the following hypothesis:

Hypothesis 1: *the effectiveness of positive eWOM recommendations on consumers' perceptions of adopting an experience service is higher, when consumers have lower prior knowledge of the context of the experience service.*

2.2.2 Consumers' Motivation to Evaluate the Service: Consumer's Innovativeness

According to the ELM, we expect the likelihood of consumers choosing central/peripheral route to be affected by consumers' motivation to evaluate a service. Prior research (Rogers, 2003; Srivastava & Sharma, 2012; Wood & Swait, 2002) shows that consumer's motivation to evaluate a service is determined by consumer's level of innovativeness, which is defined as consumers' preference for an alternative to the status quo (Wood & Swait, 2002), such as adoption of an experience service. Prior Research (e.g., Bartels & Reinders, 2011; Hirunyawipada & Paswan, 2006; Park et al., 2010; Srivastava & Sharma, 2012; Venkatraman & Price, 1990; Wood & Swait, 2002) has recognized that a consumer's level of innovativeness is determined by two distinct personal characteristics: (a) consumer's propensity to engage in new experiences with the objective of stimulating the senses – known as *sensory innovativeness*, and (b) consumer's propensity to engage in new experiences with the objective of stimulating the mind – known as *cognitive innovativeness* (e.g., thinking about the trade-offs offered by a new service as compared to the status quo). Prior studies (e.g., Venkatraman & Price, 1990; Wood & Swait, 2002) contend that although trying a new service provides sensory stimulations, it also requires cognitive stimulations to assess the benefits and costs of trying a new service. Some innovative people have a preference for either cognitive or sensory stimulation, but others may seek both (Hirschman, 1984; Park et al., 2010). Prior studies (Venkatraman & Price, 1990; Wood & Swait, 2002) have shown that these two types of innovativeness are not always strongly correlated. In fact, it is the interaction between them that generates four consumer types that behave in a systematic and predictable fashion regarding choice between new and status quo alternatives. Wood and Swait (2002) have shown that two factors – *need for cognition* and *need for change* – can be used for measuring consumers' level of cognitive and sensory innovativeness, respectively.

Consumers' need for cognition is a well-established individual difference factor in the extant psychology literature (e.g., Cacioppo et al., 1996), which is defined as consumers' disposition to engage in and enjoy thinking per se (Cacioppo & Petty, 1982; Cacioppo et al., 1996; Wood & Swait, 2002). Need for cognition is not conceptualized as a level of intellectual ability, but rather as a relative proclivity to process information (Cacioppo et al., 1996; Wood & Swait, 2002). Research findings show that consumers' level of need for cognition determines their motivation to evaluate services (Pagani, 2007; Srivastava & Sharma, 2012; Wood & Swait, 2002).

Consumers' need for change is defined as “the extent to which consumers view novelty and innovation as intrinsically valuable” (Wood & Swait, 2002). Need for change concept draws from the optimal stimulation level (OSL) literature

(Steenkamp & Baumgartner, 1992; Wahlers et al., 1986; Wahlers & Etzel, 1990; Wood & Swait, 2002). OSL is the degree of sensory stimulation with which an individual is comfortable (Zuckerman, 1979). If the environment does not provide sufficient sensory stimulation, an individual pursues behaviours or choices that enhance stimulation. If sensory stimulation levels are too high, an individual acts to reduce them. Such attempts to manipulate sensory stimulation levels are commonly observed as actions that depict seeking or avoidance of novelty and innovation (Zuckerman, 1979). Prior research findings show that consumers' level of need for change determines their motivation to evaluate the services (Srivastava & Sharma, 2012; Wood & Swait, 2002).

Prior research (Srivastava & Sharma, 2012; Wood & Swait, 2002) has demonstrated that interaction between consumers' high/low level of need for cognition and consumers' high/low level of need for change generates four different segments of consumers that behave in systematically different fashions regarding their motivation to evaluate the services: (1) Thinkers and Changers – consumers with high need for cognition and high need for change, (2) Thinkers but Not Changers – consumers with high need for cognition but low need for change, (3) Not Thinkers but Changers – consumers with low need for cognition but high need for change, and (4) Neither Thinkers Nor Changers – consumers with low need for cognition and low need for change. Based on the foregoing discussion, we propose that these four consumer segments moderate consumers' motivation to evaluate experience services, thus affect the effectiveness of eWOM recommendations on consumers' perceptions of adopting the experience services. In addition, as discussed in hypothesis 1, consumers' level of prior knowledge of the context of the service is also expected to influence the effectiveness of the eWOM recommendations. To this end, we further classify the four aforementioned segments of consumers based on their high/low level of prior knowledge of the context of the service, as depicted in Figure 2.2. To this end, we propose eight hypotheses to examine the confluence of the consumers' high/low prior knowledge of the context of the service, consumers' high/low need for cognition, and consumers' high/low need for change on the effectiveness of the eWOM recommendations on consumers' perceptions of adopting experience services, as depicted in Figure 2.2 and Table 2.1.

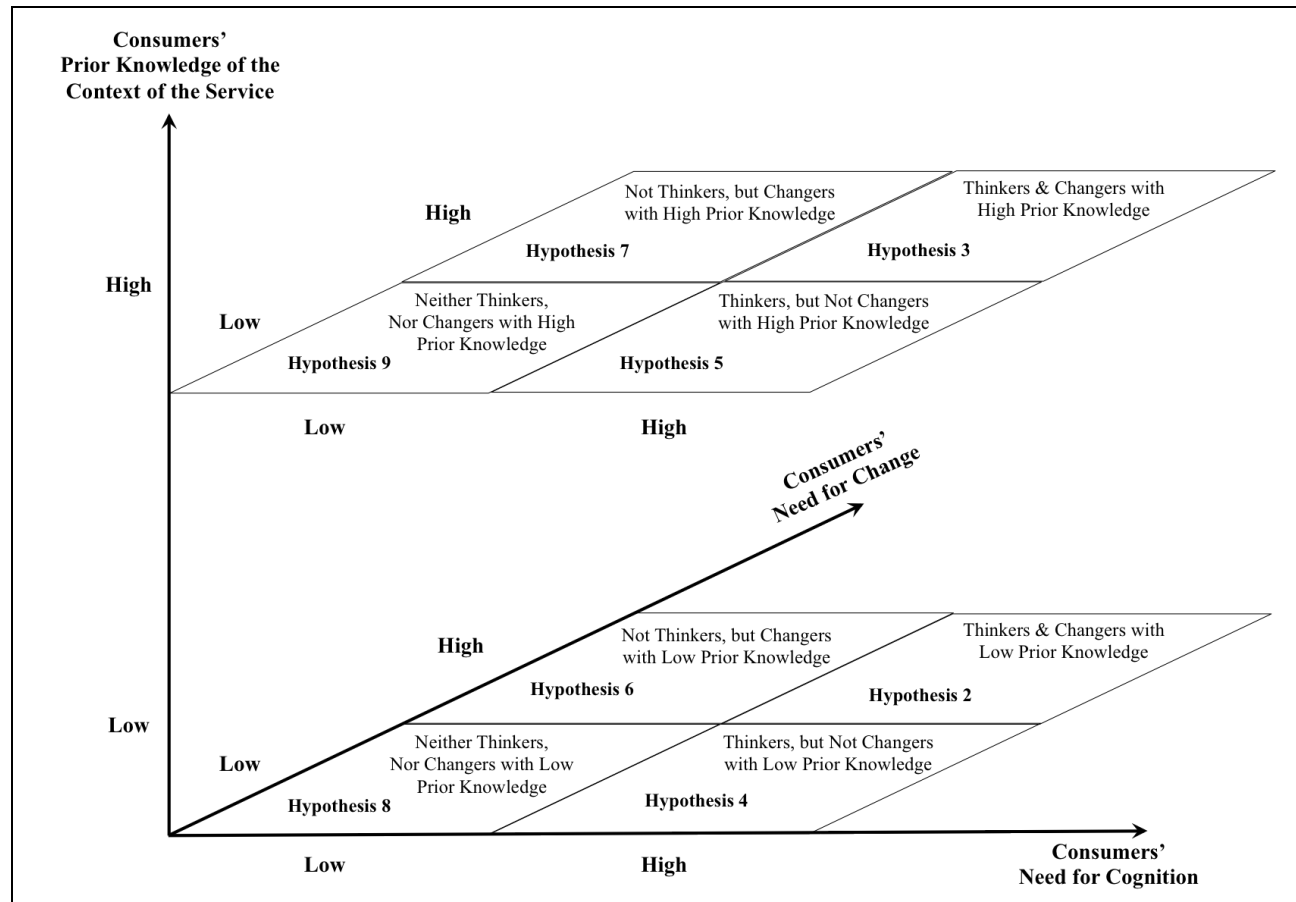


Figure 2.2 – Eight Segments of Consumers based on Consumers' High/Low Prior Knowledge of the Service Context, Consumers' High/Low Need for Cognition, and Consumers' High/Low Need for Change, Adapted from Wood and Swait (2002)

Table 2.1 – Summary of our Nine Proposed Hypotheses				
Hypotheses	Hypothesized Conditions			Hypothesized Consequents
	Consumers' Prior Knowledge of the Context of the Experience Service	Consumers' Need for Cognition	Consumers' Need for Change	Effectiveness of the eWOM Recommendations on Consumers' Perceptions of Adopting the Experience Service
H1	Lower	–	–	Higher Effectiveness
H2	Low	High	High	Affect
H3	High	High	High	Do Not Affect
H4	Low	High	Low	Do Not Affect
H5	High	High	Low	Do Not Affect
H6	Low	Low	High	Affect
H7	High	Low	High	Do Not Affect
H8	Low	Low	Low	Do Not Affect
H9	High	Low	Low	Do Not Affect

2.2.3 Thinkers and Changers: Consumers with High Need for Cognition and High Need for Change

Thinkers and Changers are the consumers who have high disposition for both thought and change, thus they score high on measures of both need for cognition and need for change (Wood & Swait, 2002). When considering a service, thinkers and changers' choice behaviour is driven by searching and processing the accessible information about the service because of their advocated position about the service of their interest and their disposition to expend cognitive resources to process the available information (Wood & Swait, 2002). These consumers have high likelihood of change in situations that allow for thoughtful consideration of the accessible information about the service of their interest (Srivastava & Sharma, 2012; Wood & Swait, 2002). For Thinkers and Changers with low prior knowledge of the service context, the eWOM recommendations about the service serve as an accessible source of information that is carefully considered. Therefore, we propose that Thinkers and Changers with low prior knowledge are likely to rely on the eWOM recommendations to adopt the service. However, for Thinkers and Changers with high prior knowledge, eWOM recommendations about the service is likely to serve only as additional information that is carefully processed and scrutinized with their accessible prior knowledge for decision-making (Gupta & Harris, 2010). Therefore, disconfirmation is likely to emerge when their evaluations of the eWOM recommendations indicate discrepancies due to their counter-arguments (Alba & Hutchinson, 2000; Chang, 2004; Wang, 2006). Thus, Thinkers and Changers with high prior knowledge are inclined to express resistance to persuasion as a result of eWOM recommendations. Based on the above justification, we propose the following hypotheses, depicted in Figure 3.2 and Table 3.1:

Hypothesis 2: *positive eWOM recommendations affect consumers' perceptions of adopting an experience service, when they have low prior knowledge of the context of the service, high need for cognition, and high need for change.*

Hypothesis 3: *positive eWOM recommendations do not affect consumers' perceptions of adopting an experience service, when they have high prior knowledge of the context of the service, high need for cognition, and high need for change..*

2.2.4 Thinkers but Not Changers: Consumers with High Need for Cognition, but Low Need for Change

Thinkers but Not Changers are the consumers who have high disposition for thought with low disposition for change. Thus, they score high on the measure of need for cognition, but low on the measure of need for change (Wood & Swait, 2002). These consumers enjoy cognitive activity; yet appreciate the comfort of routine and habit. Therefore, they are likely to stay with the status quo and are not expected to seek information about a service because of their low disposition to change (Wood & Swait, 2002). Because they are Thinkers, they are likely to have analyzed the benefits of staying with the status quo and may change only if offered substantive benefits (e.g., significant financial savings) (Wood & Swait, 2002). Therefore, we propose that Thinkers but Not Changers are not motivated to attend to the eWOM recommendations persuasion towards adopting a service. As a result, the effectiveness of the eWOM recommendations on their perceptions of adopting the service is low, regardless of their high/low level of prior knowledge of the context of the service. Based on the above justifications, we propose the following hypotheses, depicted in Figure 3.2 and Table 3.1:

Hypothesis 4: *positive eWOM recommendations do not affect consumers' perceptions of adopting an experience service, when they have low prior knowledge of the context of the service, high need for cognition, and low need for change.*

Hypothesis 5: *positive eWOM recommendations do not affect consumers' perceptions of adopting an experience service, when they have high prior knowledge of the context of the service, high need for cognition, and low need for change.*

2.2.5 Not Thinkers but Changers: Consumers with Low Need for Cognition, but High Need for Change

Not Thinkers but Changers are consumers who thrive on the sensory stimulation achieved through novelty and change, but avoid cognitive effort when possible. Thus, they score low on the measure of need for cognition, but high on the measure of need for change (Wood & Swait, 2002). These consumers are characterized as impulsive: they tend to spontaneously decide on the spur of the moment without much thinking and deliberation on the long-term implications of the decisions, and without planning carefully (Baumeister, 2002; Karande & Merchant, 2012; Wood & Swait, 2002). When they encounter uncertainty in their decision regarding the service, these consumers are expected to respond positively to the persuasion by the simple evaluative thoughts about the service of their interest that requires less cognitive effort to process (Wood & Swait, 2002). Thus, based on the ELM (Cacioppo et al., 1986), they are likely to go through the peripheral route in decision-making. Gupta and Harris (2010) contend that consumers with low disposition to process the information consider the eWOM recommendation as a simple decision-making cue in forming their perceptions towards adopting the recommended product. Therefore, we propose that Not Thinkers but Changers are likely to rely on the eWOM recommendation to adopt a service, when they encounter uncertainty in their decision (i.e., when they have low prior knowledge of the context of the service). Based on the above justification, we propose the following hypotheses, depicted in Figure 3.2 and Table 3.1:

Hypothesis 6: *positive eWOM recommendations affect consumers' perceptions of adopting an experience service, when they have low prior knowledge of the context of the service, low need for cognition, and high need for change.*

Hypothesis 7: *positive eWOM recommendations do not affect consumers' perceptions of adopting an experience service, when they have high prior knowledge of the context of the service, low need for cognition, and high need for change.*

2.2.6 Neither Thinkers Nor Changers: Low Need for Cognition and Low Need for Change

Neither Thinkers Nor Changers have low disposition for both thought and change, thus score low on both measures of need for cognition and need for change (Wood & Swait, 2002). This group of consumers has the strongest disposition to stay with the status quo, among all four aforementioned segments of consumers. Thus, they are not likely to seek and be persuaded by the information about a service (Wood & Swait, 2002), regardless of their high/low prior knowledge of the service. To this end, Neither Thinkers Nor Changers are not expected to attend to the eWOM recommendation towards adopting a service. Therefore, we propose that the effectiveness of the eWOM recommendations on consumers' perceptions of adopting the experience service would be low, regardless of their high/low prior knowledge of the context of the service. Based on the above justification, we propose the following hypotheses, depicted in Figure 3.2 and Table 3.1:

Hypothesis 8: *positive eWOM recommendations do not affect consumers' perceptions of adopting an experience service, when they have low prior knowledge of the context of the service, low need for cognition, and low need for change.*

Hypothesis 9: *positive eWOM recommendations do not affect consumers' perceptions of adopting an experience service, when they have high prior knowledge of the context of the service, low need for cognition, and low need for change.*

THIS PAGE IS INTENTIONALLY LEFT BLANK

3. RESEARCH METHODOLOGY

3.1 STUDY DESIGN, CONTEXT, AND SUBJECTS

We devised a mixed methods approach for our research methodology in this study. Mixed methods approach uses quantitative and qualitative data to provide a profound understanding of a phenomenon of interest (Venkatesh et al., 2013). To that end, we *randomly* assigned 263 subjects to four conditions based on a 2×2 between-subject factorial design via a controlled laboratory experiment, as depicted in Table 3.1. Two different conditions regarding the eWOM recommendations (i.e., positive and no-eWOM recommendation) in conjunction with two different conditions to represent high/low prior knowledge of the context of the experience service were manipulated between subjects. The no-eWOM recommendation condition for each of high/low prior knowledge conditions was used as the control condition to provide the baseline data for investigating the effectiveness of eWOM recommendations on consumers’ perceptions of adopting the experience services (Himmelfarb, 1975; Petty et al., 1981).

The laboratory experiment enabled us to have a controlled environment to assess the effects of the focal factors in the nine stated hypotheses, while controlling for the potential confounding effects of the other factors (e.g., quality of eWOM recommendations; See Table B.1 in Appendix B for a complete list of control variables). We used online structured questionnaires along with open-ended questions to collect both quantitative and qualitative data. We used the quantitative data for testing our nine proposed hypotheses and the qualitative data for expanding on our quantitative findings by gaining deeper insights into the nature of consumers' cognitive processes in evaluating services.

Table 3.1 – 2×2 Between Subject Controlled Experiment		
	High Prior Knowledge of the Experience Service Context (Music Website)	Low Prior Knowledge of the Experience Service Context (Healthcare Website)
Positive eWOM Recommendations (experimental group)	Experimental Condition	Experimental Condition
No eWOM Recommendations (control group)	Control Condition	Control Condition

3.1.1 Subjects

The subjects in our study were 263 undergraduate students (115 female and 148 male with average age of 20) enrolled in a second-year commerce course entitled “Information Systems in Business” at DeGroot School of Business. Prior consumer research has noted that students provide an appropriate sample when the focus is on the controlled theory testing (Calder et al., 1981; Wells et al., 2011). Furthermore, scholars (e.g., Bansal & Voyer, 2000; Komiak & Benbasat, 2006; Kumar & Benbasat, 2006; Kuo et al., 2009; Mitra et al., 1999; Nah et al., 2010; Sheng et al., 2008; Sia et al., 2009; Suh & Lee, 2005; Yin et al., 2014) have relied extensively on student subjects in their service adoption and eWOM studies. Students’ participation in our study was voluntary and was compensated by a 2% bonus mark.

3.1.2 Experimental Manipulation: High/Low Prior Knowledge of the Experience Service Context

To manipulate the high/low consumers’ prior knowledge of the context of the experience service, we selected two domains of the online experience service: online music to represent high prior knowledge and online healthcare to represent low prior knowledge. Studies have shown that the human brain has an implicit musical ability (Koelsch et al., 2000; Koelsch et al., 2002). For example, Koelsch et al. (2000) investigated the influence of preceding musical context, task relevance of unexpected chords, and the degree of probability of violation on music processing, in both musicians and non-musicians. They found that the human brain unintentionally extrapolates expectations about impending auditory input. Even in non-musicians, the extrapolated expectations are consistent with the music theory. The ability to process information musically supports the idea of an implicit musical ability in the human brain, which makes *identifying favourite music less complex for individuals*. Furthermore, it is reasonable to presume that our subjects have high knowledge about their favourite music, and use their computers and the Internet to listen to their favourite music frequently (Kennedy et al., 2008; Sun et al., 2006). Thus, in this investigation we expect our subjects to have high prior knowledge of selecting their favourite music using music websites.

Furthermore, consumers increasingly use healthcare websites. As a case in point, a recent report (Fox, 2011) shows that 80% of Americans with the Internet access have used online healthcare sites for healthcare information. However, understanding the validity and applicability of medical information can be difficult for those without a medical degree or extended training in the medical field (Hanif et al., 2009). Several studies (Fan et al., 2013; Hanif et al., 2009; Lambert & Loisel, 2007; Liu et al., 2013) find the difficulty of understanding the medical information for ordinary individuals without extensive medical

knowledge. Therefore, considering that our subjects were second-year undergraduate commerce students, we expected them to have *low prior knowledge of the healthcare context*.

Given that there could be some expected variability in the level and context of students' past experiences with healthcare issues, we followed Helson's (1948; 1964) argument in adaptation level theory to ensure that our subjects had *a common frame of reference* in evaluating the healthcare websites. Helson's adaptation level theory (Helson, 1948; Helson, 1964) posits that people's judgments are based on their past experiences, a context or background (for making comparison judgments), and a stimulus (i.e., eWOM recommendations in our study). Given that each of our subjects might have different levels of past experiences with different healthcare issues, when no specific healthcare topic was provided, there would be no common frame of reference for evaluating the healthcare websites, which would reduce the internal validity of our experiment (Kumar & Benbasat, 2006). To that end, in line with adaptation level theory (Helson, 1948; Helson, 1964), we instructed the students to assess the healthcare websites based on their content about the specific topic of "stress management", which is considered a relevant healthcare issue to the students (Archer & Carroll, 2003; D'Zurilla & Sheedy, 1991; Misra & McKean, 2000; Ross et al., 1999; Whitman, 1984). University students are prone to stress (D'Zurilla & Sheedy, 1991; Ross et al., 1999), due to the transitional nature of student life (Towbes & Cohen, 1996). Students must adjust to maintain a high level of academic achievements, take financial responsibilities, and being in a new social environment. Students, regardless of year in university, often deal with stress related to finding a job or a potential life partner (Ross et al., 1999). If the stress is not dealt with effectively, feelings of loneliness and nervousness, as well as sleeplessness and excessive worrying may result (Wright, 1967), which makes the stress management a relevant and important healthcare topic for the students (Archer & Carroll, 2003; D'Zurilla & Sheedy, 1991; Ross et al., 1999). Therefore, stress management topic was selected to provide students with a common frame of reference for evaluating the healthcare websites.

We selected eight top music websites and eight top healthcare websites for our experiment, as depicted in Table C.1 in Appendix C. This enabled us to avoid bias in terms of variations in the popularity of the websites. We selected these websites based on a set of criteria, depicted in Table C.2 in Appendix C, to ensure that they had similar functionalities pertinent to our required test environment. For music websites, subjects were instructed to look for their favourite music genres, tracks, and singers on the website. For healthcare websites, students were instructed to assess the website based on its content about the specific topic of stress management.

The validity of our experimental manipulation for high/low prior knowledge of

the experience service context could be ensured in two possible ways: (1) asking self-report manipulation check questions from our subjects about their level of prior knowledge of the music/healthcare websites, or (2) objectively measuring our subjects' level of prior knowledge of the music/healthcare websites using the content analysis of the qualitative data obtained from the open-ended questions at the repeated use stage. We opted to use the latter because self-report questions for the manipulation checks (e.g., asking direct questions about the level of subjects' prior knowledge) can result in biased responses to both manipulation checks and dependent factors questions (Kidd, 1976; Perdue & Summers, 1986). Khan (2011) argues that experimental studies that involve laboratory settings are prone to be biased if subjects can guess the purpose of manipulations and their role in the experiment. Subjects can use their memories of their responses to the manipulation check questions as a basis for their responses to the dependent factors and are most likely to do so when those manipulation check questions are made salient (Perdue & Summers, 1986). Furthermore, Aronson and Carlsmith (1968, p. 50) explain that "too often subjects are unable or unwilling to explain just what the effects of some manipulations have been", and suggest that "the best solution is to observe some other behaviours which we expect to covary directly with our theoretical variable". To this end, Perdue and Summers (1986, p. 321) suggest that "whenever such behavioural [manipulation] checks are included in the main experiment, it seems important that the behaviours in question occur naturally as a function of the manipulation itself and that the observation [for the manipulation checks] be unobtrusive". Therefore, in order to prevent any bias in subjects' evaluations of the websites and in the manipulation checks, we opted to validate the experimental manipulation based on the content analysis of the open-ended responses, collected after measuring the subjects' evaluations of the websites at the repeated use stage. As will be explained in section 4.3.1 in chapter 4, the results of our content analysis demonstrate the validity of our experimental manipulations for high/low prior knowledge of the context of the experience service: as expected, our subjects had significantly higher prior knowledge of the music context, compared to the healthcare context.

3.1.3 Experimental Manipulation: eWOM Recommendations

Consistent with the prior eWOM studies (e.g., Chan & Cui, 2011; Chatterjee, 2001; Park, C. & Lee, T.M., 2009; Park & Kim, 2008; Park & Lee, 2008; Park et al., 2007; Yin et al., 2014), we developed eWOM recommendations in terms of positive fictitious online reviews containing recommendations about the focal healthcare/music websites. After reviewing samples of online reviews about the healthcare/music websites posted on various review websites (e.g., Viewpoints.com, Epinions.com, Yelp.com, Consumeraffairs.com, Sitejabber.com, and Alexa.com), we developed four positive reviews. Each review dealt with one attribute of the music/healthcare website, namely perceived usefulness of the website, perceived ease of use of the website, trust in the

website, and structural assurances of the website, providing recommendations along with the pertinent justifications for the recommendations. We controlled the level of justifications in each review to avoid any confounding effects caused by the variations in the levels of justifications in the reviews. A pilot study with 20 Ph.D. students confirmed that our eWOM recommendations were perceived as we intended. Tables D.1 and D.2 in Appendix D depict examples of the eWOM recommendations that we employed in our experiment.

3.1.4 Stage of Study: Pre-usage, Initial Use, and Repeated Use

Based on the discussions presented in Chapter 1, we collected our data across the three stages of the service adoption process: pre-usage, initial use, and repeated use. To this end, as will be explained in “Experimental Procedures” section in this chapter, we measured our subjects' perceptions of adopting their focal healthcare/music websites at pre-usage, initial use, and repeated use stages for testing our nine stated hypotheses at these stages.

3.2 FACTORS AND MEASURES

3.2.1 Dependent Factors

In this study, we drew on the theory of reasoned action (TRA) (Ajzen & Fishbein, 1980) for operationalizing our dependent factors, namely perceptions of adopting an experience service. TRA is considered as one of the most influential behavioural theories in explaining and predicting behaviours (Kollmuss & Agyeman, 2002; Pavlou & Fygenson, 2006). According to TRA, the proximal determinant of behaviour (e.g., adopting an online experience service) is the behavioural intention, which is ultimately determined by a set of underlying attitudinal perceptions. Attitudinal perceptions are assessments about the likelihood of the behaviour's consequences (e.g., consumers' perceptions of adopting an experience service). Extant IS literature (e.g., Gefen et al., 2003) shows the significance of three perceptions in determining consumers' intention to adopt online experience services: perceived usefulness of the online experience service, perceived ease of use of the online experience service, and trust in the online experience service. As a case in point, Gefen et al. (2003) found that the combined effect of consumers' perceived usefulness, perceived ease of use, and trust in a website explain more than 60% of variance in the consumer's intention to adopt the website. To that end, in this study, we drew on consumers' perceived usefulness of the focal website, perceived ease of use of the focal website, and trust in the focal website as our dependent factors to operationalize consumers' perceptions of adopting the focal website (see Tables E.1 and E.2 in Appendix E).

3.2.2 Controlled Factors

Our systematic review of eWOM literature (depicted in Appendix A) identified 23 factors that potentially alter the effectiveness of eWOM recommendations on consumers' perceptions of adopting services. Therefore, to improve the validity of our experiment, we controlled for the potential confounding effects of all 23 identified factors in our study (see Table 3.2 for a list of these factors). We have explained the procedures used for controlling the potential confounding effects of each of the 23 controlled factors in Appendix B.

3.2.3 Measures

All measurement instruments were adapted from the existing and validated scales in the literature and operationalized using 5-point Likert scales (i.e., 1: strongly disagree – 5: strongly agree) in form of online questionnaires. Measures for perceived usefulness (e.g., “[the focal healthcare website] would enhance my effectiveness in getting useful information about stress management”), perceived ease of use (e.g., “getting information about stress management from [the focal healthcare website] would be easy”), and trust (e.g., “[the focal healthcare website] would be competent in providing objective information about stress management”) were adapted from Pavlou and Fygenson (2006), which is based on Ajzen and Fishbein (1980)'s expectancy–value formulation for measuring attitudinal beliefs. According to expectancy–value formulation, attitudinal beliefs (e.g., perceived usefulness, perceived ease of use, trust) are measured as the product of belief strength (e.g., “[the healthcare website] would enhance my effectiveness in getting useful information about stress management”) and importance of its outcome for the respondent (e.g., “For me, getting useful information about stress management from a website is important”) (Ajzen & Fishbein, 1980). Furthermore, consistent with the extant literature (e.g., Srivastava & Sharma, 2012), measures for need for cognition (e.g., “I would rather do something that requires little thought than something that is sure to challenge my thinking abilities”) and need for change (e.g., “I enjoy taking chances in buying unfamiliar brands just to get some variety in my purchases”) were adopted from Wood and Swait (2002) (see Tables E.1 and E.2 in Appendix E for details).

Table 3.2 –Dependent and Controlled Factors in our Study

Factor	Definition
<i>Dependent Factors</i>	
Perceived Usefulness	Consumers’ perceived usefulness of the focal website (Pavlou & Fyngenson, 2006).
Perceived Ease of Use	Consumers’ perceived ease of use of the focal website (Pavlou & Fyngenson, 2006).
Trust	Consumers’ trust in the focal website (Pavlou & Fyngenson, 2006).
<i>Controlled Factors</i>	
Perceived Helpfulness of the eWOM Recommendations	Consumers’ perceived helpfulness of the eWOM recommendations (Cheung & Thadani, 2012).
Perceived Credibility of the eWOM Recommendations	The perceived degree to which the eWOM recommendations provide accurate and trustworthy information (Cheung et al., 2009).
Confirmation	The extent to which the eWOM recommendations confirm consumers’ prior beliefs about the focal service (Cheung et al., 2009).
Valence of the eWOM Recommendations	Whether the eWOM recommendations are positive or negative (Cheung & Thadani, 2012).
Quality of the eWOM Recommendations	The persuasive strength of arguments embedded in the eWOM recommendations (Cheung & Thadani, 2012).
Volume of the eWOM Recommendations	Number of eWOM recommendations available (Cheung & Thadani, 2012).
Sidedness of the eWOM Recommendations	A one-sided eWOM recommendation presents either the positive or negative arguments. A two-sided eWOM recommendation includes both positive and negative arguments (Cheung & Thadani, 2012).
Orientation of the eWOM Recommendations	Attribute-centric versus simple eWOM recommendations (Park & Lee, 2008).
Consistency of the eWOM Recommendations	The eWOM recommendations congruence with others’ opinions about the focal service (Cheung et al., 2009).
Emotions in the eWOM Recommendations	Extent and/or type of emotional expressions presented in the eWOM recommendations (Yin et al., 2014).
Ratings of the eWOM Recommendations	The overall ratings given to eWOM recommendations by other consumers (Lee & Lee, 2009).

Table 3.2 –Dependent and Controlled Factors in our Study

Factor	Definition
Type of eWOM Recommendation Platform	Type of online platform for sharing the eWOM recommendations (e.g., provider-generated website versus independent website) (Lee & Youn, 2009).
Source Credibility	Consumers' perceived trustworthiness of the source of the eWOM recommendations (Senecal & Nantel, 2004).
Source Type	Type of the source of eWOM recommendations (e.g., provider versus consumer) (Benlian et al., 2012).
Source knowledge	Source's prior knowledge of the eWOM recommendations topic (Senecal & Nantel, 2004).
Source Homophily	The degree of similarity between the source of eWOM recommendations and the receiver (Cheung & Thadani, 2012).
Source Identity	Source disclosure of his/her identity (Racherla & Friske, 2012).
Social Tie Strength	The intensity of relationship between the source of eWOM recommendations and the receiver (Cheung & Thadani, 2012).
Consumer's Involvement	Relevance of the eWOM recommendations topic to the receiver (Cheung et al., 2012).
Consumer's age	Age of the eWOM recommendation receiver.
Consumer's gender	Gender of the eWOM recommendation receiver.
Service Type	Search versus experience attributes of the focal service in the eWOM recommendations (Mitra et al., 1999).
Service Popularity	The reputation or ranking of the focal service in the eWOM recommendations (Duan et al., 2009; Goes et al., 2014).

3.3 PILOT STUDY

Prior to data collection, a pilot study was conducted to (1) confirm that the eWOM recommendations were perceived as we intended, (2) examine the clarity of the instructions and measurement instruments, and (3) ensure the technical feasibility of the online questionnaires platform. To that end, the experiment was conducted with 20 Ph.D. students. After the experiment, we asked them to comment on the eWOM recommendations that they had received and their level of justifications, clarity of the instructions in the experiment, the meaningfulness of the language used in the measurement instruments, and any technical difficulty they had experienced during the experiment. Their feedback confirmed that the eWOM recommendations were perceived as we intended and the level of justifications was consistent across all of our eWOM recommendations. Their feedback also helped us to ensure the face validity of our eWOM recommendations. Furthermore, based on Ph.D. students' feedback, we made minor changes to the online questionnaires in order to improve the clarity of our measurement instruments. We then administered the main controlled laboratory experiment for data collection, using the following procedures.

3.4 EXPERIMENTAL PROCEDURES

The controlled laboratory experiment took place at a computer lab, where subjects were randomly assigned to one of the four conditions (depicted in Table 3.1). As per McMaster research ethics board (MREB) requirements, before the start of the experiment, we asked subjects to accept/reject the consent form explaining the nature of the study (see Table F.1 in Appendix F for details). After accepting the consent form, the subject was allowed to continue progressing through the experiment as follows.

- 1) Subjects were asked to complete an online questionnaire to collect their personal (i.e., name and student number), demographics information (i.e., age and gender), and to assess their level of “need for cognition” and “need for change” (see Table E.1 in Appendix E).
- 2) Next, to collect data for the pre-usage stage, a randomly selected website from either a music or a healthcare list of eight websites, depicted in Table C.1 in Appendix C, was displayed on the screen. The subject was prompted to state whether he/she had used the presented website before. If he/she had used the website, then another randomly selected website from that list was presented on the screen. This enabled us to avoid potential biases in subjects' evaluations that could be attributed to their past experience with the website. There was no incident in which the subject had already used all of the eight websites in the list. Furthermore, random-ordered presentation of the websites

enabled us to control for possible subject bias in terms of rank-ordered presentation of the websites on our subjects' perceptions (Guan & Cutrell, 2007).

- 3) Next, subjects were shown four distinct eWOM recommendations regarding perceived usefulness, perceived ease of use, trust, and structural assurances of their focal website (see Tables D.1 and D.2 in Appendix D). This procedure was skipped for the subjects in the control conditions (i.e., no-eWOM recommendation condition).
- 4) Next, subjects were asked to complete the online questionnaires regarding their evaluations of perceived usefulness of the assigned website, perceived ease of use of the assigned website, and trust in the assigned website, prior to using it. We used these data to test the nine hypotheses for the *pre-usage stage* of the service adoption process.
- 5) Next, to collect data for the initial use stage, subjects were asked to visit the assigned music/health website and explore the pertinent material on the website for 15 minutes. For music websites, subjects were instructed to look for their favourite music genres, tracks, and singers on the website. For healthcare websites, students were instructed to assess the website based on its content about the specific topic of stress management.
- 6) Next, subjects were asked to complete the online questionnaires to evaluate their perceived usefulness, perceived ease of use, and trust of the assigned website. We used these data to test the nine stated hypotheses for the *initial use stage* of the service adoption process.
- 7) Next, subjects were asked to explore the assigned website for two weeks and compare and contrast it with a similar website of their own choice. To accomplish this task, they had to complete online questionnaires to evaluate their perceived usefulness, perceived ease of use, and trust of the assigned website as well as the website of their choice. We used these data to test the nine stated hypotheses for the *repeated use stage* of the service adoption process. As a part of the online questionnaires for the repeated use stage, a set of open-ended questions collected subjects' qualitative responses on their justifications for their evaluations of the assigned websites. Content analysis of these qualitative data provided deeper insights into the nature of our subjects' cognitive processes towards evaluating the assigned websites, which will be discussed in the next chapter.

THIS PAGE IS INTENTIONALLY LEFT BLANK

4. RESULTS

To test our nine stated hypotheses, we used multivariate analysis of variance (MANOVA), which is a suitable quantitative technique for our purpose because it allowed us to combine our three dependent factors (i.e., perceived usefulness of the focal website, perceived ease of use of the focal website, and trust in the focal website) into a linear composite, representing consumers' perceptions of adopting the focal website. This is important because "a single dependent factor seldom captures completely a phenomenon being scrutinized" (Meyers et al., 2006, p. 367). To that end, we first conducted a series of preliminary data analyses to ensure the quality of our measurements and the required underlying statistical assumptions. Next, we employed latent class analysis (LCA) statistical technique to identify the eight segments of subjects based on their high/low prior knowledge, high/low need for cognition, and high/low need for change, as depicted in Figure 2.2 in chapter 2. Next, MANOVA tests were conducted to test the nine stated hypotheses over the three stages of service adoption process (pre-usage, initial use, and repeated use). Finally, the qualitative data obtained from the open-ended questions were content analyzed to gain deeper insights into the nature of our subjects' cognitive processes towards evaluating their assigned websites. We elaborate on the results of these analyses, as follows.

4.1 PRELIMINARY DATA ANALYSIS

We conducted a series of preliminary data analyses to ensure that statistical and methodological artefacts do not affect our measurements and analyses. Literature has identified six artefacts that potentially affect the quality of measurements, experimental manipulations, and analyses in our study: (1) low reliability of factors measurements (e.g., Nunnally, 1978), (2) low validity of factors (i.e., low content and construct validity) (e.g., Straub et al., 2004), (3) common method bias (e.g., Straub et al., 2004), (4) multicollinearity among the factors (e.g., Meyers et al., 2006), (5) Type II error arising from the lack of statistical power (e.g., Cohen, 1988), and (6) deviations from normality assumption (e.g., Meyers et al., 2006). To that end, we evaluated the factors in our study to mitigate the effects of the aforementioned artefacts on the results of our analyses, as follows.

4.1.1 *Ensuring Acceptable Reliability for our Factors*

We checked our factors reliabilities to ensure the consistency of our measurements. Reliability refers to the extent to which a set of measurement items is consistent in measuring the pertinent factor (e.g., perceived usefulness) (Pedhazur & Schmelkin, 1991; Straub et al., 2004). To that end, consistent with

the literature (e.g., Straub et al., 2004), we calculated the Cronbach's alpha (Cronbach, 1951) for each of our factors, using SPSS 20.0 (see Table G.1 in Appendix G for details). Because all of the factors exhibited acceptable reliability ($\alpha \geq 0.65$) (Kline, 2000; Nunnally, 1978), we were assured that the statistical artefact raised by low reliabilities of measures would not introduce significant measurement error into our results (Kline, 2000; Nunnally, 1978).

4.1.2 Ensuring High Validity of our Factors

We assessed content validity and construct validity of our factors to ensure the accuracy of their measurements. Content validity is the degree to which measurement items for a factor are relevant and conceptually representative of the pertinent factor (Haynes et al., 1995; Pedhazur & Schmelkin, 1991). To ensure the content validity of our factors, we adapted the existing and validated measurement instruments in the literature (see Tables E.1 and E.2 in Appendix E for details). Furthermore, the results of our pilot study confirmed that our measurement items are conceptually representative of their pertinent factors, thus have high content validity.

The construct validity is the indicative of whether the measurement items selected for each factor adequately correlate with each other (a.k.a., convergent validity) and discriminate the factor from other factors in the study (a.k.a., discriminant validity) (Pedhazur & Schmelkin, 1991; Straub et al., 2004). Three techniques of cross-loading analysis, Fornell-Larcker criterion, and confirmatory factor analysis (CFA) are commonly used to assess the construct validity (Fornell & Larcker, 1981; Straub et al., 2004; Urbach & Ahlemann, 2010). In the first technique – cross-loading analysis, cross-loadings are obtained by correlating each factor's component scores with all the measurement items. If each item loading is larger for its designated factor than for any of the other factors by the difference magnitude of at least 0.1 and each of the factors loads highest with its pertinent items, it can be inferred that there is an adequate level of construct validity (Gefen & Straub, 2005; Lehmann, 1988; Straub et al., 2004; Urbach & Ahlemann, 2010). We used SmartPLS 2.0 to calculate the loadings between our five factors (i.e., need for cognition, need for change, perceived usefulness, perceived ease of use, and trust) and their measurement items. All of our items had larger loadings on their pertinent factors compared to their cross-loadings with the other factors, by the difference magnitude of larger than 0.1 (see Table H.1 in Appendix H). Furthermore, all the five factors loaded higher with their pertinent items than other items. Therefore, our results are aligned with the recommendations in the literature for adequate construct validity (Hair et al., 1998; Hair et al., 2010; Meyers et al., 2006; Straub et al., 2004; Urbach & Ahlemann, 2010). The second technique, the Fornell-Larcker criterion (Fornell & Larcker, 1981), requires a factor to share more variance with its pertinent measurement items than with any other factor. Accordingly, the square root of average variance extracted (AVE) of

each factor should be larger than the factor's largest correlation with any other factor (Gefen & Straub, 2005; Lehmann, 1988; Straub et al., 2004; Urbach & Ahlemann, 2010). We used SmartPLS 2.0 software to compute the AVEs and correlations for our five factors. Our results, depicted in Table I.1 in Appendix I, show adequate construct validity for all the five factors. The third technique – CFA – facilitates the assessment of the construct validity by examining the goodness of fit of the measurement model (Straub et al., 2004). The measurement model specifies the measurement items for each factor and the correlations among the factors. The objective of evaluating the goodness-of-fit of a measurement model is to ensure an acceptably specified model for measuring our factors. To that end, CFA draws on the goodness of fit indices, in which root mean square error of approximation (RMSEA) of 0.08 or less, normed fit index (NFI) of at least 0.9, comparative fit index (CFI) of at least 0.9, and goodness-of-fit index (GFI) of at least 0.9 indicate an acceptably specified measurement model (Kline, 2010). We used LISREL 8.7 software to estimate the CFA models for our three measurement models pertaining to the pre-usage, initial use, and repeated use stages. Our results, depicted in Figures J.1 to J.3 in Appendix J, show acceptable fit for our three measurement models.

4.1.3 Ensuring Absence of Common Method Bias in our Study

Common method bias (a.k.a., common method variance) refers to the potential variance in the self-report factors measurements (e.g., self-report surveys) attributable to the measurement method rather than the hypothesized relationships among the factors (Podsakoff et al., 2003; Straub et al., 2004). Common method bias is suggested as a potential threat to the validity of the estimations and findings in an empirical study (Burton-Jones, 2009; Podsakoff et al., 2003; Podsakoff & Organ, 1986; Straub et al., 2004; Straub, 2009). To assess the level of common method bias in our study, we draw on two techniques: (1) “Harman’s One-factor Test”, which is a common technique used in the literature (Melas et al., In Press; Podsakoff et al., 2003; Podsakoff & Organ, 1986), and (2) unmeasured latent method construct (ULMC) (Podsakoff et al., 2003; Williams et al., 1989). To conduct “Harman’s One-factor Test”, all the measurement items of the five factors were entered into an exploratory principal components analysis (PCA). Then, the results of the unrotated solution to the PCA were examined to assess the number of factors that account for the variance among the items. Common method bias would exist if (i) all of the items tend to load on a single general factor (i.e., one single factor emerges from the PCA), or (ii) one factor explains more than 50% of the variance in all of the items (Podsakoff & Organ, 1986). Results of “Harman’s One-factor Test” did not show the presence of common method bias in our study: the unrotated solution to PCA for our items suggested five factors and the largest variance explained by one factor was 25.4%. Furthermore, the presence of common method bias can also be assessed using ULMC (Podsakoff et al., 2003; Williams et al., 1989). ULMC involves adding a

latent factor representing the common method effect (method factor) to our aforementioned CFA models, in which the method factor should be connected to all of the measurement items. The presence of common method bias can be ruled out only if the goodness of fit of the CFA model *with* the method factor is *inferior* to the goodness of fit of the pertinent CFA model *without* the method factor. We conducted the foregoing analysis for our three aforementioned CFA models pertaining to pre-usage, initial use, and repeated use stages (depicted in Figures J.1 to J.3 in Appendix J), using LISREL 8.7 software. The results of estimating the three CFA models *with* the method factor indicated that the estimation could not be converged because the covariance matrices among the factors in the three CFA models *with* the method factor were not positive definite due to *negative error variance estimates* for the measurement items (a.k.a., “Heywood cases”). Negative error variance estimates are common outcomes in ULMC (Bagozzi, 1993) and are considered as symptoms of model misfit (Kolenikov & Bollen, 2012; Rigdon, 1997; Wothke, 1993). Therefore, the three CFA models *with* the method factor were considered inadmissible. However, our results showed acceptable goodness of fit for our CFA models *without* the method factor (see Figures J.1 to J.3 in Appendix J). As a result, we concluded that the results of ULMC technique did not provide any evidence for the presence of common method bias in our study.

4.1.4 Ensuring Absence of Multicollinearity among our Factors

Multicollinearity is defined as the extent to which a factor can be explained through the other factors in the analysis. High multicollinearity among factors in an analysis would result in underestimation of the effect of any single factor, owing to their strong interrelationships (Hair et al., 2010). In order to assess multicollinearity among our five factors, an examination of the inter-factor correlations and variance inflation factor (VIF) was made (Meyers et al., 2006). All of our five factors exhibited bivariate correlations of less than 0.76 and VIF values less than 1.80 (Meyers et al., 2006) (see Table I.1 in Appendix I for details). Hence, we were satisfied that multicollinearity was not an issue in our analyses.

4.1.5 Ensuring Adequate Level of Statistical Power in our Analyses

We ensured that our MANOVA tests would have adequate level of statistical power. A statistical power level of 0.80 is widely accepted as an adequate level of power for the statistical tests (Baroudi & Orlikowski, 1989; Cohen, 1988). Failure to provide the adequate level of statistical power would result in underestimation of the statistical significance of the hypotheses in a study. Therefore, ensuring adequate level of statistical power is crucial for the interpretation of the statistical analyses results (Baroudi & Orlikowski, 1989; Cohen, 1988; Montazemi et al.,

2012; Montazemi & Qahri Saremi, 2013). To that end, we used “G*Power 3” software (Faul et al., 2007) to calculate the minimum required sample size that ensures the minimum statistical power level of 0.80 at $\alpha = 0.05$ in MANOVA tests. G*Power 3 calculations for MANOVA tests indicated that in order to statistically detect at least one standard deviation difference between the means of the eWOM experimental group and no-eWOM control group, we need to have at least 16 cases, in each of our MANOVA tests. We had minimum of 22 cases in each of our MANOVA tests, which satisfied the requirements for an adequate level of statistical power in our analyses.

4.1.6 Assessing Normality of our Factors

We assessed our three dependent factors (i.e., perceived usefulness, perceived ease of use, and trust) for serious deviations from normal distribution (a.k.a., normality). Normality of dependent factors is an underlying assumption of MANOVA tests. Serious deviations from this assumption would potentially create bias in the MANOVA results (Meyers et al., 2006). To that end, consistent with the literature (e.g., Meyers et al., 2006), we examined the level of skewness (i.e., the symmetry of the distribution) and kurtosis (i.e., the peakedness of the distribution) in each of our three dependent factors to detect serious deviations from normality (see Table G.1 in Appendix G for details). Our results showed that there was no concern with respect to serious deviations from normality assumption in the three dependent factors: all the skewness and kurtosis values were within the recommended threshold of [-1,+1] (Curran et al., 1996; Meyers et al., 2006).

4.1.7 Latent Class Analysis (LCA)

In order to test our nine stated hypotheses, we needed to segment our subjects based on their high/low prior knowledge of the context of the service, high/low need for cognition, and high/low need for change, as explained in chapter 3. Our subjects had already been segmented based on their high/low prior knowledge of the context of the service by the design of our experiment, as depicted in Table 3.1 in Chapter 3. To that end, we employed LCA to identify the distinct segments of our subjects based on their responses to the need for cognition and need for change scales. LCA is a statistical technique to identify unobservable (latent) segments (classes) within a population, based on a set of observed factors, such as need for cognition and need for change. The identified segments are distinct from each other, and each segment consists of subjects whose responses to the need for cognition and need for change factors are similar (Collins & Lanza, 2010; Lanza, Stephanie T et al., 2013; Wood & Swait, 2002).

As discussed in chapter 2 (see Figure 2.2 for details), we expected to identify four

segments of subjects within our data based on high/low need for cognition and high/low need for change factors: (1) Thinkers and Changers – high need for cognition and high need for change; (2) Thinkers, but Not Changers – high need for cognition, but low need for change; (3) Changers, but Not Thinkers – low need for cognition, but high need for change; and (4) Neither Thinkers, Nor Changers – low need for cognition and low need for change. Results of our LCA confirm our expectation, as elaborated next.

To identify the segments of our subjects based on their score of need for cognition and need for change, LCA was conducted iteratively with different number of possible segments – starting with 1 segment until the LCA converged at six segments. Following the procedures suggested by Wood and Swait (2002), the required input elements for LCA were the scores of need for cognition, need for change, and the interaction between them. To that end, the two-component solution of an exploratory maximum likelihood factor analysis with promax rotation was retained to calculate the scores of need for cognition, need for change, and their interaction (Wood & Swait, 2002). Because LCA works with categorical data, the scores of need for cognition, need for change, and their interaction were re-coded into 6 categories (1: very low – 6: very high) based on the number of standard deviations distance from the mean. The resulted categorical data were used in LCA, using LCA Procedure in SAS software (a.k.a., “PROC LCA”) (Lanza, S. T. et al., 2013). Consistent with the literature (Melas et al., In Press; Wood & Swait, 2002), the “appropriate” number of segments in our data was assessed based on the “information criteria” as the fit statistics (i.e., Akaike Information Criterion (AIC) (Akaike, 1974), Bayesian Information Criterion (BIC) (Schwarz, 1978), and Consistent Akaike Information Criterion (CAIC) (Bozdogan, 1987)). The number of segments with the minimum values for the information criteria would be considered as the “appropriate” number of segments in our data. However, the information criteria do not always agree, and in such a case the interpretability of the segments based on the objectives and characteristics of the study would be the basis for selecting the appropriate number of segments (Collins & Lanza, 2007). As depicted in Table 4.1, two of the information criteria (i.e., BIC and CAIC) suggested four segments as the appropriate number of segments in our data. However, the third information criterion (AIC) suggested six segments as the appropriate number of segments. Therefore, both four- and six-segment options were examined in terms of the interpretability of their segments. All the segments within four- and six-segment options were consistent with our four expected segments: (1) Thinkers and Changers, (2) Thinkers, but Not Changers, (3) Changers, but Not Thinkers, and (4) Neither Thinkers, Nor Changers. Therefore, as depicted in Table 4.2, the four-segment solution was selected as the appropriate number of segments in our data based on need for cognition and need for change scores. The resulted segments were used for statistically testing our nine stated hypotheses using MANOVA, as elaborated next.

Table 4.1 – Fit Statistics for Latent Segments Based on Need for Cognition and Need for Change Scales				
Number of Segments	Log Likelihood	AIC	BIC	CAIC
1	-1711.85	747.14	807.75	822.75
2	-1627.45	610.35	735.60	766.60
3	-1568.85	525.14	715.03	762.03
4	-1494.84	409.12	<u>663.65</u>	<u>726.65</u>
5	-1459.10	369.64	688.82	767.82
6	-1442.51	<u>368.45</u>	752.28	847.28

Table 4.2 – Parameter Estimates for the Four-Segment Solution of LCA				
	Segment 1 (Low NFG, Low NFC)	Segment 2 (Low NFG, High NFC)	Segment 3 (High NFG, Low NFC)	Segment 4 (High NFG, High NFC)
Number of Subjects with Low Prior Knowledge of the Service Context	22	29	29	45
Number of Subjects with High Prior Knowledge of the Service Context	23	31	27	57
Proportion of Subjects in each Segment	17%	23%	21%	39%
Factor	Probabilities for a Score of High in the Pertinent Factor			
NFG	0.008	0.002	0.997	0.884
NFC	0.006	0.998	0.002	0.868
<i>Note:</i> NFG=Need For Cognition; NFC=Need For Change.				

4.2 HYPOTHESES TESTING RESULTS

To test our nine hypotheses, MANOVA tests were conducted. We compared our subjects in the eWOM experimental condition with our subjects in the no-eWOM control condition for testing each of our nine hypotheses. Our purpose was to test whether the eWOM recommendations had a significant effect on the linear composite of our three dependent factors (i.e., perceived usefulness, perceived ease of use, and trust) over the three stages of the service adoption process (i.e., pre-usage, initial use, and repeated use). According to the literature, MANOVA is a suitable method for this purpose considering that our three dependent factors were moderately correlated with each other (i.e., $0.55 < r < 0.76$) (see Appendix I for details) (Dennis & Carte, 1998; Huberty & Morris, 1989; Meyers et al., 2006; Suh & Lee, 2005) and that the Box's test for equality of variances indicated no significant difference between the variances for our eWOM recommendation experimental condition and no-eWOM control condition (Box, 1953; Meyers et al., 2006; O'Brien & Kaiser, 1985). The results of our MANOVA tests are depicted in Table 4.3.

4.2.1 Combined Effects: Pre-usage Stage

Our results show that as indicated in hypothesis 1, prior knowledge negatively moderates the effectiveness of eWOM recommendations on subjects' perceptions of adopting the websites, at the pre-usage stage ($F = 2.911, p < 0.05$). In particular, our results demonstrate that while eWOM recommendations significantly affect subjects' perceptions of adopting healthcare websites (i.e., low prior knowledge condition) ($F = 7.99, p < 0.001$), it has no significant effects on subjects' perceptions of adopting the music websites (i.e., high prior knowledge condition) ($F = 0.584, p > 0.6$). Furthermore, the results of MANOVA on each of the eight segments identified through LCA show that, as proposed in hypotheses 2 and 6, Thinkers and Changers with low prior knowledge and Not Thinkers but Changers with low prior knowledge are the segments of subjects whose pre-usage perceptions of adopting the pertinent website is significantly increased by the eWOM recommendations ($F = 4.439, p < 0.01$; $F = 5.887, p < 0.01$). Moreover, as proposed in hypotheses 3, 4, 5, 7, 8, and 9, pre-usage perceptions of our subjects in other six segments are not significantly affected by the eWOM recommendations about the pertinent websites ($p > 0.05$).

4.2.2 Combined Effects: Initial Use and Repeated Use Stages

Furthermore, we also tested our nine hypotheses at the initial use and repeated use stages of the adoption process. Our MANOVA results show that the eWOM

recommendations have no significant effects on our subjects' perceptions of adopting the pertinent website at initial use and repeated use stages of the adoption process in any of the nine hypotheses ($p > 0.05$).

4.2.3 Individual Effects: Pre-usage Stage

Literature suggests use of univariate ANOVA following a significant MANOVA result to identify the *individual effects* on the dependent factors (e.g., Dennis & Carte, 1998; Suh & Lee, 2005; Vessey & Galletta, 1991). Thus, we analyzed our significant MANOVA results using one-way ANOVA for post-hoc analyses to examine the effects of eWOM recommendations on each of our dependent factors, depicted in Tables 4.4 and 4.5. Following the literature (Dennis & Carte, 1998; Dunn, 1961; Huberty & Morris, 1989; Suh & Lee, 2005), we applied the Bonferroni adjustment to the level of significance to control for an inflated Type I error that arises from multiple ANOVA tests: we set our critical α -level at $0.05/3 \approx 0.017$.

Consistent with our MANOVA results, the results of our one-way ANOVA tests at the pre-usage stage show that the prior knowledge of the context of the website negatively moderates the effect of eWOM recommendations on all the three dependent factors ($F_{\text{Pre-usage Perceived Usefulness}} = 8.087, p < 0.01, F_{\text{Pre-usage Perceived Ease of use}} = 4.775, p < 0.05, F_{\text{Pre-usage Trust}} = 6.246, p < 0.017$). In particular, our one-way ANOVA results for hypothesis 1, depicted in Table 4.4, show that the eWOM recommendations significantly affect all the three dependent factors for subjects with low prior knowledge of the context of the website ($F_{\text{Pre-usage Perceived Usefulness}} = 18.873, p < 0.001, F_{\text{Pre-usage Perceived Ease of use}} = 13.156, p < 0.001, F_{\text{Pre-usage Trust}} = 20.756, p < 0.001$), while eWOM recommendations have no significant effects on the perceptions of subjects with high prior knowledge of the website context ($F_{\text{Pre-usage Perceived Usefulness}} = 0.005, p > 0.05, F_{\text{Pre-usage Perceived Ease of use}} = 0.168, p > 0.05, F_{\text{Pre-usage Trust}} = 0.645, p > 0.05$). Furthermore, our one-way ANOVA results, depicted in Table 4.5, show that at the pre-usage stage, the eWOM recommendations significantly affect all the three dependent factors for subjects with high need for cognition, high need for change, and low prior knowledge of the context of the website ($F_{\text{Pre-usage Perceived Usefulness}} = 11.128, p < 0.01, F_{\text{Pre-usage Perceived Ease of use}} = 6.702, p < 0.017, F_{\text{Pre-usage Trust}} = 10.797, p < 0.01$); and subjects with low need for cognition, high need for change, and low prior knowledge of the context of the website ($F_{\text{Pre-usage Perceived Usefulness}} = 16.218, p < 0.001, F_{\text{Pre-usage Perceived Ease of use}} = 9.778, p < 0.01, F_{\text{Pre-usage Trust}} = 12.008, p < 0.01$). However, eWOM recommendations have no significant effects on any of the dependent factors for our subjects in the other six segments pertinent to hypotheses 3, 4, 5, 7, 8, and 9 at the pre-usage stage ($p > 0.05$).

4.2.4 Individual Effects: Initial Use and Repeated Use Stages

Post-hoc one-way ANOVA tests for initial use and repeated use stages indicated that, consistent with our MANOVA results, the eWOM recommendations had no significant effects on any of the three dependent factors at these stages ($p > 0.05$).

Table 4.3 – Summary of MANOVA Hypothesis Testing Results

Hypotheses	Stage of Analysis	N	F	Results (p-value)
H1: the effectiveness of positive eWOM recommendations on consumers' perceptions of adopting an experience service is higher, when consumers have lower prior knowledge of the context of the experience service.	Pre-usage	263	2.911	Supported (0.035*)
	Initial Use	263	1.185	Not Supported (0.316)
	Repeated Use	263	1.393	Not Supported (0.245)
H2: positive eWOM recommendations affect consumers' perceptions of adopting an experience service, when they have low prior knowledge of the context of the service, high need for cognition, and high need for change.	Pre-usage	45	4.439	Supported (0.009**)
	Initial Use	45	2.006	Not Supported (0.128)
	Repeated Use	45	0.457	Not Supported (0.714)
H3: positive eWOM recommendations do not affect consumers' perceptions of adopting an experience service, when they have high prior knowledge of the context of the service, high need for cognition, and high need for change.	Pre-usage	57	0.05	Supported (0.985)
	Initial Use	57	1.145	Supported (0.339)
	Repeated Use	57	1.669	Supported (0.185)
H4: positive eWOM recommendations do not affect consumers' perceptions of adopting an experience service, when they have low prior knowledge of the context of the service, high need for cognition, and low need for change.	Pre-usage	29	1.289	Supported (0.300)
	Initial Use	29	0.513	Supported (0.677)
	Repeated Use	29	0.322	Supported (0.810)
H5: positive eWOM recommendations do not affect consumers' perceptions of adopting an experience service, when they have high prior knowledge of the context of the service, high need for cognition, and low need for change.	Pre-usage	27	0.898	Supported (0.457)
	Initial Use	27	0.726	Supported (0.547)
	Repeated Use	27	0.441	Supported (0.726)
H6: positive eWOM recommendations affect consumers' perceptions of adopting an experience service, when they have low prior knowledge of the context of the service, low need for cognition, and high need for change.	Pre-usage	29	5.887	Supported (0.003**)
	Initial Use	29	1.258	Not Supported (0.310)
	Repeated Use	29	0.953	Not Supported (0.430)

Table 4.3 – Summary of MANOVA Hypothesis Testing Results

Hypotheses	Stage of Analysis	N	F	Results (p-value)
H7: positive eWOM recommendations do not affect consumers' perceptions of adopting an experience service, when they have high prior knowledge of the context of the service, low need for cognition, and high need for change.	Pre-usage	31	2.486	Supported (0.082)
	Initial Use	31	1.671	Supported (0.197)
	Repeated Use	31	0.603	Supported (0.619)
H8: positive eWOM recommendations do not affect consumers' perceptions of adopting an experience service, when they have low prior knowledge of the context of the service, low need for cognition, and low need for change.	Pre-usage	22	0.046	Supported (0.987)
	Initial Use	22	0.747	Supported (0.538)
	Repeated Use	22	1.012	Supported (0.410)
H9: positive eWOM recommendations do not affect consumers' perceptions of adopting an experience service, when they have high prior knowledge of the context of the service, low need for cognition, and low need for change.	Pre-usage	23	0.495	Supported (0.690)
	Initial Use	23	2.113	Supported (0.132)
	Repeated Use	23	1.758	Supported (0.189)
<i>NOTE:</i> <i>*Significant at $\alpha = 0.05$; ** Significant at $\alpha = 0.01$.</i>				

Table 4.4 – Summary of Post-hoc ANOVA Results for Hypothesis 1							
Stage	Factor	N	Prior Knowledge	Mean (Std. Deviation)		F	P-value
				eWOM Recommendation Condition	No-eWOM Control Condition		
Pre-Usage	PU	125	Low	13.742 (0.619)	10.303 (0.634)	8.087	0.005**
		138	High	11.716 (0.550)	11.781 (0.656)		
	PEOU	125	Low	14.680 (0.562)	11.902 (0.576)	4.775	0.030 ⁺
		138	High	13.148 (0.500)	12.816 (0.596)		
	Trust	125	Low	13.531 (0.562)	10.082 (0.575)	6.246	0.013*
		138	High	12.111 (0.499)	11.456 (0.595)		
Initial Use	PU	125	Low	14.031 (0.622)	12.574 (0.637)	0.456	0.500
		138	High	11.358 (0.553)	10.737 (0.659)		
	PEOU	125	Low	15.570 (0.688)	15.311 (0.704)	1.148	0.285
		138	High	12.722 (0.611)	13.930 (0.729)		
	Trust	125	Low	14.781 (0.586)	13.582 (0.600)	2.950	0.087
		138	High	11.802 (0.521)	12.605 (0.620)		
Repeated Use	PU	125	Low	15.852 (0.706)	15.549 (0.723)	0.459	0.499
		138	High	13.167 (0.628)	13.816 (0.748)		
	PEOU	125	Low	17.008 (0.735)	15.992 (0.753)	2.157	0.143
		138	High	14.093 (0.653)	15.316 (0.779)		
	Trust	125	Low	16.633 (0.655)	15.795 (0.671)	2.344	0.127
		138	High	14.185 (0.583)	15.263 (0.694)		

NOTE:
 *** Significant at $\alpha = 0.001$; ** Significant at $\alpha = 0.01$; * Significant at $\alpha = 0.017$ (Bonferroni adjusted critical α -level); ⁺ Significant at $\alpha = 0.05$.
 PU = Perceived Usefulness; PEOU = Perceived Ease of use.

Table 4.5 – Summary of Post-hoc ANOVA Results for Hypotheses 2 to 9

Hypotheses	Stage	Factor	N	Mean (Std. Deviation)		F	P-Value
				eWOM Recommendation Condition	No-eWOM Control Condition		
H2	Pre-usage	PU	45	15.56 (3.80)	11.67 (3.88)	11.13	0.002**
		PEOU	45	15.20 (3.69)	11.94 (4.74)	6.70	0.013*
		Trust	45	15.19 (3.21)	11.17 (5.01)	10.80	0.002**
	Initial Use	PU	45	14.69 (3.70)	12.97 (4.92)	1.78	0.190
		PEOU	45	15.98 (3.89)	16.67 (5.45)	0.24	0.625
		Trust	45	15.35 (3.29)	14.89 (4.94)	0.14	0.707
	Repeated Use	PU	45	14.89 (4.75)	14.81 (4.63)	0.00	0.954
		PEOU	45	16.41 (4.98)	15.31 (6.10)	0.44	0.510
		Trust	45	16.46 (3.81)	15.39 (5.07)	0.66	0.421
H3	Pre-usage	PU	57	11.87 (5.12)	11.95 (6.23)	0.00	0.956
		PEOU	57	13.84 (4.72)	13.48 (4.06)	0.09	0.766
		Trust	57	11.94 (3.90)	11.93 (5.83)	0.00	0.993
	Initial Use	PU	57	11.31 (5.78)	11.95 (5.31)	0.18	0.676
		PEOU	57	14.13 (5.60)	15.36 (5.79)	0.64	0.427
		Trust	57	11.46 (4.80)	13.73 (5.14)	2.86	0.096
	Repeated Use	PU	57	12.70 (5.58)	14.25 (5.75)	1.04	0.311
		PEOU	57	13.96 (5.83)	17.02 (5.12)	4.09	0.051
		Trust	57	13.23 (5.35)	15.68 (4.72)	3.10	0.084
H4	Pre-usage	PU	29	9.45 (3.92)	9.36 (4.74)	0.00	0.957
		PEOU	29	13.27 (6.23)	11.31 (5.40)	0.81	0.377
		Trust	29	10.32 (2.86)	8.94 (4.12)	0.94	0.341
	Initial Use	PU	29	11.82 (5.94)	11.78 (4.43)	0.00	0.983
		PEOU	29	13.86 (6.48)	15.94 (5.61)	0.84	0.369
		Trust	29	12.77 (4.58)	12.53 (4.27)	0.02	0.885
	Repeated Use	PU	29	15.32 (7.15)	17.00 (6.38)	0.43	0.516
		PEOU	29	16.41 (5.71)	18.64 (6.12)	0.95	0.338
		Trust	29	15.86 (6.87)	17.00 (5.89)	0.22	0.640

Table 4.5 – Summary of Post-hoc ANOVA Results for Hypotheses 2 to 9

Hypotheses	Stage	Factor	N	Mean (Std. Deviation)		F	P-Value
				eWOM Recommendation Condition	No-eWOM Control Condition		
H5	Pre-usage	PU	27	11.81 (4.33)	12.00 (6.24)	0.01	0.927
		PEOU	27	13.03 (5.18)	10.95 (2.24)	1.55	0.225
		Trust	27	13.25 (4.02)	12.64 (5.95)	0.10	0.751
	Initial Use	PU	27	12.78 (6.26)	10.00 (5.53)	1.41	0.246
		PEOU	27	13.41 (6.92)	11.91 (7.19)	0.30	0.592
		Trust	27	13.16 (5.63)	10.82 (5.41)	1.16	0.292
	Repeated Use	PU	27	13.91 (6.95)	11.91 (8.65)	0.44	0.513
		PEOU	27	13.53 (6.13)	14.00 (8.66)	0.03	0.870
		Trust	27	14.00 (5.97)	12.23 (7.71)	0.45	0.507
H6	Pre-usage	PU	29	15.33 (3.41)	9.39 (4.49)	16.22	0.000***
		PEOU	29	15.73 (3.76)	11.68 (3.17)	9.78	0.004**
		Trust	29	15.40 (3.18)	10.18 (4.82)	12.01	0.002**
	Initial Use	PU	29	15.13 (4.16)	13.82 (3.77)	0.79	0.382
		PEOU	29	16.33 (4.40)	14.07 (4.62)	1.83	0.188
		Trust	29	15.97 (4.43)	13.64 (4.65)	1.90	0.180
	Repeated Use	PU	29	17.67 (5.47)	15.86 (6.39)	0.67	0.419
		PEOU	29	18.67 (5.95)	15.89 (6.16)	1.52	0.228
		Trust	29	17.70 (4.85)	15.39 (4.20)	1.86	0.184
H7	Pre-usage	PU	31	12.29 (5.21)	11.47 (5.20)	0.18	0.674
		PEOU	31	13.14 (5.12)	11.82 (4.59)	2.75	0.108
		Trust	31	11.99 (4.60)	11.87 (4.71)	0.26	0.614
	Initial Use	PU	31	10.11 (5.60)	12.54 (4.87)	0.43	0.520
		PEOU	31	11.32 (5.35)	15.14 (5.48)	5.24	0.059
		Trust	31	11.29 (5.48)	13.63 (4.48)	1.66	0.208
	Repeated Use	PU	31	13.55 (4.97)	14.72 (5.17)	0.54	0.469
		PEOU	31	14.55 (5.22)	15.54 (5.60)	0.66	0.424
		Trust	31	15.21 (4.96)	15.93 (4.70)	1.92	0.176

Table 4.5 – Summary of Post-hoc ANOVA Results for Hypotheses 2 to 9

Hypotheses	Stage	Factor	N	Mean (Std. Deviation)		F	P-Value
				eWOM Recommendation Condition	No-eWOM Control Condition		
H8	Pre-usage	PU	22	11.41 (4.15)	10.77 (4.37)	0.12	0.730
		PEOU	22	13.36 (2.94)	13.09 (3.62)	0.04	0.848
		Trust	22	10.14 (3.61)	10.05 (3.90)	0.00	0.955
	Initial Use	PU	22	13.14 (4.46)	11.64 (3.66)	0.74	0.399
		PEOU	22	15.23 (4.16)	13.64 (3.17)	1.02	0.325
		Trust	22	13.77 (2.96)	13.09 (3.88)	0.22	0.648
	Repeated Use	PU	22	16.27 (4.56)	14.00 (5.12)	1.21	0.284
		PEOU	22	16.82 (4.14)	12.91 (6.46)	2.86	0.106
		Trust	22	16.36 (4.25)	15.00 (5.92)	0.39	0.542
H9	Pre-usage	PU	23	11.50 (5.53)	10.79 (6.93)	0.07	0.790
		PEOU	23	13.41 (5.74)	13.67 (6.09)	0.50	0.489
		Trust	23	11.41 (4.55)	9.96 (5.19)	0.50	0.486
	Initial Use	PU	23	11.59 (4.15)	8.54 (5.20)	2.38	0.138
		PEOU	23	12.18 (4.98)	12.21 (5.83)	0.00	0.991
		Trust	23	11.82 (3.90)	10.88 (4.57)	0.28	0.602
	Repeated Use	PU	23	12.91 (4.68)	13.63 (4.92)	0.13	0.725
		PEOU	23	14.55 (4.38)	12.33 (5.52)	1.12	0.302
		Trust	23	15.73 (2.10)	14.46 (5.00)	0.61	0.440
<p>NOTE: *** Significant at $\alpha = 0.001$; ** Significant at $\alpha = 0.01$; * Significant at $\alpha = 0.017$ (Bonferroni adjusted critical α-level); PU = Perceived Usefulness; PEOU = Perceived Ease of use.</p>							

4.3 CONTENT ANALYSIS OF QUALITATIVE DATA

The final stage in our analysis was a content analysis of our subjects' qualitative responses to a set of open-ended questions about their justifications for their evaluations of the assigned websites. The open-ended questions were administered as part of the online questionnaires at the repeated use stage (see section 3.4 in Chapter 3 for details). A total of 263 textual responses were obtained for each of the three factors of trust, perceived usefulness, and perceived ease of use of the assigned music/healthcare websites. The purpose of the content analysis was two-fold: (1) to gain deeper insights into the nature of our subjects' cognitive processes towards evaluating their assigned websites; (2) to gain insights into the factors influencing our subjects' perceptions of the service at the repeated use stage.

4.3.1 Content Analysis for Insights into Subjects' Cognitive Processes

To better understand the nature of cognitive processes (i.e., central/peripheral route processes), we content analyzed the “cognitive responses” of our subjects. Cognitive responses are individual thoughts that are produced during information processing and serve as the basis for evaluating different objects, such as services (e.g., Cacioppo et al., 1981; Lee, 2004; Lee & Lee, 2011; Maheswaran & Meyers-Levy, 1990; Sparks & Siemens, 2014; Sujan, 1985). Insights into the nature of cognitive responses have led to better understanding of the underlying cognitive processes in evaluating services, in prior studies (Brinol et al., 2004; Cacioppo et al., 1981; Huang & Hutchinson, 2008; Lee, 2004; Lee & Lee, 2011; Maheswaran & Meyers-Levy, 1990; Sparks & Siemens, 2014; Sujan, 1985). In particular, the presence of central and peripheral route processes, as outlined by the ELM, can be evidenced by examining the *type* and the *number* of cognitive responses elicited by our subjects (Sparks & Siemens, 2014; Sujan, 1985; Wright, 1980).

Under the central route conditions for evaluating a service, consumers' cognitive responses should comprise thoughts that reflect specific cognitive operations performed on the information provided about the service attributes. Such type of cognitive responses is called “*attribute-oriented thoughts*”. Attribute-oriented thoughts may include consumers' descriptions of how service attributes information was combined, evaluations of service attribute levels, and/or comparisons of service attributes to a standard based on the consumers' prior knowledge (e.g., “[This music website] is useful because it allows you to make your own playlists, and provides engaging information for the user. Also, the website does not limit itself in the types of music it provides”) (Lee, 2004; Lee & Lee, 2011; McMellon & Ducoffe, 1995; Sujan, 1985). Attribute-oriented thoughts indicate construction of an evaluation of the service from the *pieces of attribute*

information about the service and based on consumers' *prior knowledge* of the service context (i.e., central route processes) (Bettman & Park, 1980; Sujan, 1985).

On the other hand, under the peripheral route conditions, consumers' cognitive responses should include thoughts referring to *overall impressions* and/or *overall evaluations* of the service that are not supported by careful evaluation of the service attributes (e.g., "Personally, I just don't like [this healthcare website]"). This type of cognitive responses is called "*simple evaluative thoughts*" (a.k.a., "heuristics") by the prior cognitive response studies (e.g., Lee, 2004; Lee & Lee, 2011; McMellon & Ducoffe, 1995; Sujan, 1985). Prior studies show that a larger number of attribute-oriented thoughts and/or a smaller number of simple evaluative thoughts are indicators of central route processes. Conversely, a smaller number of attribute-oriented thoughts and/or a larger number of simple evaluative thoughts are indicators of peripheral route processes (Lee, 2004; Lee & Lee, 2011; Maheswaran & Meyers-Levy, 1990; Sujan, 1985). To this end, to gain deeper insights into the nature of our subjects' cognitive processes towards evaluating their assigned websites, we content analyzed their qualitative responses to identify the attribute-oriented thoughts and simple evaluative thoughts.

The content analysis followed a two-step process. Firstly, subjects' qualitative responses to the open-ended questions were separated into individual thoughts by two independent judges, including the researcher and another judge who was unfamiliar with the objectives of the study. This allowed us to control for any potential bias caused by ex-ante theoretical or empirical knowledge of the study (Sparks & Siemens, 2014). Secondly, a coding scheme, depicted in Table 4.6, was developed by the researcher based on the definitions and the samples of attribute-oriented and simple-evaluative thoughts in the prior cognitive response studies (e.g., Maheswaran & Sternthal, 1990; Sujan, 1985). The two judges independently used the coding scheme to classify the identified thoughts into one of two types: (1) attribute-oriented thoughts, and (2) simple evaluative thoughts. The inter-judge agreement was on average 79 percent. The average inter-judge reliability, which was calculated using intraclass correlation coefficient (ICC) for continuous variables, was 0.85, well above the acceptable threshold of 0.7 (Fleiss, 1981; McGraw & Wong, 1996; Shrout & Fleiss, 1979). The two judges discussed any discrepancy until they reached a consensus; this helped eliminate individual cases of disparities in the content analysis (Rivard & Lapointe, 2012). Next, we statistically tested the differences between the number of attribute-oriented thoughts and simple evaluative thoughts generated by our subjects in evaluating their assigned music and healthcare websites.

The results of MANOVA tests for the content analysis show that our subjects generated significantly larger number of attribute-oriented thoughts than simple evaluative thoughts in evaluating the music websites ($F_{\text{MANOVA}} = 114.001$,

$p < 0.001$), while they produced significantly larger number of simple evaluative thoughts than attribute-oriented thoughts in evaluating the healthcare websites ($F_{\text{MANOVA}} = 353.417$, $p < 0.001$). Furthermore, post-hoc analyses using one-way ANOVA tests with Bonferroni adjustments (i.e., $\alpha = 0.05/3 \approx 0.017$) indicate that similar results hold for all the three dependent factors in our study (i.e., PU, PEOU, and trust) for the music websites ($\text{Mean}_{\text{Number of attribute-oriented thoughts (Trust)}} = 1.9 > \text{Mean}_{\text{Number of simple evaluative thoughts (Trust)}} = 0.9$, $F = 62.247$, $p < 0.001$; $\text{Mean}_{\text{Number of attribute-oriented thoughts (PU)}} = 1.9 > \text{Mean}_{\text{Number of simple evaluative thoughts (PU)}} = 0.4$, $F = 238.04$, $p < 0.001$; $\text{Mean}_{\text{Number of attribute-oriented thoughts (PEOU)}} = 1.3 > \text{Mean}_{\text{Number of simple evaluative thoughts (PEOU)}} = 1.0$, $F = 9.299$, $p < 0.01$), as well as the healthcare websites ($\text{Mean}_{\text{Number of attribute-oriented thoughts (Trust)}} = 0.4 < \text{Mean}_{\text{Number of simple evaluative thoughts (Trust)}} = 2.9$, $F = 499.90$, $p < 0.001$; $\text{Mean}_{\text{Number of attribute-oriented thoughts (PU)}} = 0.4 < \text{Mean}_{\text{Number of simple evaluative thoughts (PU)}} = 1.8$, $F = 198.61$, $p < 0.001$; $\text{Mean}_{\text{Number of attribute-oriented thoughts (PEOU)}} = 0.08 < \text{Mean}_{\text{Number of simple evaluative thoughts (PEOU)}} = 2.4$, $F = 677.33$, $p < 0.001$). These results have two valuable implications for our study.

Firstly, they lend credence to the validity of our experimental manipulations for high/low prior knowledge of the context of the experience service. Prior cognitive response studies have found that attribute-oriented thoughts are accessible only to subjects with a well-developed prior knowledge base (i.e., schema) (Sujan, 1985; Wright & Rip, 1980). These studies further show that subjects with less developed schema are more likely to produce simple evaluative thoughts, compared to subjects with well-developed schema (Sujan, 1985). Therefore, our findings that the subjects generated significantly larger number of attribute-oriented thoughts than simple evaluative thoughts in evaluating the music websites validate our expectation: *our subjects had high prior knowledge of the music context*. Likewise, our findings that the subjects produced significantly larger number of simple evaluative thoughts than attribute-oriented thoughts in evaluating the healthcare websites validate our expectation: *our subjects had low prior knowledge of the healthcare context*.

Secondly, the results of our content analysis corroborate our earlier contention based on the ELM that for consumers without the required prior knowledge of the context of a service (i.e., healthcare websites in our experiment), the task of evaluating the service will be complex. Therefore, the consumers will not be able to evaluate the service through central route processes. As a result, in order to reduce the task complexity, consumers resort to the peripheral route processes for evaluating the service. This is illustrated by significantly larger number of simple evaluative thoughts than attribute-oriented thoughts generated by subjects evaluating the healthcare websites.

Table 4.6 – Coding Scheme for Content Analysis of Qualitative Responses

Code and Description	Example
<i>Attribute-oriented Thoughts:</i>	
<ul style="list-style-type: none"> – Evaluation of Assigned Website Attribute Levels 	<p>“When trying to search for a new music under the hip-hop category, I was expecting to see tracks from the more popular rappers in the industry today (i.e., Drake, Jay-Z, Kanye West), but the majority of the artists that the website provided I had never heard of”.</p> <p>“I am a bit sceptical about the services provided [in this healthcare website]. I believe that even though the information is accurate, the fact that the patients are diagnosing themselves can make it difficult as lots of time people may think they feel symptoms that conform to a certain problem they think they have. Another reason is that people may be unknowingly allergic to some drugs, and without a doctor to check for such things; it could leave the patient worse off than before. Finally it would be very hard for people who suffer from more than one illness to diagnose themselves, as the symptoms would get crossed together”.</p>
<ul style="list-style-type: none"> – Comparison of Assigned Website Attributes To a Standard 	<p>“When I typed in the search engine “Carrie Underwood”, music portals like iTunes would list all her songs and albums she had recorded and would allow you to listen to a thirty second clip of the song. [This music website], on the other hand, only had a couple of her music videos to view, I couldn’t find any of her hit songs on this website.”</p> <p>“This website is easy to use because it’s setup very similar to most music playback programs that music listeners will have already become accustomed to. Therefore it only requires a short amount of time to become adjusted to its online browsing tools and playback device.”</p>

Table 4.6 – Coding Scheme for Content Analysis of Qualitative Responses

Code and Description	Example
<i>Simple Evaluative Thoughts:</i>	
– Overall Impression of the Assigned Website	<p>“Personally, I just don’t like [this healthcare website]”.</p> <p>“[This music website] is a big website, so I think it’s music part should be also trustable”.</p> <p>“This [music] website must have abundant intelligent and professional employees to support”.</p>
– Overall Evaluation of the Assigned Website	<p>“I expect [this healthcare website] to be generally useful, because I have heard reputable things about it”.</p> <p>“Since this [website] is about health, it is not the best idea to put your trust into a website, rather than your family doctor”.</p> <p>“I trust [this music website]. Firstly, there is huge number of users enter the website everyday, which means the website is accepted by most people. Secondly, there is a link to join Facebook through the website”.</p>

4.3.2 Content Analysis for Insights into Factors Influencing Subjects' Perceptions of the Service at the Repeated Use Stage

Content analysis of the qualitative responses offers insights into the factors influencing our subjects' perceptions of the service at the repeated use stage. To that end, for each assigned website, we compared the qualitative responses in support of high quantitative evaluations with the qualitative responses in support of low quantitative evaluations. This allowed us to examine the similarities and differences in the subjects' underlying thoughts for their evaluations of the assigned music/healthcare websites at the repeated use stage. This analysis resulted in two valuable findings, as follows.

Firstly, our content analysis results corroborated our quantitative findings showing that as consumers gain direct experience with the online services based on their repeated usage, the direct effect of eWOM recommendations on consumers' perceptions of adopting the online services are attenuated. Our content analysis shows that none of the qualitative responses in the music and healthcare contexts at the repeated use stage had any direct reference to the eWOM recommendations provided to the subjects at the initial pre-usage stage. This finding would raise the question about the basis for the consumers' evaluations of their experience with the services at the repeated use stage, which is responded by our second finding as follows.

Secondly, our content analysis demonstrates the importance of consumers' expectations based on their *past experiences with other similar services* in evaluating their direct experience with the online service. Our results show that those subjects who were able to recognize the relative advantages of the recommended music/healthcare website (through eWOM) compared to their past experiences with other similar music/healthcare websites found the recommended service to be useful. For example, the following excerpts from two subjects provide insights into this finding:

“Grooveshark has a very unique design that *distinguishes it from its competitors*. Users are able to see other users who have similar taste in music. This gives them an advantage as it becomes a music website and a place for social networking. Also, it enables users to save a playlist of songs of their choice”.

“What I like best about [health.yahoo.com] is that it lets you search for doctors and specialists within your area to help cure any given medical issue, *unlike other healthcare websites*”.

However, those subjects who were unable to identify the relative advantages of the recommended music/healthcare website compared to their past experiences

with other similar music/healthcare websites found the service not appealing. For example, the following excerpts from two subjects provide insights into this finding:

“[Grooveshark.com is] not the best choice if you intend to find new bands. If you know what you want, this site is perfect for you. If however you're looking for something new or at least similar to something you like, *you might want to try Jango [Jango.com] instead*. Simply because Grooveshark can't make any suggestions based on your preference”.

"I do not intend to use [health.yahoo.com] in the future for serious medical concerns, *due to the fact that I enjoy Mayo Clinic [Mayoclinic.org] more*".

The content analysis of the qualitative responses shows that consumers' past experiences with other similar services (i.e., competitors' services) determine the consumers' expectations of the service. Our findings are consistent with the contentions in the extant literature that consumers' past experiences with other similar services create requirements that serve as a basis for evaluating their experience with the service (Woodruff et al., 1983). Direct experience with the service enables consumers to re-evaluate their expectations of the service that may result in “fulfillment gap”. The fulfillment gap represents the overall discrepancy between the consumers' expectations/requirements and their direct experiences with the service (Zeithaml et al., 2002). Fulfillment gap occurs when the service fails to perform up to consumers' expectations, based on their past experiences with other similar services (i.e., competitors' services). The fulfillment gap can lead to negative disconfirmation of consumers' expectations, which tend to develop a negative evaluation of the service that results in consumers' discontinued usage (Woodruff et al., 1983; Zeithaml et al., 2002). Therefore, consumers' past experiences with other similar services is an important factor affecting consumers' adoption of the services, at the repeated use stage.

The theoretical contributions and practical implications of our quantitative and qualitative findings are discussed in the next chapter.

THIS PAGE IS INTENTIONALLY LEFT BLANK

5. DISCUSSIONS

Despite the importance of task complexity (e.g., Jiang & Benbasat, 2007), consumers' innovativeness (e.g., Wood & Swait, 2002), and the stages of the service adoption process (e.g., Rogers, 2003) on the consumers' behaviour, their effects on the effectiveness of eWOM recommendations on consumers' perceptions of adopting experience services have not been investigated. To ameliorate this void, in this study, we investigated two research questions across the three stages of the service adoption process (i.e., pre-usage, initial use, and repeated use): (1) Does the task complexity in evaluating an experience service affect the effectiveness of eWOM recommendations on consumers' perceptions of adopting the experience service? (2) Does the consumers' level of innovativeness affect the effectiveness of eWOM recommendations on their perceptions of adopting an experience service? In responding to the foregoing research questions, our study makes important contributions to the theory and provides essential implications for the practice, as follows.

5.1 CONTRIBUTIONS TO THE THEORY

Our study makes three major contributions to the theory. Our first theoretical contribution fills the void in the eWOM literature about the effect of task complexity on the effectiveness of eWOM recommendations. In particular, our finding illustrates that when the task of evaluating an experience service becomes more complex for consumers, the effectiveness of eWOM recommendations on their perceptions of adopting the experience service increases significantly. This finding supports our contention that for a consumer who does not have the required prior knowledge of the context of a service, task of evaluating the service is highly complex. Therefore, the consumer is unable to evaluate the service through central route processes, as outlined by the ELM. As a result, in order to reduce the task complexity, the consumer resorts to the peripheral route processes for evaluating the service. Under peripheral route conditions, presence of eWOM recommendations from a credible source about an experience service (e.g., a healthcare website) would result in invocation of simple evaluative thoughts (a.k.a., heuristics) for the consumers, which can be used as the basis for formation of their perceptions about the experience service, without careful evaluation of the service attributes. On the contrary, under central route conditions, the eWOM recommendations and the attributes of the recommended service are subjected to careful scrutiny by the consumers based on their prior knowledge of the service context. If the eWOM recommendation is found to lack merit for supporting the advocated view, or does not provide much information over and above the consumer's prior knowledge of the context of the service, then it has little impact on consumer's perceptions about the service. This scrutiny of the eWOM

recommendation for merit would be less likely under peripheral route conditions, where the mere invocation of simple evaluative thoughts would be sufficient for formation of consumers' perceptions about the recommended service. The results of our content analysis corroborate this contention by showing that consumers generate significantly larger number of attribute-oriented thoughts than simple evaluative thoughts when evaluating a service with low task complexity (e.g., online music service). However, they produce significantly larger number of simple evaluative thoughts than attribute-oriented thoughts when evaluating a service with high task complexity (e.g., online healthcare service). In sum, the aforementioned finding underscores the significance of task complexity in differentiating the experience services and provides a granular understanding of its effect on the effectiveness of eWOM recommendations. This finding informs the eWOM literature of the importance of considering a new dimension, namely task complexity, in the future eWOM studies. While the extant eWOM literature has shown the significance of service type (i.e., search versus experience service) and service popularity on the effectiveness of eWOM recommendations, our finding extends the past research by demonstrating the task complexity of evaluating the service as another important contingency factor to be considered in future eWOM studies. It is common in the extant eWOM literature to investigate the effectiveness of eWOM recommendations on the adoption of several different services (e.g., Floh et al., 2013). Our finding is particularly useful for such studies by showing that task complexity of evaluating their focal services can significantly alter the effectiveness of eWOM recommendations on their adoption. This effect is in addition to the effects of service type and service popularity, thus should be addressed separately.

Our second theoretical contribution mitigates the paucity of research examining the effects of consumers' innovativeness on the effectiveness of eWOM recommendations. To that end, our findings show that the effectiveness of eWOM recommendations varies based on the four segments of consumers, generated by the interaction between consumers' high/low level of need for cognition – representing consumers' cognitive innovativeness, and consumers' high/low level of need for change – representing consumers' sensory innovativeness. Furthermore, our findings illustrate the confluence of the consumers' prior knowledge of the service context, consumers' need for cognition, and consumers' need for change on the effectiveness of the eWOM recommendations. In particular, our findings show that Thinkers and Changers and Not Thinkers but Changers with low prior knowledge are the only segments of consumers whose pre-usage perceptions of adopting the experience service are significantly affected by the eWOM recommendations. These findings underscore the importance of the two dimensions of consumer's innovativeness (i.e., cognitive innovativeness and sensory innovativeness) for the future studies concerning the effectiveness of eWOM recommendations on online consumer behaviour. Gupta and Harris (2010) also found evidence showing the significance of need for cognition (i.e.,

cognitive innovativeness) for the effectiveness of eWOM recommendations. While our results support their findings, we further demonstrate that sensory innovativeness is also another important dimension that affects the effectiveness of eWOM recommendations. This effect is in addition to the effect of cognitive innovativeness, thus need to be considered separately in the future eWOM studies. The extant IS literature describes the innovative consumer as a curious, communicative, information-seeking, and cognitive individual (e.g., Agarwal & Prasad, 1998; Parthasarathy & Bhattacharjee, 1998). Thus, innovative consumers have previously been attributed to being both comfortable with novelty (e.g., “receptive to new ideas”; Parthasarathy & Bhattacharjee, 1998, p. 364) and prone to cognition (e.g., “[able] to form informed judgements”; Parthasarathy & Bhattacharjee, 1998, p. 364). In other words, changers have been considered as thinkers. Our study extends the past research by separating the dimensions of novelty-seeking (i.e., sensory innovativeness) and cognition (i.e., cognitive innovativeness) and demonstrates that both of these two dimensions influence consumers’ level of innovativeness, but are not always positively correlated. To that end, we have distinguished between consumers’ need for cognition and need for change to cross-classify consumers into four segments. Our findings demonstrate that the effectiveness of eWOM recommendations varies based on the four segments of consumers. These findings provide new insights to the IS literature about the differential effects of the two dimensions of innovativeness (i.e., cognitive innovativeness and sensory innovativeness).

Thirdly, given the importance of pre-usage, initial use, and repeated use stages in adoption of services, we considered all the three stages in our study. Our findings reveal the significant moderating effect of the stage of the service adoption process (i.e., pre-usage, initial use, and repeated use) on the effectiveness of eWOM recommendations. In particular, our findings demonstrate that upon actual experience with the experience service at the initial use and repeated use stages of the adoption process, the direct effects of eWOM recommendations on consumers’ perceptions of adopting the experience service are attenuated. These findings can be explained from the perspective of schema theory (Rumelhart, 1978; Sweller et al., 1998), that individuals construct various schemata based on their direct experience with different objects, such as services. We show that the schemata, which are constructed based on the direct experience with a service in initial use and repeated use stages of the adoption process, have stronger effects on consumers’ adoption of the service, as compared to the eWOM recommendations. Thus, the effects of eWOM recommendations are significantly stronger at the pre-usage stage of the service adoption process, when consumers don’t have direct experience with the recommended service. This informs the pertinent literature of the moderating effect of the stage of the adoption process on the effectiveness of eWOM recommendations.

5.2 IMPLICATIONS FOR PRACTICE

Our study provides valuable implications for practice. Firstly, our findings show that eWOM recommendations are significantly more effective when dealing with high task complexity services. For example, in healthcare, there is an increasing trend for patients to share and use information about medical conditions and treatments in online healthcare communities such as PatientsLikeMe.com, Braintalk.com, and Inspire.com (Fichman et al., 2011). This implies that firms that offer services that require substantial cognitive effort and learning, such as healthcare services, should emphasize online forums and social media communities and encourage eWOM recommendations towards the adoption of their services. Clearly, the first step in this process is to offer services that are of high quality, which increase consumers' satisfaction. EWOM recommendations increase as the level of consumers' satisfaction increases (Hennig Thureau et al., 2004). Next, firms should ensure that a responsive system for addressing consumers' complaints is in place before engaging in efforts to stimulate eWOM recommendations. When dissatisfied consumers find it difficult to complain to the firm, they disparage the firm to others (Gelb & Johnson, 1995). Disparagement of the firm is most likely, when no redress is expected from complaining directly to the firm (Gelb & Johnson, 1995). Having minimized the incidence and motivation for negative eWOM, firms may stimulate eWOM recommendations by putting prospective consumers in contact with satisfied consumers (Mangold et al., 1999). As a case in point, some online healthcare firms, such as Webmd.com, have formed online communities for patients dealing with common health problems or undergoing similar medical treatment procedures. This creates the opportunities for patients to share eWOM recommendations. Similarly, investment firms sponsor online investment clubs, such as ValueForum.com, for members with similar financial objectives. Additionally, firms may stimulate eWOM recommendations from satisfied consumers by offering incentives for their referrals. Discounted services and/or referral fees are common practices for achieving this end (Mangold et al., 1999). Furthermore, firms may spread eWOM recommendations by advertising their services to "market mavens". Market mavens (a.k.a., opinion leaders) are individuals who enjoy introducing new services to others (Gelb & Johnson, 1995). Firms should ensure that market mavens have enough familiarity with their services that they can recommend them to others. The aforementioned possibilities provide the firms that offer high task complexity services with effective means for informing and educating prospective consumers about their services, using eWOM recommendations.

Secondly, results of our content analysis show that due to the high task complexity of the healthcare context, consumers mostly rely on their simplistic thought processes in using the online healthcare services. This signifies the concern that online patients can be victims of low quality healthcare websites.

Quality of information is a known concern for healthcare providers (Hanif et al., 2009; Marton, 2010). Online healthcare services vary in terms of quality of information that result in incomplete, misleading, or inaccurate medical information available on the web (Hanif et al., 2009; Marton, 2010). For example, Gordon et al. (2001) evaluated the available online healthcare services on the topic of breast augmentation. Their findings show that 83 percent of the healthcare websites were biased towards a particular surgical technique and only about 15 percent of the websites were acceptable to be recommended to patients. Other prior studies have come to similar conclusions on a variety of topics such as breast cancer (Meric et al., 2002), thyroid cancer (Air et al., 2007; Yeo et al., 2007), back pain (Gremeaux et al., 2007), anaesthesia (Caron et al., 2007), and rheumatoid arthritis (Culver & Chadwick, 2005). Online healthcare services may lead to potentially dangerous outcomes (e.g., patients reading information intended for health professionals may misunderstand the information or may get wrong expectations regarding treatment options) (Gordon et al., 2001; McKinley et al., 1999). Understanding the validity and applicability of medical information is difficult for those without a medical degree or extended training in the medical field (Fan et al., 2013; Hanif et al., 2009; Liu et al., 2013). This implies that healthcare service regulators and online healthcare service providers should be wary of the consequences of the patients' simplistic use of healthcare information on their websites. They should assess the level of consumers' knowledge regarding the issue at hand and provide appropriate level of information that fits the patients' pertinent knowledge. This can be achieved through the application of the intelligent tutoring system (ITS). ITS is a computer-based instructional system that measures an individual's level of knowledge in order to adapt the instructions to the individual's learning needs (Fazel Zarandi et al., 2012). Employing ITSs on healthcare websites can satisfy the learning needs of patients by providing customized instructions.

Thirdly, our findings demonstrate that firms should attend to the consumers' prior knowledge of the service context (i.e., schema) to effectively manage the presentation of eWOM recommendations on their websites. Our research findings show that an essential factor that determines how consumers process the eWOM recommendations regarding a service is their prior knowledge of the service context. To that end, firms need to understand their consumers' prior knowledge of a service context, before providing them with eWOM recommendations about that service. Our findings show that for consumers with low prior knowledge, extrinsic cues in the eWOM recommendations, such as the credibility of the sender and/or ratings of the eWOM recommendations by other consumers, can be used as the basis for formation of consumers' perceptions. Therefore, eWOM recommendations with extrinsic cues that simplify the evaluation of the service for the consumers (e.g., endorsements from credible and/or famous sources) are likely to be more effective for this group of consumers. On the other hand, in order to increase the effectiveness of eWOM recommendations for consumers

with high prior knowledge, firms need to make sure that these consumers do not have opportunities to elaborate negatively on eWOM recommendations about a service. This is because higher prior knowledge can result in more counter-arguments, hence cause negative persuasive effects on consumers' perceptions towards adopting the service (Wang, 2006). For consumers with high prior knowledge, eWOM recommendations with reasonable and credible arguments that are in line with their prior knowledge are less likely to generate negative effects on their perceptions towards the service.

Fourthly, our content analysis suggests that service providers' lack of attention to consumers' past experiences with other similar services can have detrimental consequences in terms of unfavourable evaluation of their services by the consumers. Results of our content analysis demonstrate that consumers' past experiences with other similar services serve as a standard for evaluating their direct experience with the services. Consistent with our findings, Zeithaml et al. (2002) define "information gap" as the difference between consumers' expectations of the online service and service providers' perceptions of consumers' expectations. The information gap represents the discrepancy between consumers' requirements concerning the service and service providers' understanding of these requirements, which can negatively affect consumers' perceptions of service quality. What a service provider believes to be an ideal service (e.g., a healthcare/music website) for its consumers might be incomplete or inaccurate because of insufficient or incorrect information about the service features desired by the consumers (Zeithaml et al., 2002). Our findings show that consumers' past experiences with other similar services (i.e., competitors' services) is influential in determining the consumers' expectations concerning the service. As such, the consumers' expectations of the service can vary across consumers based on their past experiences with other similar services as well as their personality characteristics, such as their need for cognition and/or need for change (Srivastava & Sharma, 2012; Wood & Swait, 2002; Zeithaml et al., 2002). Failing to perform up to consumers' expectations would lead to fulfillment gap. The fulfillment gap can result in developing a negative evaluation of the service that leads to consumers' discontinued usage of the service (Woodruff et al., 1983; Zeithaml et al., 2002). Therefore, it is important for the service providers to be wary of the consumers' characteristics and their prior experiences with other services.

In the absence of monitoring of the marketplace and consumers to update the company's knowledge about the required service attributes desired by consumers, information gap persists (Zeithaml et al., 2002). Researchers and practitioners have acknowledged that in order to identify consumers' characteristics and their preferences in regard to the services, effective consumer segmentation is crucial (Viswanathan et al., 2007). To that end, traditionally, service providers have attempted to target different categories of consumers based on demographic,

lifestyle, and socioeconomic variables, *ex ante*. Nonetheless, as consumers increasingly rely on the web to satisfy their information needs, practitioners have recently begun to focus on its role in consumer segmentation (Viswanathan et al., 2007). The underlying logic is that as consumers self-select different services on the web, they reveal their preferences for the services, which can be used towards their segmentation for future offerings. A case in point is Amazon's recommendations for products based on consumers' previous purchases and/or browsing history. Such information is obtained by "behavioural targeting". Behavioural targeting is a generic name for a series of technologies that collect and organize information about a consumer's online activities (e.g., what other websites a consumer visits, how long the consumer stays there, what pages the consumer views, and where consumer goes next) (Dwyer, 2009; Goldfarb & Tucker, 2011; Yan et al., 2009). Behavioural targeting technologies collect click stream data, develop data warehousing structures, and apply data mining algorithms to uncover consumers' browsing patterns. Such information can help service providers to better determine their consumers' characteristics and preferences for the services, which can be used for provision of a more customized service to their consumers, thus filling the information gap.

5.3 LIMITATIONS & FUTURE RESEARCH

As with any research, our study has some limitations, which in turn open potential avenues for the future research. Firstly, we have used two evaluation tasks, namely, the evaluation of healthcare websites and music websites, to manipulate the subjects' high/low prior knowledge of the context of the experience service in our experiment. These two tasks may differ in other ways including higher sensitivity of the healthcare context versus music context and higher likelihood of our subjects having a favourite music website as compared to having a favourite healthcare website, which may introduce artefacts in our experimental manipulations. To that end, we have measured the subjects' concerns in regard to the sensitivity of the contents provided by the healthcare/music websites using their trust in the websites. Results of our one-tail t-tests show that their trust in the healthcare websites is not significantly lower than their trust in the music websites in the three stages of service adoption process ($p > 0.9$). Therefore, the sensitivity of the healthcare context is not likely to have confounding effects on our results. Furthermore, we asked the subjects to quantitatively evaluate their perceived usefulness, perceived ease of use, and trust for their favourite as well as assigned music/healthcare websites. The results of our analysis show that there is no significant difference between subjects' evaluations of their favourite and assigned healthcare/music websites in all of the eight segments of our subjects ($p > 0.06$). These results ensure that difference in the subjects' likelihood of having a favourite music website versus healthcare website did not have any confounding effects on our findings. Moreover, considering that our two evaluation tasks are

similar in nature in that they both focus on evaluation of online services; they both are experience services; they both are relevant topics for our subjects; and the fact that it is theoretically impossible to select two services that contain exactly the same contents for the same subjects, while being associated with different levels of prior knowledge of the service context, we believe that our experimental manipulation is acceptable for the objective of this study. Furthermore, this practice is in line with prior studies on task complexity (e.g., Jahng et al., 2007; Jiang & Benbasat, 2007).

Secondly, notwithstanding the care we took to ensure the internal validity of our controlled laboratory experiment, our study could exhibit stronger external validity if we used real consumers as our subjects. The subjects in our study were students, not actual consumers searching online for music and/or healthcare websites. This is the bane for many laboratory experimental designs in IS and consumer behaviour literature (Jahng et al., 2007). Nonetheless, students are drawn from the general consumer population (Enis et al., 1972) and can be considered representative consumers. Furthermore, our subjects were instructed to look for their favourite music songs, albums, and singers on the music websites and assess the healthcare websites based on its content about the stress management. Both of these topics are considered as relevant to the students (Archer & Carroll, 2003; D'Zurilla & Sheedy, 1991; Qi et al., 2013; Ross et al., 1999). While these practices are in line with other research studies in IS and consumer behaviour literature (e.g., Bansal & Voyer, 2000; Jiang & Benbasat, 2004; Komiak & Benbasat, 2006; Kumar & Benbasat, 2002; Kumar & Benbasat, 2006; Kuo et al., 2009; Sia et al., 2009; Xu et al., 2014; Xu et al., 2013; Yin et al., 2014), future research should attempt to use real consumers as their samples and compare their results with our findings to illustrate the effects of using students' subjects.

Finally, an important avenue for future research that is illuminated in light of our findings is the effect of “functional matching” on the effectiveness of eWOM recommendations. The essence of the functional matching is understanding the functional basis of individuals' attitudes in order to understand how to change those attitudes (Petty & Wegener, 1998). Within the persuasion context, functional matching holds that communications that “match” the “functions” served by an attitude are more effective in persuasion, than the communications that are irrelevant to the functions served by the attitude (Petty et al., 2000). Prior research (e.g., Lavine & Snyder, 1996; Petty et al., 2009; Petty & Wegener, 1998; Petty et al., 2000) shows the positive effect of functional matching on the effectiveness of persuasion. For example, under peripheral route conditions, matching a message to some aspects of the individual (e.g., level of need for cognition, level of need for change, age, or gender) might invoke simple evaluative thoughts such as “if it's for me (or relates to me or is similar to me), then I like it” (Petty et al., 2009, p. 200), which can be used as the basis for formation of individuals' perceptions. Likewise, under the central route

conditions, functional matching, such as matching a message to individuals' high level of prior knowledge by providing more specific and technical information in the message, can increase the effectiveness of the message in persuading the individuals (Petty et al., 2009). Extrapolating this to the context of eWOM recommendations, an important agenda for future research would be how the functional matching affects the effectiveness of eWOM recommendations on consumers' perceptions of adopting experience services. For example, a content analysis of consumers' communications on an online forum by Adjei et al. (2010) show that consumers with higher prior knowledge of the subject matter ask more specific and technical questions about the subject matter, than consumers with lower prior knowledge, who usually ask more general questions. More technical questions might yield more technical eWOM recommendations, which might be effective in persuading consumers with high prior knowledge. Therefore, although our results show that the eWOM recommendations are more effective in persuading consumers with lower prior knowledge, future research should investigate the significance of functional matching by providing more technical and specific content to increase the effectiveness of eWOM recommendations on consumers with higher prior knowledge. Furthermore, our findings show that the consumers' levels of need for cognition and need for change significantly affect the effectiveness of eWOM recommendations. Future research should investigate how matching the content of the eWOM recommendations to consumers' levels of need for cognition (e.g., more thought-provoking content) and need for change (e.g., more innovative and novel content) affect the effectiveness of eWOM recommendations.

5.4 CONCLUDING REMARKS

In this study, we posed two research questions to investigate across the three stages of the service adoption process (i.e., pre-usage, initial use, and repeated use): (1) Does the task complexity in evaluating an experience service affect the effectiveness of eWOM recommendations on consumers' perceptions of adopting the experience service? (2) Does the consumers' level of innovativeness affect the effectiveness of eWOM recommendations on their perceptions of adopting an experience service? To that end, we drew on the ELM, cognitive load theory, and two dimensions of consumer's innovativeness (i.e., cognitive innovativeness and sensory innovativeness), as our theoretical underpinnings, to propose nine hypotheses. We devised a mixed methods approach for our research methodology to test the nine hypotheses based on the quantitative-qualitative data collected from 263 subjects. To that end, we adopted a controlled longitudinal laboratory experiment to subject our nine hypotheses to quantitative empirical tests, while controlling for the potential confounding effects of other factors identified in our systematic review of the eWOM literature (see Appendices A and B for details). The qualitative data obtained from the open-ended questions were content analyzed to expand our insights into the nature of consumers' cognitive processes towards evaluating the experience services. The content analysis results also provided insights into the nature of factors influencing our subjects' perceptions of the experience service at the repeated use stage of service adoption process. Our findings provide conceptual and empirical clarity to the effects of task complexity and consumer's cognitive and sensory innovativeness on the effectiveness of the eWOM recommendations, across the three stages of the experience service adoption process. To the best of our knowledge, this is the first study that provides such a comprehensive evaluation of the contingency factors affecting the effectiveness of eWOM recommendations. In particular, the extant literature was silent about the roles that task complexity, consumers' innovativeness, and the stages of the service adoption process play in the effectiveness of eWOM recommendations on consumers' perceptions of adopting experience services. This study has sought to fill these gaps in the extant literature. Thus, it can serve as a foundation for future eWOM research. Our findings also present important implications for the practice, as discussed in the preceding sections in this chapter.

APPENDICES

APPENDIX A– Systematic Review of eWOM Literature

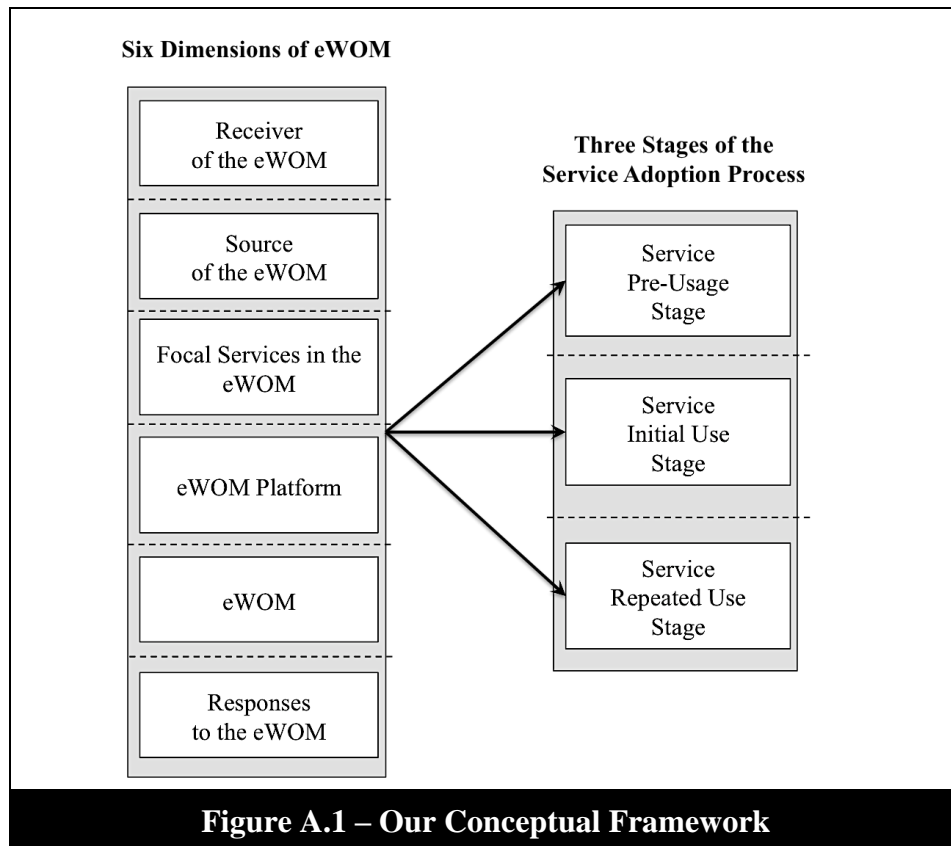
Prior research on eWOM recommendations has demonstrated the effects of different factors on the effectiveness of eWOM recommendations. Given the focus of our study, it is essential to gain a better understanding of these factors. To this end, we followed the recommendations in the literature (e.g., Boote & Beile, 2005; Hart, 1998; Webster & Watson, 2002) to conduct a systematic review of eWOM literature, which is presented in this Appendix. Our objective in this Appendix is to identify and synthesize the factors that affect the effectiveness of eWOM recommendations on consumers' perceptions of adopting services, across three stages of the service adoption process (i.e., pre-usage, initial use, and repeated use). As explained in chapter 3, we draw on the findings of this literature review to control for the potential confounding effects of the identified factors on the effectiveness of eWOM recommendations in our study. This enables us to increase the internal validity of our study.

This Appendix is organized as follows. First, we present a theoretical framework for synthesizing the extant eWOM literature. Next, based on the five stages of “Grounded Theory Literature Review Method” Wolfswinkel et al. (2013), we outline our methodology for analyzing the extant eWOM literature. Finally, in section A.3, we provide our findings and a classification of the factors that can affect the effectiveness of eWOM recommendations on consumers' perceptions of adopting services across the three stages of the service adoption process (i.e., pre-usage, initial use, and repeated use).

A.1 Theoretical Foundation

Electronic word of mouth recommendations are considered as a prominent form of social influence that affects consumers' adoption of services, across the three stages of the service adoption process (i.e., pre-usage, initial-use, and repeated-use) (Bock et al., 2012). Social influence is the extent to which members of a social network influence one another's behaviour. This influence is exerted through messages (signals) that help to form perceptions of the value of the services, at each stage of the adoption process (Bernof et al., 2011; Montazemi & Qahri Saremi, 2013; Venkatesh & Brown, 2001). Webster and Watson (2002, p. xiv) contend that “authors of literature reviews are at risk for producing mind-numbing lists of citations and findings that resemble a phone book—impressive case, lots of numbers, but not much plot. In contrast, a coherent review emerges only from a coherent conceptual structuring of the topic itself. For most reviews, this requires a guiding theory”. To this end, we draw on social communication framework (Hovland, 1948) as the theoretical underpinning to guide our eWOM literature analysis, over the three stages of the service adoption process (i.e., pre-usage, initial use, and repeated use) (Rogers, 2003). Social communication is

defined as “the process by which an individual (the communicator) transmits stimuli to modify the behaviour of other individuals (receivers)” (Hovland, 1948, p. 371). The eWOM, as a form of online social communication media, comprises six major dimensions that are depicted in Figure A.1: (1) the communicator (source) who transmits the eWOM recommendation, (2) the eWOM recommendation as a form of social communication content transmitted by the eWOM source, (3) the consumer who receives and responds to the eWOM recommendation (eWOM receiver), (4) the responses made to the eWOM recommendation by the receiver, (5) the focal services in the eWOM recommendation, and (6) the eWOM recommendation platform. We systematically analyze eWOM literature to identify the factors representing each of the six dimensions of eWOM, across the three stages of the service adoption process.



A.2 Methodology

We adopted the “Grounded Theory Literature Review Method” (Wolfswinkel et al., 2013), to systematically review the extant eWOM literature. This method enabled us to perform a thorough and theoretically relevant analysis of the eWOM

literature. The “Grounded Theory Literature Review Method” is implemented in five steps, depicted in Figure A.2. Step 1 (“Define”) consists of defining the inclusion/exclusion criteria, determining the pertinent databases of the published studies for search, and determining the appropriate search terms. In step 2 (“Search”), the actual search for the published studies is performed using the keywords and the pertinent databases determined in the step 1. In step 3 (“Select”), we refine the retrieved studies from step 2 using the inclusion/exclusion criteria that were determined in step 1. Next, in step 4 (“Analyze”), we synthesize the refined sample of pertinent studies using Grounded Theory techniques. In step 5 (“Present”), we present the findings and insights gleaned from the synthesis of the pertinent studies in step 4. Detailed description of the five steps in support of our synthesis of extant eWOM literature on is presented next.

Steps 1 – 3: Define, Search, and Select

To identify journal and conference papers that investigated the effectiveness of eWOM recommendations on consumers’ perceptions of adopting services (i.e., including both goods and service type of products), we searched a number of electronic databases such as AIS, ACM, ScienceDirect, Palgrave Macmillan, Sage, EBSCOhost, JSTOR, Scholar’s Portal, and Google Scholar. We used search terms of “word of mouth”, “electronic word of mouth”, “WOM”, “eWOM”, “online reviews”, “eWOM recommendation”, and “online consumer reviews”. To ensure that no major eWOM articles is ignored, we also searched the leading scholarly Information Systems journals (i.e., MIS Quarterly, Information Systems Research, Journal of Management Information Systems, European Journal of Information Systems, Information Systems Journal, Journal of Strategic Information Systems, Journal of Association for Information Systems, and Information & Management), and four major Marketing journals (Journal of Marketing, Journal of Marketing Research, Journal of Consumer Research, and Journal of the Academy of Marketing Science). The search initially yielded 306 studies.

Not all the 306 studies were appropriate for inclusion in our analysis. Recognizing this, Wolfswinkel et al. (2013) have recommended that researchers mark out the scope of their review by establishing criteria for inclusion. To that end, we included only peer-reviewed studies in which (1) eWOM recommendation was the main focus of investigation in the study, and (2) the study was empirical (i.e., entirely conceptual or theoretical studies were excluded). Applying these criteria to 306 papers resulted in 114 eWOM studies that we used in our analysis, as indicated in Tables A1 to A6.

Step 4: Analyze

To analyze the selected 114 eWOM studies, constructs used in those studies were

initially identified and coded. Next, we synthesized the constructs into factors based on their conceptual similarities and mapped them on the six dimensions of eWOM, using three Grounded Theory techniques: (1) *open coding*, (2) *axial coding*, and (3) *selective coding*, as explained next.

We used *open coding* technique, through which constructs, their measurement instruments, and their stage of study (i.e., pre-usage, initial use, or repeated use) were coded for each of the 114 eWOM studies. The outcome was 390 constructs that were used in the 114 eWOM studies. Next, we applied *axial coding* technique, to synthesize these 390 constructs based on their conceptual similarities. To that end, we used the constructs' instrument measures used in the eWOM study, rather than the authors' labels because the labels that authors applied to their constructs can vary (Montazemi et al., 2012; Montazemi & Qahri Saremi, 2013, 2014). Comparing similarities and differences between the instrument measures of the 390 constructs yielded 36 conceptually distinct factors. Finally, *selective coding* technique was used to map these 36 factors on the six dimensions of eWOM, depicted in Figure A.3.

A.3 Results (Step 5: Present)

Our analyses of 114 eWOM studies identified 36 conceptually distinct factors, which represent the six dimensions of eWOM: (1) four factors pertaining to the receiver of the eWOM recommendations, as detailed in Table A1; (2) six factors pertaining to the source of the eWOM recommendations, as detailed in Table A2; (3) two factors pertaining to the focal services in the eWOM recommendations, as explained in Table A3; (4) one factor pertaining to the eWOM recommendations platform, as detailed in Table A4; (5) nine factors pertaining to the eWOM recommendations, as detailed in Table A5; and (6) fourteen factors pertaining to the response, as detailed in Table A6. Extant literature shows that these factors affect the effectiveness of eWOM recommendations on consumers' perceptions of adopting services, across the three stages of the service adoption process (i.e., pre-usage, initial use, and repeated use), as depicted in Figure 1.2, in Chapter 1.

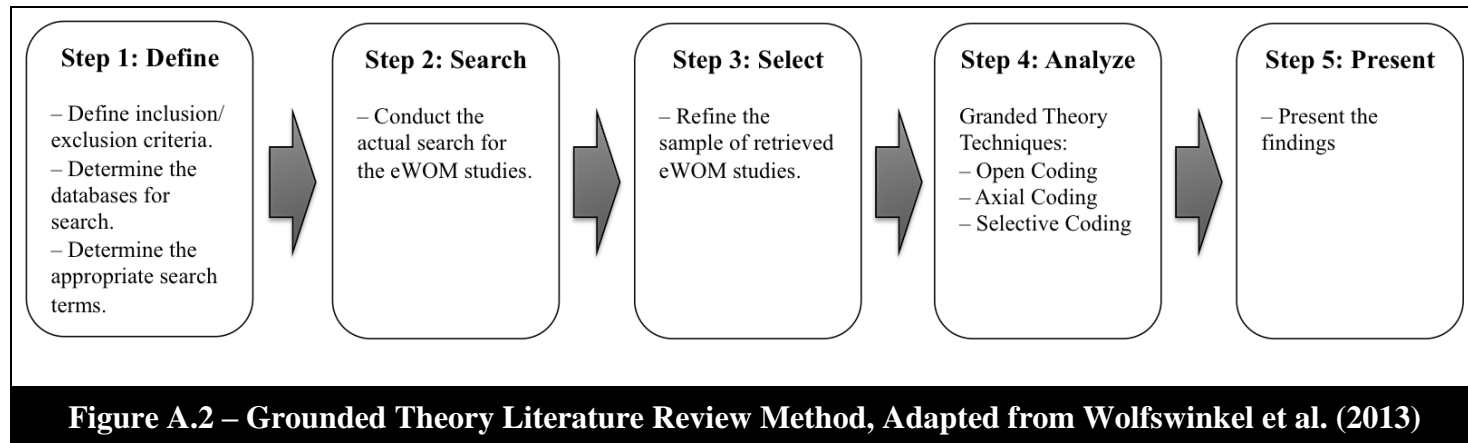


Table A.1 – Factors Pertaining to the Receiver of the eWOM Recommendations

#	Factors	Definition	Stage of Adoption Process in the eWOM Studies		
			Pre-usage	Initial Use	Repeated Use
1	Consumer's prior knowledge of the service context	Receiver's prior knowledge or pertinent experience to the eWOM recommendation (Cheung & Thadani, 2012; Martin & Lueg, 2013)	(Chakravarty et al., 2010; Cheung et al., 2012; Park & Kim, 2008; Vermeulen & Seegers, 2009)		(Adjei et al., 2010; Chatterjee, 2001; Cheung et al., 2009; Doh & Hwang, 2009; Fan & Miao, 2012; Martin & Lueg, 2013; Park, Cheol & Lee, Thae Min, 2009; Tseng & Hsu, 2010)
2	Consumer's need for cognition	The eWOM recommendation receiver's innate desire to think about and process information (Gupta & Govindarajan, 2000; Gupta & Harris, 2010)		(Gupta & Harris, 2010; Lin et al., 2011)	
3	Consumer's involvement with the eWOM	Relevance of eWOM recommendation to the eWOM recommendation receiver (Cheung et al., 2012)	(Benny et al., 2009; Cheung et al., 2012; Lee et al., 2008; Park & Lee, 2008; Park et al., 2007; Racherla et al., 2012)		(Cheung et al., 2009; Doh & Hwang, 2009; Fan & Miao, 2012; Gruen et al., 2006; Martin & Lueg, 2013; Sotiriadis & van Zyl, 2013; Zhang & Watts, 2008)
4	Consumer's demographics	Demographical attributes of eWOM recommendation receiver (e.g., Gender).			(Awad & Ragowsky, 2008)
<p><i>Note:</i> <i>Empty Cell = Gap in the eWOM literature</i></p>					

Table A.2 – Factors Pertaining to the Source of the eWOM Recommendations

#	Factors	Definition	Stage of Adoption Process in the eWOM Studies		
			Pre-usage	Initial Use	Repeated Use
1	Source knowledge of the service	Source’s prior knowledge or pertinent experience to the eWOM recommendation (Cheung et al., 2008; Senecal & Nantel, 2004)	(Chakravarty et al., 2010; Racherla & Friske, 2012; Vermeulen & Seegers, 2009)		(Adjei et al., 2010; Cheung et al., 2008; Ho & Chien, 2010; Ku et al., 2012; Martin & Lueg, 2013; Nakayama et al., 2010; Sotiriadis & van Zyl, 2013; Tseng & Hsu, 2010; Yang & Mai, 2010; Yeh & Choi, 2011)
2	Source credibility	Consumers’ perception about the trustworthiness of the source of eWOM recommendation (Cheung et al., 2008; Senecal & Nantel, 2004)	(Chu & Kamal, 2008; Hsu et al., 2013; Huang et al., 2012; Huang et al., 2011; Park, C. & Lee, T.M., 2009; Racherla & Friske, 2012; Senecal & Nantel, 2004)		(Cheung et al., 2008; Cheung et al., 2007; Cheung et al., 2009; Choi & Scott, 2013; Chu & Kim, 2011; Ho & Chien, 2010; Ku et al., 2012; Luo et al., 2013; Martin & Lueg, 2013; Rabjohn et al., 2008; Sen & Lerman, 2007; Sotiriadis & van Zyl, 2013; Zhang & Watts, 2008)
3	Source type	Type of the source of eWOM recommendation (e.g., provider versus consumer) (Benlian et al., 2010, 2012).	(Huang & Chen, 2006; Lee et al., 2011; Senecal & Nantel, 2004)	(Benlian et al., 2010, 2012)	(Adjei et al., 2010; Goh et al., 2013)

Table A.2 – Factors Pertaining to the Source of the eWOM Recommendations

#	Factors	Definition	Stage of Adoption Process in the eWOM Studies		
			Pre-usage	Initial Use	Repeated Use
4	Source identity	Source disclosure of his/her identity (Racherla & Friske, 2012).	(Racherla & Friske, 2012; Xie et al., 2011)		
5	Source tie Strength	The level of intensity of a social relationship between the source of eWOM recommendation and the consumer (Cheung & Thadani, 2012; Steffes & Burgee, 2009)	(Pan & Chiou, 2011; Steffes & Burgee, 2009)		(Chu & Kim, 2011)
6	Source homophily	The degree of similarity between the source of eWOM recommendation and the consumer (Cheung & Thadani, 2012; Steffes & Burgee, 2009)	(Racherla et al., 2012; Steffes & Burgee, 2009)		(Chu & Kim, 2011; Fan & Miao, 2012)
<p><i>Note:</i> <i>Empty Cell = Gap in the eWOM literature</i></p>					

Table A.3 – Factors Pertaining to the Focal Services in the eWOM Recommendations					
#	Factors	Definition	Stage of Adoption Process in the eWOM Studies		
			Pre-usage	Initial Use	Repeated Use
1	Service type	Search versus Experience attributes of the focal service in the eWOM recommendation (Mudambi & Schuff, 2010).	(Hao et al., 2010; Pan & Chiou, 2011; Park, C. & Lee, T.M., 2009; Racherla & Friske, 2012; Senecal & Nantel, 2004; Xia & Bechwati, 2008)	(Benlian et al., 2012)	(Mudambi & Schuff, 2010; Nakayama et al., 2010; Yang & Mai, 2010)
2	Service popularity	The reputation or ranking of the focal service in the eWOM recommendation (Duan et al., 2009).	(Amblee & Bui, 2007; Duan et al., 2009; Park & Lee, 2008)		(Yang & Mai, 2010)
<p><i>Note:</i> <i>Empty Cell = Gap in the eWOM literature</i></p>					

Table A.4 – Factors Pertaining to the eWOM Recommendations Platform					
#	Factors	Definition	Stage of Adoption Process in the eWOM Studies		
			Pre-usage	Initial Use	Repeated Use
1	The eWOM recommendation Platform Type	Type of online platform for sharing the eWOM recommendations (i.e., provider-generated website versus independent website) (Lee & Youn, 2009).	(Lee & Youn, 2009)		
<p><i>Note:</i> <i>Empty Cell = Gap in the eWOM literature</i></p>					

Table A.5 – Factors Pertaining to the eWOM Recommendations

#	Factors	Definition	Stage of Adoption Process in the eWOM Studies		
			Pre-usage	Initial Use	Repeated Use
1	eWOM recommendation valence	The valence of an eWOM recommendation shows that whether it is positive or negative (Cheung & Thadani, 2012).	(Benny et al., 2009; Bock et al., 2012; Chakravarty et al., 2010; Chu & Kamal, 2008; Duan et al., 2009; Floh et al., 2013; Hao et al., 2010; Huang et al., 2012; Huang & Chen, 2006; Huang et al., 2011; Huang & Yang, 2011; Jones et al., 2009; Kuan & Bock, 2007; Lee & Lee, 2009; Lee et al., 2009; Lee & Youn, 2009; Lee & Song, 2010; Li & Wang, 2013; Mauri & Minazzi, 2013; Pan & Chiou, 2011; Park, Cheol & Lee, Thae Min, 2009; Qiu et al., 2012; Racherla & Friske, 2012; Sparks & Browning, 2011; Vermeulen & Seegers, 2009; Wu & Gaytan, 2013; Wu et al., 2013; Xia & Bechwati, 2008; Yao et al., 2009; Yin et al., 2011; Yin et al., 2014)	(Aggarwal et al., 2012; Bock et al., 2012; Cheung & Lee, 2008; Sia et al., 2009; Zhang et al., 2010)	(Aggarwal et al., 2012; Chatterjee, 2001; Chen et al., 2012; Cheung et al., 2009; Doh & Hwang, 2009; Jiang et al., 2010; Kim, 2008; Lee et al., 2006; Pavlou & Dimoka, 2006; Sen & Lerman, 2007; Sridhar & Srinivasan, 2012; Wu et al., 2011; Yang & Mai, 2010; Ye et al., 2011)
2	eWOM recommendation quality	The eWOM recommendation quality refers to the persuasive strength of arguments	(Huang et al., 2011; Lee et al., 2008; Park & Lee, 2008; Park et al., 2007; Racherla et al., 2012; Senecal & Nantel,	(Lin et al., 2011)	(Adjei et al., 2010; Cheung et al., 2008; Cheung et al., 2007; Cheung et al., 2009;

Table A.5 – Factors Pertaining to the eWOM Recommendations

#	Factors	Definition	Stage of Adoption Process in the eWOM Studies		
			Pre-usage	Initial Use	Repeated Use
		embedded in an eWOM: <ul style="list-style-type: none"> – Timeliness concerns whether the eWOM recommendation is current, timely, and up-to-date – Accuracy concerns reliability of the eWOM recommendation. It also represents a user's perception that the eWOM recommendation is correct – Comprehensiveness of eWOM recommendation refers to their completeness – Explaining language refers to the extent of justifications in eWOM recommendation in support of its claims (Cheung & Thadani, 2012). 	2004; Zhao & Xie, 2011)		Choi & Scott, 2013; Luo et al., 2013; Martin & Lueg, 2013; Moore, 2012; Mudambi & Schuff, 2010; Rabjohn et al., 2008; Wu et al., 2011; Zhang & Watts, 2008)
3	eWOM	Number of eWOM	(Amblee & Bui, 2007;	(Aggarwal et al.,	(Aggarwal et al., 2012;

Table A.5 – Factors Pertaining to the eWOM Recommendations

#	Factors	Definition	Stage of Adoption Process in the eWOM Studies		
			Pre-usage	Initial Use	Repeated Use
	recommendation volume	recommendations (Cheung & Thadani, 2012).	Cheung et al., 2012; Lee et al., 2008; Li & Wang, 2013; Park & Kim, 2008; Park & Lee, 2008; Park et al., 2007; Wu & Gaytan, 2013; Wu et al., 2013)	2012; Gupta & Harris, 2010; Li et al., 2011)	Gauri et al., 2008; Ku et al., 2012; Lo & Lin, 2013)
4	eWOM recommendation presence	Whether there is any eWOM recommendation available about the service (Gupta & Harris, 2010).	(Benny et al., 2009; Chakravarty et al., 2010; Senecal & Nantel, 2004; Vermeulen & Seegers, 2009; Zhao & Xie, 2011)	(Cheung & Lee, 2008; Gupta & Harris, 2010; Kumar & Benbasat, 2006)	(Chen et al., 2012)
5	eWOM recommendation sidedness	A one-sided eWOM recommendation presents either the positive or negative arguments, but not both. A two-sided eWOM recommendation includes both positive and negative arguments (Cheung & Thadani, 2012).	(Benny et al., 2009; Floh et al., 2013; Lee & Lee, 2009; Lee et al., 2009; Racherla & Friske, 2012; Wu et al., 2013; Yao et al., 2009)		(Cheung et al., 2009; Mudambi & Schuff, 2010; Ye et al., 2011)
6	eWOM recommendation consistency	The eWOM recommendation congruence to others' opinions about the focal service (Cheung & Thadani, 2012; Cheung et al., 2009)	(Lee & Song, 2010; Qiu et al., 2012; Yao et al., 2009)		(Cheung et al., 2007; Cheung et al., 2009; Lo & Lin, 2013)

Table A.5 – Factors Pertaining to the eWOM Recommendations

#	Factors	Definition	Stage of Adoption Process in the eWOM Studies		
			Pre-usage	Initial Use	Repeated Use
7	eWOM recommendation emotions	Extent and/or type of emotional expressions used in the eWOM recommendation (Yin et al., 2014).	(Lee & Song, 2010; Yin et al., 2011; Yin et al., 2014)	(Kim & Gupta, 2012)	
8	eWOM recommendation rating	The overall ratings given by other consumers for an eWOM recommendation (Lee & Lee, 2009).			(Cheung et al., 2007; Cheung et al., 2009)
9	eWOM recommendation orientation	Attribute-centric versus simple eWOM recommendations (Cheung & Thadani, 2012; Park & Kim, 2008; Park & Lee, 2008).	(Benny et al., 2009; Park & Kim, 2008; Park & Lee, 2008; Xia & Bechwati, 2008)		

Note:
Empty Cell = Gap in the eWOM literature

Table A.6 – Factors Pertaining to the Response					
#	Factors	Definition	Stage of Adoption Process in the eWOM Studies		
			Pre-usage	Initial Use	Repeated Use
1	Perceived usefulness of the service	Consumers' perceived usefulness of the service (Cheung & Thadani, 2012).	(Lee & Lee, 2009; Li & Wang, 2013)	(Kumar & Benbasat, 2006)	(Gruen et al., 2006; Lee et al., 2006; Lo & Lin, 2013; Tseng & Hsu, 2010)
2	Perceived ease of use of the service	Consumers' perceived ease of use of the service (Lee et al., 2006).			(Lee et al., 2006; Tseng & Hsu, 2010)
3	Trust in the online provider	Consumers' trust in online vendor (Awad & Ragowsky, 2008; Liu, 2006).	(Bock et al., 2012; Kuan & Bock, 2007; Lee et al., 2011; Sparks & Browning, 2011)	(Bock et al., 2012; Cheung & Lee, 2008; Lim et al., 2006; Sia et al., 2009)	(Awad & Ragowsky, 2008; Kim, 2008; Liao & Zhong, 2010; Pavlou & Dimoka, 2006; Tsao & Hsieh, 2012)
4	Perceived enjoyment of adopting the service	An individual's affective reactions to using service (Benlian et al., 2010, 2012).	(Lee & Lee, 2009; Xia & Bechwati, 2008)	(Benlian et al., 2010, 2012)	(Gruen et al., 2006; Lee et al., 2006; Moore, 2012; Tseng & Hsu, 2010)
5	Attitude towards the service	Consumers' overall evaluations of the service (Cheung & Thadani, 2012).	(Chakravarty et al., 2010; Chu & Kamal, 2008; Hsu et al., 2013; Huang et al., 2012; Jones et al., 2009; Lee & Lee, 2009; Lee et al., 2008; Lee et al., 2009; Lee & Youn, 2009; Li & Wang, 2013; Pan & Chiou, 2011; Vermeulen & Seegers, 2009)		(Casalo et al., 2011; Doh & Hwang, 2009; Lee et al., 2006; Liao & Zhong, 2010; Martin & Lueg, 2013)

Table A.6 – Factors Pertaining to the Response

#	Factors	Definition	Stage of Adoption Process in the eWOM Studies		
			Pre-usage	Initial Use	Repeated Use
			6	Intention to purchase the service	Consumers' willingness to pay for or purchase the service (Cheung & Thadani, 2012).
7	Actual use/purchase of the service	Consumer's actual use/purchase of the service (Ye et al., 2011).	(Cheung et al., 2012; Duan et al., 2009; Senecal & Nantel, 2004)		(Goh et al., 2013; Ye et al., 2011)
8	Willingness to recommend the service	Consumers' willingness to recommend the service in the future (Gauri et al., 2008; Lee & Youn, 2009).			(Tsao & Hsieh, 2012; Yeh & Choi, 2011)

Table A.6 – Factors Pertaining to the Response					
#	Factors	Definition	Stage of Adoption Process in the eWOM Studies		
			Pre-usage	Initial Use	Repeated Use
9	Adoption of the eWOM recommendation	A process in which consumers purposefully engage in using eWOM recommendation (Cheung et al., 2008; Cheung & Thadani, 2012).	(Hao et al., 2010; Huang et al., 2012; Huang et al., 2011; Huang & Yang, 2011; Lee & Song, 2010; Park, C. & Lee, T.M., 2009; Senecal & Nantel, 2004; Steffes & Burgee, 2009; Vermeulen & Seegers, 2009; Xia & Bechwati, 2008; Zhao & Xie, 2011)	(Aggarwal et al., 2012; Gupta & Harris, 2010; Kim & Gupta, 2012; Zhang et al., 2010)	(Aggarwal et al., 2012; Casalo et al., 2011; Chatterjee, 2001; Cheung et al., 2008; Cheung et al., 2007; Chu & Kim, 2011; Fan & Miao, 2012; Hennig-Thurau et al., 2003; Ho & Chien, 2010; Liu & Zhang, 2010; Luo et al., 2013; Martin & Lueg, 2013; Nakayama et al., 2010; Park, Cheol & Lee, Thae Min, 2009; Poyry et al., 2012; Rabjohn et al., 2008; Sotiriadis & van Zyl, 2013; Tseng & Hsu, 2010; Wang et al., 2013; Yang & Mai, 2010; Yeh & Choi, 2011; Zhang & Watts, 2008)
10	Intention to adopt the eWOM recommendation	Consumers' willingness to adopt the eWOM recommendation (Benlian et al., 2012).		(Benlian et al., 2010, 2012)	
11	Perceived helpfulness of the eWOM	Consumers' perception of the helpfulness of eWOM	(Hsu et al., 2013; Huang & Chen, 2006; Park & Kim, 2008; Park & Lee, 2008; Qiu et	(Benlian et al., 2010, 2012; Kim, 2003; Kim	(Awad & Ragowsky, 2008; Casalo et al., 2011; Cheung et al.,

Table A.6 – Factors Pertaining to the Response					
#	Factors	Definition	Stage of Adoption Process in the eWOM Studies		
			Pre-usage	Initial Use	Repeated Use
	recommendation	recommendation (Cheung & Thadani, 2012; Sen & Lerman, 2007).	al., 2012; Racherla & Friske, 2012; Xia & Bechwati, 2008; Yin et al., 2011; Yin et al., 2014)	& Gupta, 2012; Lim et al., 2006)	2008; Cheung et al., 2009; Gruen et al., 2006; Liu & Zhang, 2010; Mudambi & Schuff, 2010; Park, Cheol & Lee, Thae Min, 2009; Poyry et al., 2012; Rabjohn et al., 2008; Sen & Lerman, 2007; Tseng & Hsu, 2010; Wang et al., 2013; Wu et al., 2011)
12	Perceived credibility of the eWOM recommendation	The perceived degree to which an eWOM recommendation provides accurate and trustworthy information (Cheung et al., 2009; Park, C. & Lee, T.M., 2009).	(Hsu et al., 2013; Huang & Chen, 2006; Lee et al., 2011; Pan & Chiou, 2011; Qiu et al., 2012; Racherla et al., 2012; Xie et al., 2011)	(Benlian et al., 2010, 2012)	(Casalo et al., 2011; Chatterjee, 2001; Cheung et al., 2007; Cheung et al., 2009; Doh & Hwang, 2009; Fan & Miao, 2012; Ho & Chien, 2010; Liao & Zhong, 2010; Liu & Zhang, 2010; Luo et al., 2013; Tseng & Hsu, 2010; Wang et al., 2013; Yang & Mai, 2010; Yeh & Choi, 2011)
13	Extent of elaboration on the eWOM recommendation	Consumers' extent of cognitive elaborations about the eWOM recommendation (Cheung & Thadani,	(Chu & Kamal, 2008)		

Table A.6 – Factors Pertaining to the Response					
#	Factors	Definition	Stage of Adoption Process in the eWOM Studies		
			Pre-usage	Initial Use	Repeated Use
		2012; Chu & Kamal, 2008).			
14	Confirmation of prior beliefs	Consumers' confirmation of prior beliefs about the focal services (Cheung & Thadani, 2012; Cheung et al., 2009).			(Cheung et al., 2007; Cheung et al., 2009; Zhang & Watts, 2008)
<p><i>Note:</i> <i>Empty Cell = Gap in the eWOM literature</i></p>					

APPENDIX B– Procedures for Controlling the Potential Confounding Effects of the Controlled Factors

Table B.1 – Procedures for Controlling the Possible Confounding Effects of the Controlled Factors			
Controlled Dimension	Controlled Factor	Definition of the Controlled Factor	The Procedure for Controlling the Possible Confounding Effect
Factors Pertaining to Response	Perceived Helpfulness of the eWOM Recommendation	Consumers’ perception of the helpfulness of eWOM recommendation.	We controlled the potential confounding effect of perceived helpfulness of the eWOM recommendation by measuring it as a controlled variable. A one-way ANOVA test revealed no significant difference between the eight segments of our subjects in terms of the perceived helpfulness of the eWOM recommendations ($F=1.753, p > 0.1$).
	Perceived Credibility of the eWOM Recommendation	The perceived degree to which an eWOM recommendation provides accurate and truthful information.	We controlled the potential confounding effect of the perceived credibility of the eWOM by informing students that the source of eWOM recommendations is an unknown <i>independent expert</i> in the context of the focal website.
	Confirmation	Consumers’ confirmation of prior beliefs about the focal website.	We controlled the potential confounding effect of students’ confirmation of prior beliefs by assuring that students had no past experience with, thus prior belief about, the focal website.
Factors Pertaining to eWOM Recommendations	eWOM Valence	The valence of an eWOM recommendation shows that whether it is positive or negative.	We controlled the potential confounding effect of variations in the eWOM Valence by providing only <i>positive</i> eWOM recommendations to all subjects.

Table B.1 – Procedures for Controlling the Possible Confounding Effects of the Controlled Factors

Controlled Dimension	Controlled Factor	Definition of the Controlled Factor	The Procedure for Controlling the Possible Confounding Effect
	eWOM Quality	eWOM quality refers to the persuasive strength of arguments embedded in an eWOM recommendation.	We controlled the potential confounding effect of eWOM quality by providing equal level of justifications in all of the eWOM recommendations. The pilot study confirmed that the eWOM recommendations were perceived as we intended and the level of justifications was consistent across all of the eWOM recommendations.
	eWOM Volume	Number of eWOM recommendations	We controlled the potential confounding effect of eWOM volume by providing equal number of eWOM recommendations – four eWOM recommendations – to all subjects.
	eWOM Sidedness	A one-sided eWOM recommendation presents either the positive or negative arguments, but not both. A two-sided eWOM includes both positive and negative arguments.	We controlled the potential confounding effect of eWOM sidedness by providing only one-sided eWOM recommendations – all positive – to all subjects.
	eWOM Orientation	Attribute-centric versus simple eWOM recommendations	We controlled the potential confounding effect of eWOM orientation by providing attribute-centric eWOM recommendations to all subjects, which are considered as more informative than simple eWOM recommendations (Park & Lee, 2008).

Table B.1 – Procedures for Controlling the Possible Confounding Effects of the Controlled Factors			
Controlled Dimension	Controlled Factor	Definition of the Controlled Factor	The Procedure for Controlling the Possible Confounding Effect
	eWOM Consistency	eWOM congruence to others' opinions about the focal website	We controlled the potential confounding effect of eWOM consistency by providing completely consistent eWOM recommendations to all subjects.
	eWOM emotions	Extent of emotional expressions used in the eWOM recommendation	We controlled the potential confounding effect of eWOM emotions by avoiding any expression of extreme anxiety, anger, and extreme excitement in our eWOM recommendations.
	eWOM rating	The overall rating given by other consumers on an eWOM recommendation	We controlled the potential confounding effect of eWOM ratings by other consumers by not providing any consumers' ratings for the eWOM recommendations to our subjects.
Factors Pertaining to the Source of the eWOM Recommendation	Source Credibility	Consumers' perception about the trustworthiness of source of eWOM	We controlled the potential confounding effect of the source credibility by telling students that the source of eWOM recommendations is an unknown independent <i>expert</i> in the context of the focal website.
	Source Type	Type of the source of eWOM (e.g., provider versus consumer)	We controlled the potential confounding effect of the source type by telling students that the source of eWOM recommendations is an unknown <i>independent expert</i> in the context of the focal website.
	Source knowledge	Source's prior knowledge of or experience with the eWOM topic or context	We controlled the potential confounding effect of the source knowledge by telling students that the source of eWOM recommendations is an unknown independent <i>expert</i> in the context of the focal website.

Table B.1 – Procedures for Controlling the Possible Confounding Effects of the Controlled Factors			
Controlled Dimension	Controlled Factor	Definition of the Controlled Factor	The Procedure for Controlling the Possible Confounding Effect
	Source Homophily	The degree of similarity between the source of eWOM and the consumer	We controlled the potential confounding effect of the source homophily by telling students that the source of eWOM recommendations is an <i>unknown</i> independent expert in the context of the focal website.
	Source Identity	Disclosure of source identity	We controlled the potential confounding effect of the source identity by telling students that the source of eWOM recommendations is an <i>unknown</i> independent expert in the context of the focal website.
	Social Tie Strength	The level of intensity of a social relationship between source and the consumer	We controlled the potential confounding effect of the social tie strength by telling students that the source of eWOM recommendations is an <i>unknown</i> independent expert in the context of the focal website.

Table B.1 – Procedures for Controlling the Possible Confounding Effects of the Controlled Factors			
Controlled Dimension	Controlled Factor	Definition of the Controlled Factor	The Procedure for Controlling the Possible Confounding Effect
Factors Pertaining to the Receiver of the eWOM Recommendation	Receiver's Involvement	Relevance of eWOM recommendation topic to the eWOM receiver.	<p>We controlled the effect of consumers' involvement in the healthcare context by asking students to assess the healthcare website based on its content on one specific topic – stress management, which is relevant to students' life (Archer & Carroll, 2003; Whitman, 1984). We, then, measured the importance of stress management for the students. The high mean score of importance of stress management variable for our subjects confirmed the relevance of stress management to our subjects (4.02/5.00). Furthermore, a one-way ANOVA test revealed no significant difference between our subjects in terms of the relevance of stress management to them ($F=1.767, p > 0.1$).</p> <p>Furthermore, we controlled the effect of consumers' involvement in the music context by asking students to assess the music website based on its content about their favourite music genre, music track, and singer.</p>
	Receiver's Demographics	Demographical attributes of eWOM receiver (i.e., age and gender).	We controlled the potential confounding effect of subjects' age and gender by measuring them as controlled variables. Two one-way ANOVA tests revealed no significant difference between the eight segments of our subjects in terms of their age ($F=0.960, p > 0.1$) and gender ($F=0.217, p > 0.1$).

Table B.1 – Procedures for Controlling the Possible Confounding Effects of the Controlled Factors			
Controlled Dimension	Controlled Factor	Definition of the Controlled Factor	The Procedure for Controlling the Possible Confounding Effect
Factors Pertaining to the focal service in the eWOM Recommendation	Service Type	Search versus Experience Service	We controlled the confounding effect of service type by focusing on two domains of <i>experience</i> services in our experiment: music (Bhattacharjee et al., 2006; Bhattacharjee & Sanford, 2006; Nelson, 1970) and healthcare (Dranove, 2000, 2009; Franke et al., 2004; Sloan & Kasper, 2008).
	Service Popularity	Service reputation or ranking	We controlled the potential confounding effect of popularity of the websites by selecting eight music websites and eight healthcare websites that were ranked as most popular by Alexa.com (see Table C.2 in Appendix C for the list of websites). The rankings for the selected websites were similar in their pertinent domains. One-way ANOVA tests on our factors revealed no significant difference between the eight healthcare websites ($F_{\text{Perceived usefulness (healthcare)}} = 0.913, p > 0.1$; $F_{\text{Perceived ease of use (healthcare)}} = 0.778, p > 0.1$; $F_{\text{Trust (healthcare)}} = 0.814, p > 0.1$) and the eight music websites ($F_{\text{Perceived usefulness (music)}} = 0.855, p > 0.1$; $F_{\text{Perceived ease of use (music)}} = 1.085, p > 0.1$; $F_{\text{Trust (music)}} = 0.562, p > 0.1$).
Factors Pertaining to the eWOM Recommendation Platform	eWOM Recommendation Platform Type	Type of eWOM recommendation platform (i.e., provider-generated website versus independent website)	We controlled the potential confounding effect of the online platform type by telling subjects that the eWOM recommendations are from an <i>independent</i> expert.

APPENDIX C– List of Selected Healthcare and Music Websites for our Experiment

We used Alexa.com, which rates the popularity of websites based on their user traffic, to select the top eight ranked websites in healthcare and music contexts (see Table C1). This enabled us to control the confounding effects of the variations in the quality of the websites on subjects’ pertinent assessments of the websites. This is consistent with the literature that has found the *website quality* as an important driver for its popularity, measured in terms of its user traffic (Alpar et al., 2001). Furthermore, we used a set of criteria (depicted in Table C2) to make sure that the functionalities of the websites in each category were similar.

Table C.1 – List of Healthcare and Music Websites Selected for Our Experiment	
Healthcare Websites	Music Websites
Bettermedicine.com	AOL Music (Music.aol.com)
Everydayhealth.com	eMusic.com
Mayoclinic.com	Grooveshark.com
Medicinenet.com	Jango.com
Realage.com	Last.fm
Rxlist.com	MySpace Music (Myspace.com/music)
Webmd.com	Rhapsody.com
Yahoo! Health (Health.yahoo.com)	Yahoo! Music (Music.yahoo.com)

Table C.2 – Criteria Used in Selecting our Healthcare and Music Websites

Criteria Used for Selecting Healthcare Websites	Criteria Used for Selecting Music Websites
<p>1– The website has information for a directory of healthcare problems and diseases, in particular stress management</p> <p>2– The website provides reviews on medicines and supplements</p> <p>3– The website has information about eating/diet/fitness</p> <p>4– The website has symptom check functionality</p> <p>5– The website has no subscription fee</p> <p>6– Using the website does not require a mandatory registration</p> <p>7– The website should be accessible in Canada</p>	<p>1– The website has a search functionality for singers, music albums, and song tracks</p> <p>2– The website has music streaming functionality</p> <p>3– The website has online purchase functionality for purchasing song tracks and albums</p> <p>4– The website has the functionality of users’ forums and reviews about the singers, music albums, and song tracks</p> <p>5– The website has no subscription fee</p> <p>6– Using the website does not require a mandatory registration</p> <p>7– The website should be accessible in Canada¹</p>

¹ Some websites are not accessible in Canada, such as Spotify.com.

APPENDIX D– Examples of the eWOM Recommendations about the focal Healthcare and Music Websites

Table D.1 – The Fictitious eWOM Recommendations developed for a Healthcare Website, Webmd.com as an example	
The Intended Attribute of Webmd.com, which is positively discussed in the eWOM Recommendation	The Fictitious eWOM Recommendation
Consumer’s Perceived Usefulness of Webmd.com	As doctors become busier and more expensive, many consumers are taking more responsibility for educating themselves that narrow the possibilities so they can choose health care providers more effectively, explore lifestyle behaviours that keep them fit and healthy, and research medications and therapeutic options. The medical community supports Webmd.com in order to promote patient/parent/lay caregiver education. The language is purposefully non- technical so anyone can understand.
Consumer’s Perceived Ease of Use of Webmd.com	Webmd.com's interactive tools are an easy way to figure out more about your health - and they're organized from A to Z by category for easy access. These little quizzes and fun interactive tools make it easy to evaluate various health concerns, from weight to environment and everything in between.
Consumer’s Trust in Webmd.com	Webmd.com provides valuable health information, tools for managing your health, and support to those who seek information. Stellar reputations and a vast array of topics with information about symptoms, causes, cures, medications, and prevention options available in general medical practice. It is run by a team of physicians with medical degrees.
Structural Assurances of Webmd.com	Webmd.com has been awarded TRUSTe's Privacy Seal signifying that its privacy policy and practices have been reviewed by TRUSTe for compliance with TRUSTe's program requirements, including transparency, accountability, and choice regarding the collection and use of your personal information.

Table D.2 – The Fictitious eWOM Recommendations developed for a Music Website, Grooveshark.com as an example

The Intended Attribute of Grooveshark.com, which is positively discussed in the eWOM Recommendation	The Fictitious eWOM Recommendation
Consumer’s Perceived Usefulness of Grooveshark.com	Grooveshark.com is an online music streaming service. They offer a free service which does have ads, but they are not obtrusive and they do not in anyway get in the way of the listening experience. You can create an account for free, which then allows you to create playlists for your favourite music and share those playlists with anyone else. Say goodbye to the days of struggling to find new music to listen to.
Consumer’s Perceived Ease of Use of Grooveshark.com	Grooveshark.com does a good job with navigation from their website. Everything that a user needs from music streaming experience is just a few clicks away. The most significant item, the search feature, is the first thing users see when logging in to their website. In addition to the good affordances, interacting with it requires minimal user input.
Consumer’s Trust in Grooveshark.com	Grooveshark.com will let you play any song by any artist whenever you want. No waiting for a recommendation engine to randomly pump out your favourites, it’s all on-demand. Plus, if you want to start a song over, you can! That’s something that’s always bothered me with Pandora. If you want to find a particular type of music just Search for it (e.g. “rock music”) and then Click the Playlists tab.
Structural Assurances of Grooveshark.com	Grooveshark.com takes reasonable steps to protect information from loss, misuse, and unauthorized access, disclosure, alteration, and destruction. Grooveshark.com has in place appropriate physical, electronic, and managerial procedures to safeguard and secure the information from loss, misuse, unauthorized access or disclosure, alteration, or destruction. When consumers enter sensitive information (such as a credit card number) on order forms, Grooveshark.com encrypt the transmission of that information by using secure socket layer technology (SSL).

APPENDIX E– The Validated Measurement Instruments adapted from the Extant Literature

Table E.1 – Adapted Instruments for Measuring Factors at Pre-usage Stage, for the case of Webmd.com as an example							
References	Factor	Adapted Measurement Instruments	5-Point Likert Scale Anchors				
Wood and Swait (2002)	Need for Cognition	I would rather do something that requires little thought than something that is sure to challenge my thinking abilities (<i>reversed</i>)	Strongly Disagree	Disagree	Neither Disagree/ Agree	Agree	Strongly Agree
		I try to anticipate and avoid situations where there is a likely chance I'll have to think in depth about something (<i>reversed</i>)	Strongly Disagree	Disagree	Neither Disagree/ Agree	Agree	Strongly Agree
		I only think as hard as I have to (<i>reversed</i>)	Strongly Disagree	Disagree	Neither Disagree/ Agree	Agree	Strongly Agree
		The idea of relying on thought to get my way to the top does not appeal to me (<i>reversed</i>)	Strongly Disagree	Disagree	Neither Disagree/ Agree	Agree	Strongly Agree
		The notion of thinking abstractly is not appealing to me (<i>reversed</i>)	Strongly Disagree	Disagree	Neither Disagree/ Agree	Agree	Strongly Agree
Wood and Swait (2002)	Need for Change	When I see a new or different brand on the shelf, I often pick it up just to see what it is like	Strongly Disagree	Disagree	Neither Disagree/ Agree	Agree	Strongly Agree
		I like introducing new brands and products to my friends	Strongly Disagree	Disagree	Neither Disagree/ Agree	Agree	Strongly Agree
		I enjoy taking chances in buying unfamiliar brands just to get some variety in my purchases	Strongly Disagree	Disagree	Neither Disagree/ Agree	Agree	Strongly Agree
		I often read the information on the	Strongly	Disagree	Neither	Agree	Strongly

Table E.1 – Adapted Instruments for Measuring Factors at Pre-usage Stage, for the case of Webmd.com as an example							
References	Factor	Adapted Measurement Instruments	5-Point Likert Scale Anchors				
		packages of products just out of curiosity	Disagree		Disagree/ Agree		Agree
		I get bored with buying the same brands even if they are good	Strongly Disagree	Disagree	Neither Disagree/ Agree	Agree	Strongly Agree
		I shop around a lot for my clothes just to find out more about the latest styles.	Strongly Disagree	Disagree	Neither Disagree/ Agree	Agree	Strongly Agree
Pavlou and Fygenson (2006)	Consumer's Perceived Usefulness of Webmd.com	Webmd.com would be useful for getting valuable information about stress management	Strongly Disagree	Disagree	Neither Disagree/ Agree	Agree	Strongly Agree
		For me, getting valuable information about stress management from a website is important.	Strongly Disagree	Disagree	Neither Disagree/ Agree	Agree	Strongly Agree
		Webmd.com would enhance my effectiveness in getting useful information about stress management.	Strongly Disagree	Disagree	Neither Disagree/ Agree	Agree	Strongly Agree
		For me, getting useful information about stress management from a website is important.	Strongly Disagree	Disagree	Neither Disagree/ Agree	Agree	Strongly Agree
Pavlou and Fygenson (2006)	Consumer's Perceived Ease of Use of Webmd.com	Getting information about stress management from Webmd.com would be easy.	Strongly Disagree	Disagree	Neither Disagree/ Agree	Agree	Strongly Agree
		For me, getting stress management information easily from a website is important.	Strongly Disagree	Disagree	Neither Disagree/ Agree	Agree	Strongly Agree
		Learning how to get information about stress management from Webmd.com would be easy.	Strongly Disagree	Disagree	Neither Disagree/ Agree	Agree	Strongly Agree

Table E.1 – Adapted Instruments for Measuring Factors at Pre-usage Stage, for the case of Webmd.com as an example							
References	Factor	Adapted Measurement Instruments	5-Point Likert Scale Anchors				
		For me, learning how to get stress management information easily from a website is important.	Strongly Disagree	Disagree	Neither Disagree/ Agree	Agree	Strongly Agree
Pavlou and Fygenson (2006)	Consumer's Trust in Webmd.com	Webmd.com would be competent in providing objective information about stress management.	Strongly Disagree	Disagree	Neither Disagree/ Agree	Agree	Strongly Agree
		For me, getting objective stress management information from a website is important.	Strongly Disagree	Disagree	Neither Disagree/ Agree	Agree	Strongly Agree
		Webmd.com would be honest in providing accurate information about stress management.	Strongly Disagree	Disagree	Neither Disagree/ Agree	Agree	Strongly Agree
		For me, getting accurate stress management information from a website is important.	Strongly Disagree	Disagree	Neither Disagree/ Agree	Agree	Strongly Agree
Sussman and Siegal (2003)	Consumer's Involvement with the Stress Management (<i>Control Variable</i>)	Stress management is an important issue for me.	Strongly Disagree	Disagree	Neither Disagree/ Agree	Agree	Strongly Agree
		I have been affected by stress, lately.	Strongly Disagree	Disagree	Neither Disagree/ Agree	Agree	Strongly Agree
		Stress management has been on my mind, lately.	Strongly Disagree	Disagree	Neither Disagree/ Agree	Agree	Strongly Agree
Yin et al. (2011); Yin et al. (2014)	Consumer's Perceived Helpfulness of eWOM Recommendation	I have found the eWOM Recommendations Helpful	Strongly Disagree	Disagree	Neither Disagree/ Agree	Agree	Strongly Agree
		I have found the eWOM Recommendations Useful	Strongly Disagree	Disagree	Neither Disagree/ Agree	Agree	Strongly Agree

Table E.1 – Adapted Instruments for Measuring Factors at Pre-usage Stage, for the case of Webmd.com as an example						
References	Factor	Adapted Measurement Instruments	5-Point Likert Scale Anchors			
	<i>(Control Variable)</i>	I have found the eWOM Recommendations Informative	Strongly Disagree	Disagree	Neither Disagree/ Agree	Strongly Agree

Table E.2 – Adapted Instruments for Measuring Factors at Initial Use and Repeated Use Stages, for the case of Webmd.com as an example							
References	Factor	Adapted Measurement Instruments	5-Point Likert Scale Anchors				
Pavlou and Fygenson (2006)	Consumer's Perceived Usefulness of Webmd.com	Webmd.com is useful for getting valuable information about stress management	Strongly Disagree	Disagree	Neither Disagree/ Agree	Agree	Strongly Agree
		For me, getting valuable information about stress management from a website is important.	Strongly Disagree	Disagree	Neither Disagree/ Agree	Agree	Strongly Agree
		Webmd.com enhances my effectiveness in getting useful information about stress management.	Strongly Disagree	Disagree	Neither Disagree/ Agree	Agree	Strongly Agree
		For me, getting useful information about stress management from a website is important.	Strongly Disagree	Disagree	Neither Disagree/ Agree	Agree	Strongly Agree
Pavlou and Fygenson (2006)	Consumer's Perceived Ease of Use of Webmd.com	Getting information about stress management from Webmd.com is easy	Strongly Disagree	Disagree	Neither Disagree/ Agree	Agree	Strongly Agree
		For me, getting stress management information easily from a website is important	Strongly Disagree	Disagree	Neither Disagree/ Agree	Agree	Strongly Agree
		Learning how to get information about stress management from Webmd.com is easy	Strongly Disagree	Disagree	Neither Disagree/ Agree	Agree	Strongly Agree
		For me, learning how to get stress management information easily from a website is important.	Strongly Disagree	Disagree	Neither Disagree/ Agree	Agree	Strongly Agree
Pavlou and Fygenson (2006)	Consumer's Trust in Webmd.com	Webmd.com is competent in providing objective information about stress management	Strongly Disagree	Disagree	Neither Disagree/ Agree	Agree	Strongly Agree
		For me, getting objective stress management information from a website is important	Strongly Disagree	Disagree	Neither Disagree/ Agree	Agree	Strongly Agree

Table E.2 – Adapted Instruments for Measuring Factors at Initial Use and Repeated Use Stages, for the case of Webmd.com as an example							
References	Factor	Adapted Measurement Instruments	5-Point Likert Scale Anchors				
		Webmd.com is honest in providing accurate information about stress management	Strongly Disagree	Disagree	Neither Disagree/ Agree	Agree	Strongly Agree
		For me, getting accurate stress management information from a website is important	Strongly Disagree	Disagree	Neither Disagree/ Agree	Agree	Strongly Agree

APPENDIX F– Online Consent Form for Experiment, approved by McMaster Research Ethics Board (MREB)

Table F.1 – Online Consent Form for Our Experiment

By clicking “*Next* ” button, I’m indicating that I have read the information presented below about the current study being conducted by Mr. Hamed Qahri Saremi and Dr. Ali Reza Montazemi of McMaster University, Canada, and I AGREE to participate in this study.

I understand that if I agree to participate in this study, I may withdraw from the study at any time by clicking the “*Exit and Clear Survey*” button.

<p>Student Investigator: Mr. Hamed Qahri Saremi Doctoral Candidate DeGroote School of Business McMaster University Hamilton, Ontario, Canada (905) 525-9140 Ext 26938 Email: qahrish@mcmaster.ca</p>	<p>Faculty Supervisor: Dr. Ali Reza Montazemi Professor, Information Systems DeGroote School of Business McMaster University Hamilton, Ontario, Canada (905) 525-9140 Ext 27434 Email: montazem@mcmaster.ca</p>
---	---

Purpose of the Study: This research is part of the doctoral dissertation of Mr. Hamed Qahri Saremi. Consumers’ decisions in regard to adoption of experience services are fraught with uncertainty. This is because the benefits or consequences provided by the services are unobservable for the consumers prior to using it. Such uncertainty bears consumers perceived risk that the consequences of adopting the services may not meet their expectations. In such a situation, consumers search for the sources providing information that can reduce the uncertainty and risk associated with their adoption decision. Information from prior consumers (i.e., informational social influence) enables later consumers to build on their experiences and/or actual behaviours to overcome the uncertainty and risk in their judgments.

The objective of the study is assessing contingency factors affecting the effectiveness of eWOM recommendations on consumers’ perceptions of adopting experience services

Procedures involved in the Research: For part 1 that will be completed in the lab, we will provide you with information about a website and then will ask you to complete a questionnaire to assess your perception about its utility. This would take 15 minutes. Next, we will ask you to visit the website and assess it for ten minutes. After assessing the Website, you will be asked to complete a second

questionnaire that will take about 15 minutes to complete. Upon completion of this task, the part 1 is complete and you can leave the lab. For part 2 of the study, you will assess the same website on your own and submit a report of your findings as the course assignment 1. The details for completing part 2 will be released on January 20th through Avenue.

Potential Risks: Your participation in this experiment has no risk to you and your course grade at all.

Potential Benefits: You will learn about how questionnaires can be used to assess the perception of the consumers towards using a website. Furthermore, if interested, we will email you the results of this study that will be available in form of Mr. Saremi's PhD Thesis.

Compensation: For part 1, by completing both questionnaires, you automatically receive 2% bonus mark towards your Comm. 2KA3 course. For part 2, your submitted assignment 1 will be assessed out of a 10% maximum grade, as indicated in the course outline.

Confidentiality: The data that we collect from you will be anonymously used for statistical analyses. Your name will not be published anywhere. In fact, we will remove your name and ID from the database by February 28th, 2012.

Participation: Your participation in this study is voluntary. For part 1, you can decide to withdraw any time before completing the two questionnaires for this lab or even after that. In either case, if you decide to withdraw from the study, your data will be deleted from database. Nonetheless, you still receive the 2% bonus mark even if you decide to withdraw your data. If you decided that you wish to end your participation before completing all the required procedures for part 1 in the lab, you can click on "exit" and sit quietly working at the computer workstation on other tasks (such as browsing the Internet or answering emails) till the lab session is over.

You have till February 24th, 2012 to decide to withdraw your data for part 1 and/or part 2. In this case, you can inform Head-TA. Please note that withdrawal means asking that your data not to be used by Mr. Saremi towards his doctoral dissertation research.

This study has been reviewed and received clearance by the McMaster Research Ethics Board. If you have concerns or questions about your rights as a participant or about the way the study is conducted, you may contact:

McMaster Research Ethics Board Secretariat
Telephone: (905) 525-9140 ext. 23142
c/o Office of Research Services
E-mail: ethicsoffice@mcmaster.ca

APPENDIX G– Descriptive Statistics for the Three Stages of the Service Adoption Process (Pre-usage, Initial Use, Repeated Use)

Table G.1 – Descriptive Statistics for our Factors						
Factor	N	Mean	Standard Deviation	Internal Consistency (Cronbach's Alpha)	Normality Measures	
					Skewness	Kurtosis
Need for Cognition	403	3.65	0.676	0.74	-0.388	-0.318
Need for Change	403	3.34	0.589	0.65	-0.667	0.804
Perceived Usefulness (<i>Pre-usage</i>)	403	10.31	5.036	0.88	0.365	-0.422
Perceived Ease of use (<i>Pre-usage</i>)	403	12.04	4.792	0.82	0.146	-0.189
Trust (<i>Pre-usage</i>)	403	10.54	4.648	0.76	0.222	-0.442
Perceived Usefulness (<i>After the Initial Use</i>)	403	11.85	5.113	0.86	0.022	-0.363
Perceived Ease of use (<i>After the Initial Use</i>)	403	14.06	5.368	0.89	-0.095	-0.367
Trust (<i>After the Initial Use</i>)	403	12.81	4.629	0.79	0.056	-0.090
Perceived Usefulness (<i>After the Repeated Use</i>)	403	14.41	5.632	0.93	-0.072	-0.449
Perceived Ease of use (<i>After the Repeated Use</i>)	403	15.54	5.768	0.90	-0.030	-0.568
Trust (<i>After the Repeated Use</i>)	403	15.14	5.248	0.90	-0.048	-0.269
Perceived Helpfulness of the eWOM Recommendations (<i>Control Variable</i>)	285	3.75	0.626	0.70	-0.891	0.945
Importance of Stress Management (<i>Control Variable</i>)	190	4.02	0.230	0.78	-0.861	0.972

APPENDIX H– Factors’ Discriminant Validity Assessment through Items Loadings and Cross-Loadings

To assess the discriminant validity of our five factors, we drew on SmartPLS 2.0 to calculate the loadings between the five factors and the measurement items. As depicted in Table H1, all of the items had larger loadings on their pertinent factors compared to their cross-loadings with the other factors, by the difference magnitude of larger than 0.1. In addition, all five factors loaded higher with their pertinent items than other items. Therefore, our results are aligned with the recommendations in the literature for adequate discriminant validity (Hair et al., 1998; Hair et al., 2010; Meyers et al., 2006; Straub et al., 2004; Urbach & Ahlemann, 2010).

Table H.1 – Items Loadings and Cross-loadings for our Factors

Items	Need for Cognition	Need for Change	Perceived Usefulness	Perceived Ease of use	Trust
<i>Pre-usage Stage:</i>					
NFG1	0.716	-0.062	0.016	0.019	0.055
NFG2	0.759	-0.112	0.031	0.059	0.061
NFG3	0.637	-0.050	0.023	0.002	0.054
NFG4	0.555	0.033	-0.036	0.049	0.008
NFG5	0.760	-0.003	0.014	0.069	0.089
NFC1	-0.082	0.694	0.133	0.128	0.073
NFC2	-0.036	0.678	0.087	0.165	0.015
NFC3	0.020	0.631	0.078	0.069	0.020
NFC4	0.000	0.465	0.037	0.060	-0.024
NFC5	-0.021	0.575	0.129	0.086	0.032
NFC6	-0.057	0.589	0.147	0.093	0.114
PU1	0.017	0.192	0.957	0.607	0.635
PU2	0.026	0.153	0.934	0.557	0.602
PEOU1	0.068	0.163	0.558	0.926	0.503
PEOU2	0.051	0.161	0.580	0.918	0.519
Trust1	0.052	0.048	0.639	0.453	0.824
Trust2	0.096	0.090	0.618	0.531	0.953
<i>Initial Use Stage:</i>					
NFG1	0.605	-0.056	-0.056	0.053	0.001
NFG2	0.599	-0.097	-0.036	0.018	0.013
NFG3	0.728	-0.055	0.009	0.076	0.065
NFG4	0.763	0.027	0.031	0.102	0.044
NFG5	0.690	0.001	0.010	0.055	0.058
NFC1	-0.040	0.579	0.033	0.057	0.056

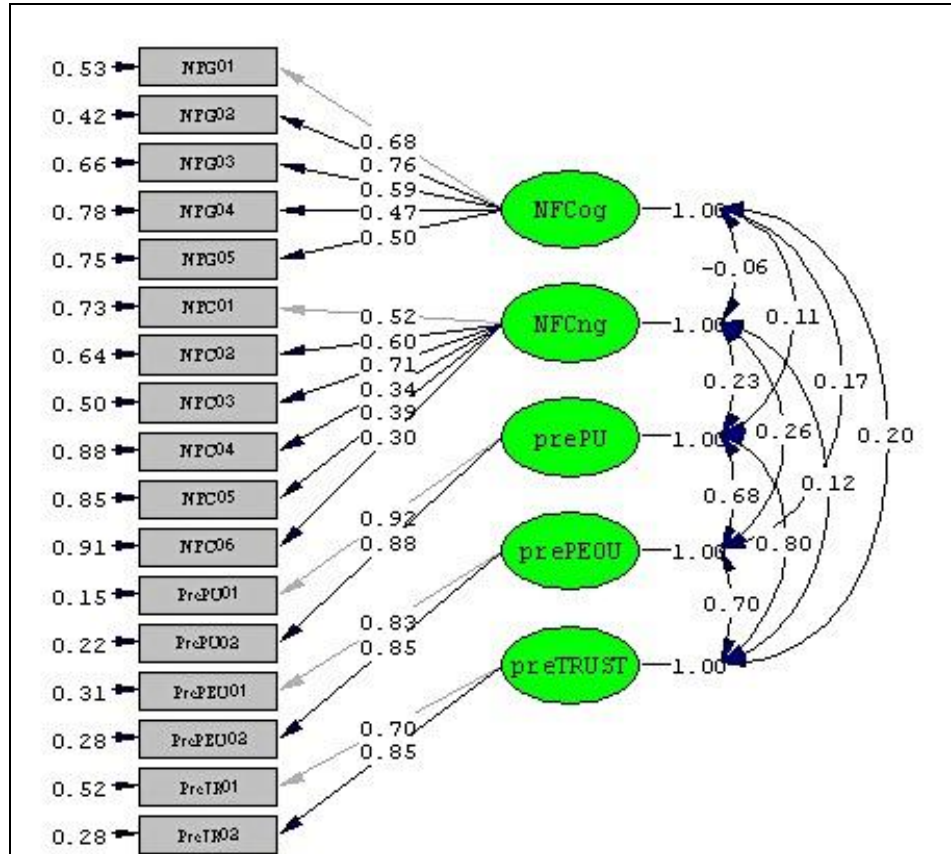
Table H.1 – Items Loadings and Cross-loadings for our Factors

Items	Need for Cognition	Need for Change	Perceived Usefulness	Perceived Ease of use	Trust
NFC2	0.014	0.646	0.065	0.083	0.061
NFC3	0.053	0.603	0.043	0.049	0.030
NFC4	-0.014	0.433	0.024	0.061	0.051
NFC5	-0.061	0.615	0.139	0.010	0.067
NFC6	-0.019	0.653	0.093	0.093	0.107
PU1	0.022	0.088	0.921	0.605	0.641
PU2	0.000	0.141	0.968	0.602	0.665
PEOU1	0.058	0.081	0.616	0.917	0.588
PEOU2	0.123	0.106	0.595	0.970	0.600
Trust1	0.090	0.103	0.644	0.564	0.934
Trust2	0.019	0.106	0.638	0.579	0.879
Repeated Use Stage:					
NFG1	0.744	-0.069	-0.042	-0.040	0.008
NFG2	0.769	-0.116	-0.020	-0.003	0.020
NFG3	0.690	-0.051	-0.004	0.007	-0.012
NFG4	0.873	0.032	0.038	0.103	0.001
NFG5	0.588	-0.003	0.013	0.043	0.061
NFC1	0.023	0.696	0.074	0.110	0.079
NFC2	0.091	0.673	0.083	0.089	0.046
NFC3	0.057	0.609	0.041	0.052	0.024
NFC4	-0.042	0.423	0.012	-0.024	0.049
NFC5	-0.041	0.575	0.048	0.055	0.096
NFC6	0.070	0.610	0.105	0.048	0.112
PU1	0.059	0.121	0.974	0.655	0.644
PU2	0.049	0.104	0.964	0.684	0.628
PEOU1	0.073	0.099	0.673	0.932	0.581
PEOU2	0.147	0.111	0.650	0.972	0.556
Trust1	0.016	0.131	0.655	0.595	0.965
Trust2	0.026	0.098	0.684	0.524	0.938
<i>NOTE:</i> <i>NFG = Need for Cognition; NFC = Need for Change; PU = Perceived Usefulness; PEOU = Perceived Ease of use.</i>					

APPENDIX I– Factors’ Correlations, Square Roots of Average Variance Extracted (AVE), and Variance Inflation Factor (VIF) for Discriminant Validity and Multicollinearity Assessments

Table I.1 – Factors Correlations, Square Roots of AVEs, and VIFs						
	VIF	Need for Cognition	Need for Change	Perceived Usefulness	Perceived Ease of use	Trust
<i>Pre-usage Stage</i>						
Need for Cognition	1.00	0.69				
Need for Change	1.00	-0.04	0.60			
Perceived Usefulness	1.70	0.02	0.17	0.95		
Perceived Ease of use	1.68	0.05	0.16	0.62	0.92	
Trust	1.55	0.07	0.07	0.76	0.55	0.89
<i>Initial Use Stage</i>						
Need for Cognition	1.00	0.59				
Need for Change	1.00	-0.04	0.68			
Perceived Usefulness	1.50	-0.01	0.11	0.95		
Perceived Ease of use	1.29	0.08	0.10	0.64	0.94	
Trust	1.46	0.05	0.11	0.72	0.63	0.91
<i>Repeated Use Stage</i>						
Need for Cognition	1.00	0.59				
Need for Change	1.00	-0.04	0.61			
Perceived Usefulness	1.79	-0.01	0.10	0.97		
Perceived Ease of use	1.32	0.02	0.09	0.70	0.95	
Trust	1.51	0.02	0.11	0.76	0.59	0.95
<p><i>NOTE 1: Variance Inflation Factor (VIF), which quantifies the severity of multicollinearity for a factor, is calculated by $1/(1 - R^2)$. R^2 is the coefficient of determination of the regression equation with the pertinent factor as the dependent variable and the other factors as the independent variables (Meyers et al., 2006).</i></p> <p><i>NOTE 2: In the correlation matrices, bold diagonal values are the square roots of AVEs for the factors and off-diagonal values are the correlation coefficients among the factors.</i></p>						

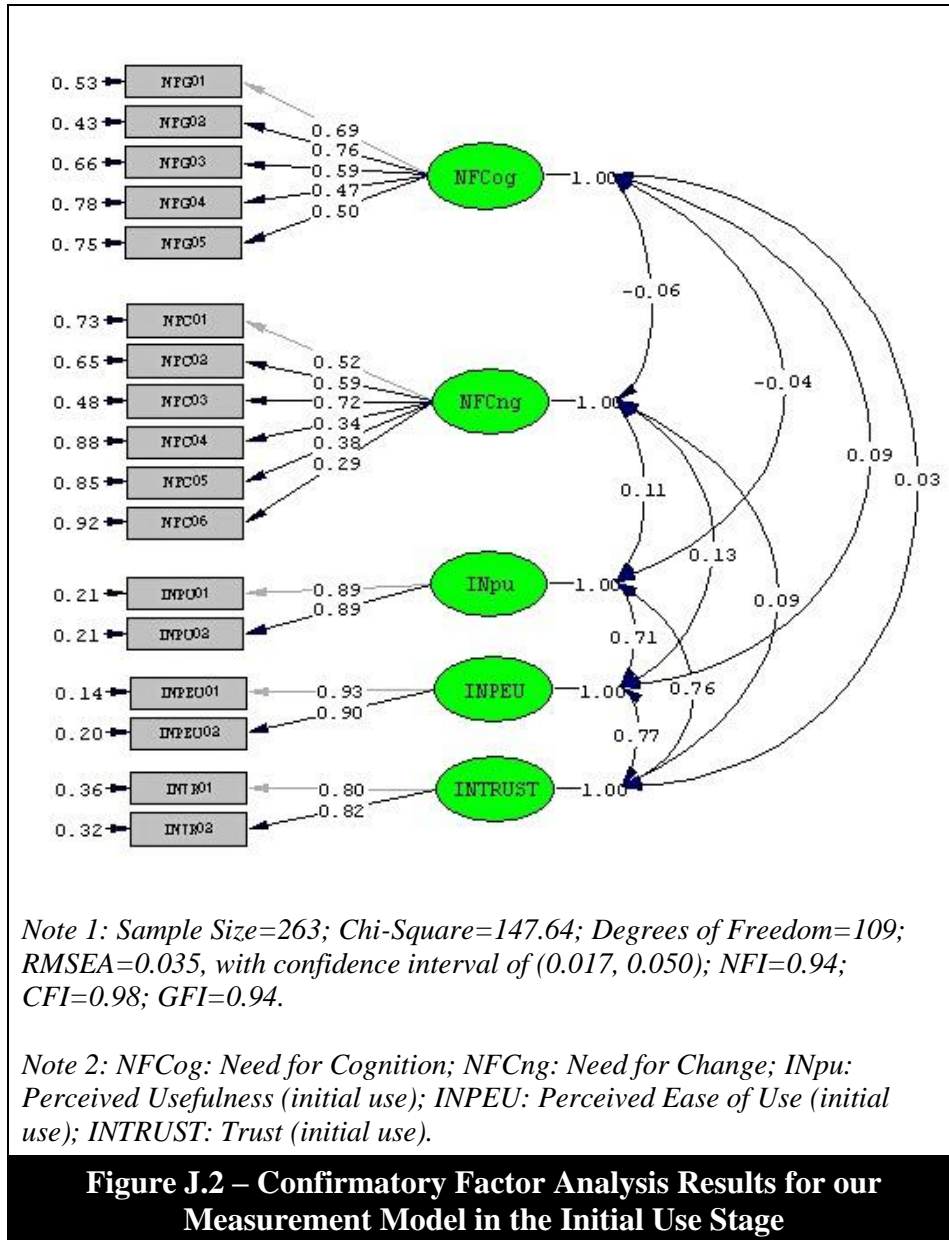
APPENDIX J– Confirmatory Factor Analysis (CFA) Results

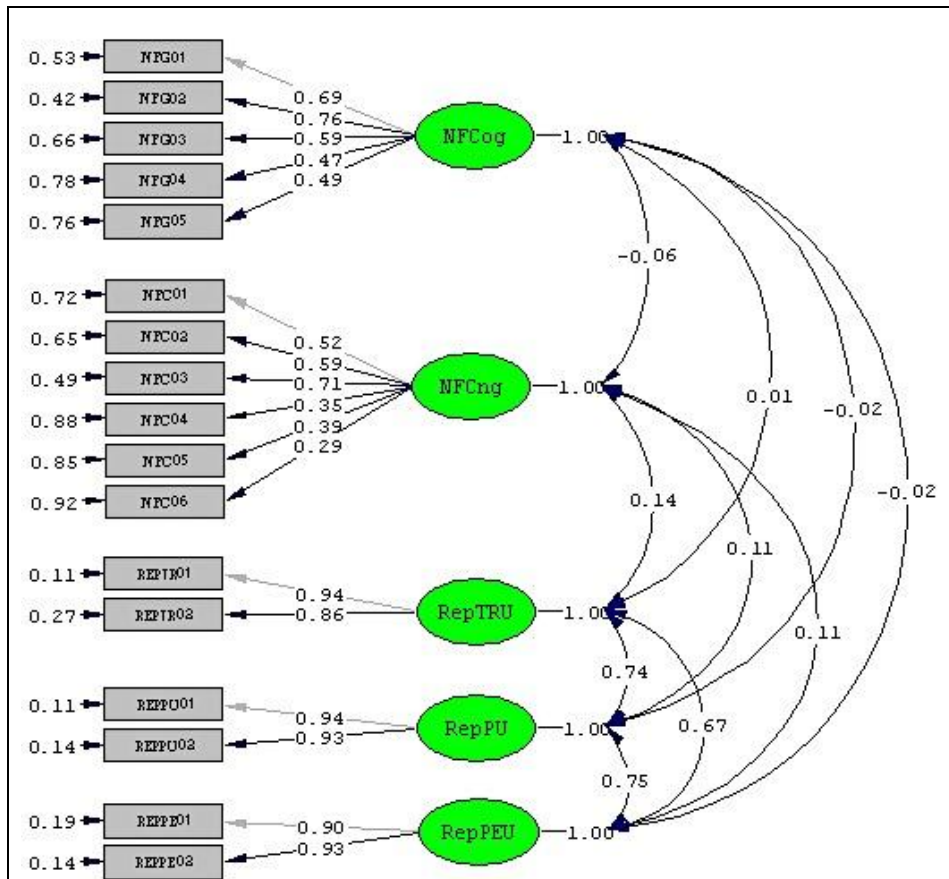


Note 1: Sample Size=263; Chi-Square=167.79; Degrees of Freedom=109; RMSEA=0.042, with confidence interval of (0.027, 0.056); NFI=0.92; CFI=0.97; GFI=0.93.

Note 2: NFCog: Need for Cognition; NFCng: Need for Change; prePU: Perceived Usefulness (pre-usage); prePEOU: Perceived Ease of Use (pre-usage); preTRUST: Trust (pre-usage).

Figure J.1 – Confirmatory Factor Analysis Results for our Measurement Model in the Pre-usage Stage





Note 1: Sample Size=263; Chi-Square=172.71; Degrees of Freedom=109; RMSEA=0.045, with confidence interval of (0.031, 0.059); NFI=0.93; CFI=0.97; GFI=0.93.

Note 2: NFCog: Need for Cognition; NFCng: Need for Change; RepPU: Perceived Usefulness (repeated use); RepPEU: Perceived Ease of Use (repeated use); RepTRU: Trust (repeated use).

Figure J.3 – Confirmatory Factor Analysis Results for our Measurement Model in the Repeated Use Stage

REFERENCES

- Adjei, M. T., Noble, S. M., & Noble, C. H. (2010). The influence of C2C communications in online brand communities on customer purchase behavior. *Journal of the Academy of Marketing Science*, 38(5), 634-653.
- Agarwal, R., & Prasad, J. (1997). The role of innovation characteristics and perceived voluntariness in the acceptance of information technologies. *Decision Sciences*, 28(3), 557-582.
- Agarwal, R., & Prasad, J. (1998). A conceptual and operational definition of personal innovativeness in the domain of information technology. *Information Systems Research*, 9(2), 204-215.
- Aggarwal, R., Gopal, R., Gupta, A., & Singh, H. (2012). Putting Money Where the Mouths Are: The Relation Between Venture Financing and Electronic Word-of-Mouth. *Information Systems Research*, 23(3), 976-992.
- Air, M., Roman, S. A., Yeo, H., Maser, C., Trapasso, T., Kinder, B., & Sosa, J. A. (2007). Outdated and incomplete: a review of thyroid cancer on the World Wide Web. *Thyroid*, 17(3), 259-265.
- Ajzen, I., & Fishbein, M. (1980). *Understanding Attitudes and Predicting Social Behavior*: Prentice-Hall Englewood Cliffs, NJ.
- Akaike, H. (1974). A new look at the statistical model identification. *Automatic Control, IEEE Transactions on*, 19(6), 716-723.
- Alba, J. W., & Hutchinson, J. W. (2000). Knowledge calibration: What consumers know and what they think they know. *Journal of Consumer Research*, 27(2), 123-156.
- Alpar, P., Porembski, M., & Pickerodt, S. (2001). Measuring the efficiency of Web site traffic generation. *International Journal of Electronic Commerce*, 6(1), 53-74.
- Amblee, N., & Bui, T. (2007). *The Impact of Additional Electronic Word-of-Mouth on Sales of Digital Micro-products over Time: A Longitudinal Analysis of Amazon Shorts*. Paper presented at the 40th Annual Hawaii International Conference on System Sciences (HICSS 07), Hawaii, USA.
- Angst, C. M., & Agarwal, R. (2009). Adoption of electronic health records in the presence of privacy concerns: the elaboration likelihood model and individual persuasion. *MIS Quarterly*, 33(2), 339-370.

- Archer, J., & Carroll, C. (2003). Stress and the college student: University of Florida Counseling Center 301 Peabody Hall, Gainesville FL 32611.
- Armstrong, D. J., & Hardgrave, B. C. (2007). Understanding mindshift learning: the transition to object-oriented development. *MIS Quarterly*, 453-474.
- Arnold, D. R., Hoffman, K. D., & McCormick, J. (1989). Service pricing: a differentiation premium approach. *Journal of Services Marketing*, 3(3), 25-33.
- Arnould, E. J. (2008). Service-dominant logic and resource theory. *Journal of the Academy of Marketing Science*, 36(1), 21-24.
- Aronson, E., & Carlsmith, J. M. (1968). Experimentation in Social Psychology. In Lindzey & Aronson (Eds.), *The Handbook of Social Psychology* (2nd ed., Vol. 2). Oxford, England: Addison-Wesley Publishing Company.
- Awad, N. F., & Ragowsky, A. (2008). Establishing trust in electronic commerce through online word of mouth: An examination across genders. *Journal of Management Information Systems*, 24(4), 101-121.
- Bagozzi, R. P. (1993). Assessing construct validity in personality research: Applications to measures of self-esteem. *Journal of Research in Personality*, 27(1), 49-87.
- Bansal, H. S., & Voyer, P. A. (2000). Word-of-mouth processes within a services purchase decision context. *Journal of Service Research*, 3(2), 166-177.
- Baroudi, J. J., & Orlikowski, W. J. (1989). The problem of statistical power in MIS research. *MIS Quarterly*, 13(1), 87-106.
- Bartels, J., & Reinders, M. J. (2011). Consumer innovativeness and its correlates: A propositional inventory for future research. *Journal of Business Research*, 64(6), 601-609.
- Baumeister, R. F. (2002). Yielding to temptation: Self-control failure, impulsive purchasing, and consumer behavior. *Journal of Consumer Research*, 28(4), 670-676.
- Benlian, A., Titah, R., & Hess, T. (2010). *Provider- vs. User-generated Recommendations on e-Commerce Websites - Comparing Cognitive, Affective and Relational Effects*. Paper presented at the Thirty First International Conference on Information Systems, (ICIS 2010), St. Louis, USA.

- Benlian, A., Titah, R., & Hess, T. (2012). Differential Effects of Provider Recommendations and Consumer Reviews in E-Commerce Transactions: An Experimental Study. *Journal of Management Information Systems*, 29(1), 237-272.
- Benny, S., Eicher, B., & Roeleveld, M. (2009). *The Role of Negative eWOM in a High Involvement Decision Context*. (Master's of Science), Lund University.
- Bernof, J., Cooperstein, D. M., Lussanet, M. d., & Madigan, C. J. (2011). Competitive Strategy In The Age of The Customer (pp. 17): Forrester Research, Inc.
- Bettman, J. R., Luce, M. F., & Payne, J. W. (1998). Constructive consumer choice processes. *Journal of Consumer Research*, 25(3), 187-217.
- Bettman, J. R., & Park, C. W. (1980). Effects of prior knowledge and experience and phase of the choice process on consumer decision processes: A protocol analysis. *Journal of Consumer Research*, 7(3), 234-248.
- Bhattacharjee, S., Gopal, R. D., Lertwachara, K., & Marsden, J. R. (2006). Consumer search and retailer strategies in the presence of online music sharing. *Journal of Management Information Systems*, 23(1), 129-159.
- Bhattacharjee, A., & Sanford, C. (2006). Influence processes for information technology acceptance: An elaboration likelihood model. *MIS Quarterly*, 30(4), 805-825.
- Bock, G. W., Lee, J., Kuan, H. H., & Kim, J. H. (2012). The Progression of Online Trust in the Multi-Channel Retailer Context and the Role of Product Uncertainty. *Decision Support Systems*, 53(1), 97-107.
- Boote, D. N., & Beile, P. (2005). Scholars before researchers: On the centrality of the dissertation literature review in research preparation. *Educational researcher*, 34(6), 3-15.
- Box, G. E. (1953). Non-normality and tests on variances. *Biometrika*, 40(3/4), 318-335.
- Bozdogan, H. (1987). Model selection and Akaike's information criterion (AIC): The general theory and its analytical extensions. *Psychometrika*, 52(3), 345-370.

- Bradley, G. L., & Sparks, B. A. (2002). Service locus of control its conceptualization and measurement. *Journal of Service Research*, 4(4), 312-324.
- Brinol, P., Petty, R. E., & Tormala, Z. L. (2004). Self - Validation of Cognitive Responses to Advertisements. *Journal of Consumer Research*, 30(4), 559-573.
- Burton-Jones, A. (2009). Minimizing method bias through programmatic research. *MIS Quarterly*, 33(3), 445-471.
- Cacioppo, J. T., Harkins, S. G., & Petty, R. E. (1981). The nature of attitudes and cognitive responses and their relationships to behavior. In Petty, Ostrom & Brock (Eds.), *Cognitive responses in persuasion* (pp. 31-54). Hillsdale, NJ: Erlbaum.
- Cacioppo, J. T., & Petty, R. E. (1982). The need for cognition. *Journal of Personality and Social Psychology; Journal of Personality and Social Psychology*, 42(1), 116.
- Cacioppo, J. T., Petty, R. E., Feinstein, J. A., & Jarvis, W. B. G. (1996). Dispositional differences in cognitive motivation: The life and times of individuals varying in need for cognition. *Psychological Bulletin*, 119(2), 197-253.
- Cacioppo, J. T., Petty, R. E., Kao, C. F., & Rodriguez, R. (1986). Central and peripheral routes to persuasion: An individual difference perspective. *Journal of personality and social psychology*, 51(5), 1032-1043.
- Calder, B. J., Phillips, L. W., & Tybout, A. M. (1981). Designing research for application. *Journal of Consumer Research*, 197-207.
- Caron, S., Berton, J., & Beydon, L. (2007). Quality of anaesthesia-related information accessed via Internet searches. *British journal of anaesthesia*, 99(2), 195-201.
- Casalo, L. V., Flavian, C., & Guinalà, M. (2011). Understanding the intention to follow the advice obtained in an online travel community. *Computers in Human Behavior*, 27, 622–633.
- Chakravarty, A., Liu, Y., & Mazumdar, T. (2010). The Differential Effects of Online Word-of-Mouth and Critics' Reviews on Pre-release Movie Evaluation. *Journal of Interactive Marketing*, 24(3), 185-197.

- Chan, H., & Cui, S. (2011). The contrasting effects of negative word of mouth in the post-consumption stage. *Journal of Consumer Psychology, 21*(3), 324-337.
- Chang, C. (2004). The interplay of product class knowledge and trial experience in attitude formation. *Journal of Advertising, 33*(1), 83-92.
- Chatterjee, P. (2001). Online reviews: do consumers use them? *Advances in consumer research, 28*, 129-133.
- Chen, S.-C., Yen, D. C., & Hwang, M. I. (2012). Factors influencing the continuance intention to the usage of Web 2.0: An empirical study. *Computers in Human Behavior, 28*(3), 933-941.
- Cheung, C. M., & Lee, M. K. (2008). *Online consumer reviews: Does negative electronic word-of-mouth hurt more?* Paper presented at the Americas Conference on Information Systems (AMCIS), Toronto, Canada.
- Cheung, C. M. K., Lee, M. K. O., & Rabjohn, N. (2008). The impact of electronic word-of-mouth: The adoption of online opinions in online customer communities. *Internet Research, 18*(3), 229-247.
- Cheung, C. M. K., & Thadani, D. R. (2012). The Impact of Electronic Word-of-Mouth Communication: A Literature Analysis and Integrative Model. *Decision Support Systems, 54*(1), 461–470.
- Cheung, C. M. K., Xiao, B., & Liu, I. L. B. (2012). *The Impact of Observational Learning and Electronic Word of Mouth on Consumer Purchase Decisions: The Moderating Role of Consumer Expertise and Consumer Involvement.* Paper presented at the 45th Hawaii International Conference on System Sciences (HICSS), Hawaii, USA.
- Cheung, M. Y., Luo, C., SIA, C. L., & Chen, H. (2007). *How do people evaluate electronic word-of-mouth? Informational and normative based determinants of perceived credibility of online consumer recommendations in China.* Paper presented at the 11th Pacific-Asia Conference on Information Systems (PACIS 07), Auckland, New Zealand.
- Cheung, M. Y., Luo, C., Sia, C. L., & Chen, H. (2009). Credibility of electronic word-of-mouth: Informational and normative determinants of on-line consumer recommendations. *International Journal of Electronic Commerce, 13*(4), 9-38.

- Choi, J. H., & Scott, J. E. (2013). Electronic word of mouth and knowledge sharing on social network sites: a social capital perspective. *Journal of theoretical and applied electronic commerce research*, 8(1), 69-82.
- Chu, S.-C., & Kim, Y. (2011). Determinants of consumer engagement in electronic word-of-mouth (eWOM) in social networking sites. *International Journal of Advertising*, 30(1), 47-75.
- Chu, S. C., & Kamal, S. (2008). The effect of perceived blogger credibility and argument quality on message elaboration and brand attitudes: An exploratory study. *Journal of Interactive Advertising*, 8(2), 26-37.
- Cohen, J. (1988). *Statistical power analysis for the behavioral sciences* (Second ed.). New Jersey: Lawrence Erlbaum.
- Collins, L., & Lanza, S. (2007). *AIC vs. BIC*. The Methodology Center at the College of Health and Human Development at the University Park campus of Penn State. Retrieved from <http://methodology.psu.edu/eresources/ask/sp07>.
- Collins, L. M., & Lanza, S. T. (2010). *Latent class and latent transition analysis: With applications in the social, behavioral, and health sciences* (1st ed.). Hoboken, NJ,: John Wiley & Sons, Inc.
- Coulter, K. S., & Roggeveen, A. (2012). “Like it or not”: Consumer responses to word-of-mouth communication in on-line social networks. *Management Research Review*, 35(9), 878-899.
- Cronbach, L. J. (1951). Coefficient alpha and the internal structure of tests. *Psychometrika*, 16(3), 297-334.
- Culver, M., & Chadwick, A. (2005). Internet information on rheumatoid arthritis: an evaluation. *Musculoskeletal Care*, 3(1), 33-43.
- Curran, J. M., & Meuter, M. L. (2005). Self-service technology adoption: comparing three technologies. *Journal of Services Marketing*, 19(2), 103-113.
- Curran, P. J., West, S. G., & Finch, J. F. (1996). The robustness of test statistics to nonnormality and specification error in confirmatory factor analysis. *Psychological Methods*, 1(1), 16-29.
- D’Zurilla, T. J., & Sheedy, C. F. (1991). Relation between social problem-solving ability and subsequent level of psychological stress in college students. *Journal of personality and social psychology*, 61(5), 841-846.

- Dennis, A. R., & Carte, T. A. (1998). Using geographical information systems for decision making: Extending cognitive fit theory to map-based presentations. *Information Systems Research*, 9(2), 194-203.
- Dimoka, A., Hong, Y., & Pavlou, P. (2012). Product Uncertainty in Online Markets: Theory and Evidence. *MIS Quarterly*, 36(2), 395-426.
- Dimoka, A., & Pavlou, P. A. (2008). *Understanding and mitigating product uncertainty in online auction marketplaces*. Industry Studies Association. Working Papers
- Doh, S. J., & Hwang, J. S. (2009). How consumers evaluate eWOM (electronic word-of-mouth) messages. *CyberPsychology & Behavior*, 12(2), 193-197.
- Dou, W., Lim, K. H., Su, C., Zhou, N., & Cui, N. (2010). Brand Positioning Strategy Using Search Engine Marketing. *MIS Quarterly*, 34(2), 261-279.
- Dranove, D. (2000). Marcus Welby Medicine *The Economic Evaluation of American Health Care* (pp. 7-27). New Jersey, USA: Princeton University Press.
- Dranove, D. (2009). *The Economic Evolution of American Health Care: From Marcus Welby to Managed Care* (1 ed.): Princeton University Press.
- Duan, W., Gu, B., & Whinston, A. B. (2009). Informational cascades and software adoption on the Internet: An empirical investigation. *MIS Quarterly*, 33(1), 23-48.
- Dunn, O. J. (1961). Multiple comparisons among means. *Journal of the American Statistical Association*, 56(293), 52-64.
- Dwyer, C. (2009). *Behavioral Targeting: A Case Study of Consumer Tracking on Levis. com*. Paper presented at the 15th Americas Conference on Information Systems (AMCIS 2009), San Francisco, California.
- eMarketer Inc. (2010). Moms Place Trust in Other Consumers (Vol. 2014). <http://www.emarketer.com/Article/Moms-Place-Trust-Other-Consumers/1007509>.
- eMarketer Inc. (2012). 'Big Data' Can Be Hard to Harness. <http://www.emarketer.com/Article/Big-Data-Hard-Harness/1009064>.
- eMarketer Inc. (2014). Global B2C Ecommerce Sales to Hit \$1.5 Trillion This Year Driven by Growth in Emerging Markets. <http://www.emarketer.com/Article/Global-B2C-Ecommerce-Sales-Hit-15-Trillion-This-Year-Driven-by-Growth-Emerging-Markets/1010575>.

- Enis, B. M., Cox, K. K., & Stafford, J. E. (1972). Students as subjects in consumer behavior experiments. *Journal of Marketing Research*, 72-74.
- Fan, H., Lederman, R., Smith, S., & Chang, S. (2013). *How Online Health Forum Users Assess User-Generated Content: Mixed-Method Research*. Paper presented at the 21st European Conference on Information Systems (ECIS), Utrecht, Netherlands.
- Fan, Y.-W., & Miao, Y.-F. (2012). Effect of electronic word-of-mouth on consumer purchase intention: The perspective of gender differences. *International Journal of Electronic Business Management*, 10(3), 175-181.
- Fang, C.-H., Lin, T. M., Liu, F., & Lin, Y. H. (2011). Product type and word of mouth: a dyadic perspective. *Journal of Research in Interactive Marketing*, 5(2/3), 189-202.
- Faul, F., Erdfelder, E., Lang, A.-G., & Buchner, A. (2007). G* Power 3: A flexible statistical power analysis program for the social, behavioral, and biomedical sciences. *Behavior Research Methods*, 39(2), 175-191.
- Fazel Zarandi, M. H., Khademian, M., & Minaei-Bidgoli, B. (2012). A Fuzzy Expert System Architecture for Intelligent Tutoring Systems: A Cognitive Mapping Approach. *Journal of Intelligent Learning Systems & Applications*, 4, 29-40.
- Fichman, R. G., Kohli, R., & Krishnan, R. (2011). Editorial overview-the role of information systems in healthcare: Current research and future trends. *Information Systems Research*, 22(3), 419-428.
- Fleiss, J. L. (1981). *Statistical methods for rates and proportions* (2nd ed.). New York: Wiley.
- Floh, A., Koller, M., & Zauner, A. (2013). Taking a deeper look at online reviews: The asymmetric effect of valence intensity on shopping behaviour. *Journal of Marketing Management*, 29(5-6), 646-670.
- Fornell, C., & Larcker, D. F. (1981). Evaluating structural equation models with unobservable variables and measurement error. *Journal of Marketing Research*, 39-50.
- Fox, S. (2011). *The Social Life of Health Information* (pp. 1-45). Washington, DC: Pew Research Center's Internet & American Life Project.

- Franke, G. R., Huhmann, B. A., & Mothersbaugh, D. L. (2004). Information content and consumer readership of print ads: a comparison of search and experience products. *Journal of the Academy of Marketing Science*, 32(1), 20-31.
- Fu, F. Q., & Elliott, M. T. (2013). The Moderating Effect of Perceived Product Innovativeness and Product Knowledge on New Product Adoption: An Integrated Model. *The Journal of Marketing Theory and Practice*, 21(3), 257-272.
- Gauri, D. K., Bhatnagar, A., & Rao, R. (2008). Role of word of mouth in online store loyalty. *Communications of the ACM*, 51(3), 89-91.
- Gefen, D., Karahanna, E., & Straub, D. W. (2003). Trust and TAM in online shopping: An integrated model. *MIS Quarterly*, 27(1), 51-90.
- Gefen, D., & Straub, D. (2005). A practical guide to factorial validity using PLS-Graph: Tutorial and annotated example. *Communications of the Association for Information Systems*, 16(1), 91-109.
- Gelb, B., & Johnson, M. (1995). Word-of-mouth communication: causes and consequences. *Journal of Health Care Marketing*, 15(3), 54-58.
- Ghose, A., & Ipeirotis, P. G. (2011). Estimating the helpfulness and economic impact of product reviews: Mining text and reviewer characteristics. *Knowledge and Data Engineering, IEEE Transactions on*, 23(10), 1498-1512.
- Goes, P. B., Lin, M., & Yeung, C.-m. A. (2014). “Popularity Effect” in User-Generated Content: Evidence from Online Product Reviews. *Information Systems Research*, 25(2), 222-238.
- Goh, K.-Y., Heng, C.-S., & Lin, Z. (2013). Social media brand community and consumer behavior: Quantifying the relative impact of user-and marketer-generated content. *Information Systems Research*, 24(1), 88-107.
- Goldfarb, A., & Tucker, C. E. (2011). Online advertising, behavioral targeting, and privacy. *Communications of the ACM*, 54(5), 25-27.
- Gordon, J. B., Barot, L. R., Fahey, A. L., & Matthews, M. S. (2001). The Internet as a source of information on breast augmentation. *Plastic and Reconstructive Surgery*, 107(1), 171-176.
- Gremeaux, V., Coudeyre, E., Givron, P., Herisson, C., Pelissier, J., Poiraudou, S., & Bénéïm, C. (2007). *Qualitative evaluation of the expectations of low*

back pain patients with regard to information gained through semi-directed navigation on the Internet. Paper presented at the Annales de réadaptation et de médecine physique.

- Gruen, T. W., Osmonbekov, T., & Czaplewski, A. J. (2006). eWOM: The impact of customer-to-customer online know-how exchange on customer value and loyalty. *Journal of Business Research*, 59(4), 449-456.
- Guan, Z., & Cutrell, E. (2007). *An eye tracking study of the effect of target rank on web search.* Paper presented at the SIGCHI conference on Human factors in computing systems, San Jose, California, USA.
- Guiltinan, J. P. (1987). The Price Bundling of Services: A Normative Framework. *the journal of marketing*, 51(2), 74-85.
- Gupta, A. K., & Govindarajan, V. (2000). Knowledge flows within multinational corporations. *Strategic Management Journal*, 21(4), 473-496.
- Gupta, P., & Harris, J. (2010). How e-WOM recommendations influence product consideration and quality of choice: A motivation to process information perspective. *Journal of Business Research*, 63(9), 1041-1049.
- Hadjimarcou, J., & Hu, M. Y. (1999). Global product stereotypes and heuristic processing: the impact of ambient task complexity. *Psychology & Marketing*, 16(7), 583-612.
- Hair, J. F., Anderson, R. E., Tatham, R. L., & Black, W. C. (1998). *Multivariate data analysis* (5th ed.). Upper Saddle River, NJ: Prentice Hall.
- Hair, J. F., Black, W. C., Babin, B. J., & Anderson, R. E. (2010). *Multivariate Data Analysis* (7th ed.): Prentice Hall.
- Hanif, F., Read, J. C., Goodacre, J. A., Chaudhry, A., & Gibbs, P. (2009). The role of quality tools in assessing reliability of the internet for health information. *Informatics for Health and Social Care*, 34(4), 231-243.
- Hao, Y. Y., Ye, Q., Li, Y. J., & Cheng, Z. (2010). *How does the valence of online consumer reviews matter in consumer decision making? Differences between search goods and experience goods.* Paper presented at the 43rd Hawaii International Conference on System Sciences (HICSS).
- Hart, C. (1998). *Doing a Literature Review: Releasing the Social Science Research Imagination.* London, U.K.: Sage Publications Ltd.

- Haynes, S. N., Richard, D., & Kubany, E. S. (1995). Content validity in psychological assessment: A functional approach to concepts and methods. *Psychological assessment*, 7(3), 238-247.
- Helson, H. (1948). Adaptation-level as a basis for a quantitative theory of frames of reference. *Psychological review*, 55(6), 297-313.
- Helson, H. (1964). *Adaption-Level Theory: An Experimental and Systematic Approach to Behavior*. New York, USA.: Harper & Row.
- Hennig Thureau, T., Gwinner, K. P., Walsh, G., & Gremler, D. D. (2004). Electronic word of mouth via consumer opinion platforms: What motivates consumers to articulate themselves on the Internet? *Journal of Interactive Marketing*, 18(1), 38-52.
- Hennig-Thureau, T., Walsh, G., & Walsh, G. (2003). Electronic word-of-mouth: motives for and consequences of reading customer articulations on the internet. *International Journal of Electronic Commerce*, 8(2), 51-74.
- Himmelfarb, S. (1975). What do you do when the control group doesn't fit into the factorial design? *Psychological Bulletin*, 82(3), 363-368.
- Hirschman, E. C. (1980). Innovativeness, novelty seeking, and consumer creativity. *Journal of Consumer Research*, 7(3), 283-295.
- Hirschman, E. C. (1984). Experience seeking: a subjectivist perspective of consumption. *Journal of Business Research*, 12(1), 115-136.
- Hirunyawipada, T., & Paswan, A. K. (2006). Consumer innovativeness and perceived risk: implications for high technology product adoption. *Journal of Consumer Marketing*, 23(4), 182-198.
- Ho, H.-Y., & Chien, P.-H. C. (2010). *Influence of message trust in online word-of-mouth on consumer behavior—by the example of food blog*. Paper presented at the International Conference on Electronics and Information Engineering (ICEIE).
- Hong, Y., & Pavlou, P. (2010). *Product Uncertainty in Online Marketplaces in China: An Econometric Model*. Paper presented at the America's Conference on Information Systems, Lima, Peru.
- Hovland, C. I. (1948). Social communication. *Proceedings of the American Philosophical Society*, 92(5), 371-375.

- Hsieh, Y.-C., Chiu, H.-C., & Chiang, M.-Y. (2005). Maintaining a committed online customer: a study across search-experience-credence products. *Journal of Retailing*, 81(1), 75-82.
- Hsu, C.-L., Lin, J. C.-C., & Chiang, H.-S. (2013). The effects of blogger recommendations on customers' online shopping intentions. *Internet Research*, 23(1), 69-88.
- Huang, J.-H., Hsiao, T.-T., & Chen, Y.-F. (2012). The Effects of Electronic Word of Mouth on Product Judgment and Choice: The Moderating Role of the Sense of Virtual Community. *Journal of Applied Social Psychology*, 42(9), 2326-2347.
- Huang, J. H., & Chen, Y. F. (2006). Herding in online product choice. *Psychology and Marketing*, 23(5), 413-428.
- Huang, M., Cai, F., Tsang, A. S. L., & Zhou, N. (2011). Making your online voice loud: the critical role of WOM information. *European Journal of Marketing*, 45(7/8), 1277-1297.
- Huang, P., Lurie, N. H., & Mitra, S. (2009). Searching for experience on the web: an empirical examination of consumer behavior for search and experience goods. *Journal of Marketing*, 73(2), 55-69.
- Huang, Y., & Hutchinson, J. W. (2008). Counting every thought: Implicit measures of cognitive responses to advertising. *Journal of Consumer Research*, 35(1), 98-118.
- Huang, Y. K., & Yang, W. I. (2011). The effects of electronic word-of-mouth messages, psychological endowment and anticipated regret on online bidding behavior. *Expert Systems with Applications*, 38(4), 4215-4221.
- Huberty, C. J., & Morris, J. D. (1989). Multivariate analysis versus multiple univariate analyses. *Psychological Bulletin*, 105(2), 302-308.
- Jahng, J., Jain, H., & Ramamurthy, K. (2000). *Empirical investigation into impact of electronic commerce systems richness on user behavior: The case of a complex product*. Paper presented at the Americas' Conference on Information Systems (AMCIS), Long Beach, California, USA.
- Jahng, J., Jain, H., & Ramamurthy, K. (2007). Effects of interaction richness on consumer attitudes and behavioral intentions in e-commerce: some experimental results. *European Journal of Information Systems*, 16(3), 254-269.

- Jiang, J., Gretzel, U., & Law, R. (2010). Do negative experiences always lead to dissatisfaction?—testing attribution theory in the context of online travel reviews. *Information and communication technologies in tourism, 2010*, 297-308.
- Jiang, Z., & Benbasat, I. (2004). Virtual product experience: Effects of visual and functional control of products on perceived diagnosticity and flow in electronic shopping. *Journal of Management Information Systems, 21*(3), 111-147.
- Jiang, Z. J., & Benbasat, I. (2007). The effects of presentation formats and task complexity on online consumers' product understanding. *MIS Quarterly, 31*(3), 475-475.
- Johnson, J. S., & Sohi, R. S. (2013). The curvilinear and conditional effects of product line breadth on salesperson performance, role stress, and job satisfaction. *Journal of the Academy of Marketing Science, 1-19*.
- Jones, S. A., Aiken, K. D., & Boush, D. M. (2009). Integrating experience, advertising, and electronic word of mouth. *Journal of Internet Commerce, 8*(3-4), 246-267.
- Kamis, A., Koufaris, M., & Stern, T. (2008). Using an attribute-based decision support system for user-customized products online: an experimental investigation. *MIS Quarterly, 159-177*.
- Karahanna, E., Straub, D. W., & Chervany, N. L. (1999). Information technology adoption across time: a cross-sectional comparison of pre-adoption and post-adoption beliefs. *MIS Quarterly, 23*(2), 183-213.
- Karande, K., & Merchant, A. (2012). The Impact of Time and Planning Orientation on an Individual's Recreational Shopper Identity and Shopping Behavior. *The Journal of Marketing Theory and Practice, 20*(1), 59-72.
- Keller, K. L. (1993). Conceptualizing, measuring, and managing customer-based brand equity. *Journal of Marketing, 57*(1), 1-22.
- Keller, K. L., & Staelin, R. (1987). Effects of quality and quantity of information on decision effectiveness. *Journal of Consumer Research, 200-213*.
- Kennedy, G. E., Judd, T. S., Churchward, A., Gray, K., & Krause, K. (2008). First year students' experiences with technology: Are they really digital natives. *Australasian Journal of Educational Technology, 24*(1), 108-122.

- Khan, J. (2011). Validation in marketing experiments revisited. *Journal of Business Research*, 64(7), 687-692.
- Kidd, R. F. (1976). Manipulation checks: advantage or disadvantage? *Representative Research in Social Psychology*.
- Kim, D. (2003). *The Effects of Trust-Assuring Arguments on Consumer Trust in Internet Stores*. Paper presented at the Ninth American Conference on Information Systems (AMCIS 2003), Florida, USA.
- Kim, D. J. (2008). Self-perception-based versus transference-based trust determinants in computer-mediated transactions: A cross-cultural comparison study. *Journal of Management Information Systems*, 24(4), 13-45.
- Kim, J., & Gupta, P. (2012). Emotional expressions in online user reviews: How they influence consumers' product evaluations. *Journal of Business Research*, 65(7), 985-992.
- Kirschner, P. A. (2002). Cognitive load theory: Implications of cognitive load theory on the design of learning. *Learning and instruction*, 12(1), 1-10.
- Kline, P. (2000). *The handbook of psychological testing* (2 ed.). London: Routledge.
- Kline, R. B. (2010). *Principles and practice of structural equation modeling* (3rd ed.). New York: Guilford press.
- Koelsch, S., Gunter, T., Friederici, A. D., & Schroger, E. (2000). Brain indices of music processing: "nonmusicians" are musical. *Journal of Cognitive Neuroscience*, 12(3), 520-541.
- Koelsch, S., Schroger, E., & Gunter, T. C. (2002). Music matters: Preattentive musicality of the human brain. *Psychophysiology*, 39(1), 38-48.
- Kolenikov, S., & Bollen, K. A. (2012). Testing Negative Error Variances Is a Heywood Case a Symptom of Misspecification? *Sociological Methods & Research*, 41(1), 124-167.
- Kollmuss, A., & Agyeman, J. (2002). Mind the gap: why do people act environmentally and what are the barriers to pro-environmental behavior? *Environmental education research*, 8(3), 239-260.
- Komiak, S. Y. X., & Benbasat, I. (2006). The effects of personalization and familiarity on trust and adoption of recommendation agents. *MIS Quarterly*, 30(4), 941-960.

- Ku, Y.-C., Wei, C.-P., & Hsiao, H.-W. (2012). To whom should I listen? Finding reputable reviewers in opinion-sharing communities. *Decision Support Systems*, 53(3), 534-542.
- Kuan, H. H., & Bock, G. W. (2007). Trust transference in brick and click retailers: An investigation of the before-online-visit phase. *Information & Management*, 44(2), 175-187.
- Kumar, N., & Benbasat, I. (2002). Para-social presence and communication capabilities of a web site: a theoretical perspective. *E-service Journal*, 1(3), 5-24.
- Kumar, N., & Benbasat, I. (2006). Research note: the influence of recommendations and consumer reviews on evaluations of websites. *Information Systems Research*, 17(4), 425-439.
- Kuo, Y. F., Wu, C. M., & Deng, W. J. (2009). The relationships among service quality, perceived value, customer satisfaction, and post-purchase intention in mobile value-added services. *Computers in Human Behavior*, 25(4), 887-896.
- Lambert, S. D., & Loisel, C. G. (2007). Health information—seeking behavior. *Qualitative health research*, 17(8), 1006-1019.
- Lanza, S. T., Dziak, J. J., Huang, L., Wagner, A., & Collins, L. M. (2013). PROC LCA & PROC LTA [Software] (Version 1.3.0). University Park: The Methodology Center, Penn State. Retrieved from <http://methodology.psu.edu>
- Lanza, S. T., Tan, X., & Bray, B. C. (2013). Latent class analysis with distal outcomes: A flexible model-based approach. *Structural Equation Modeling: A Multidisciplinary Journal*, 20(1), 1-26.
- Lavine, H., & Snyder, M. (1996). Cognitive processing and the functional matching effect in persuasion: The mediating role of subjective perceptions of message quality. *Journal of Experimental Social Psychology*, 32(6), 580-604.
- Lee, B.-k. (2004). *The effects of product knowledge on product memory and evaluation in competitive versus non-competitive ad context: with the item-specific and relational processing framework*. (Doctor of Philosophy), The University of Texas at Austin.

- Lee, B. K., & Lee, W. N. (2011). The impact of product knowledge on consumer product memory and evaluation in the competitive ad context: The item - specific - relational perspective. *Psychology & Marketing*, 28(4), 360-387.
- Lee, E.-J., & Shin, S. Y. (2014). When do consumers buy online product reviews? Effects of review quality, product type, and reviewer's photo. *Computers in Human Behavior*, 31, 356-366.
- Lee, J., & Lee, J. N. (2009). Understanding the product information inference process in electronic word-of-mouth: An objectivity-subjectivity dichotomy perspective. *Information & Management*, 46(5), 302-311.
- Lee, J., Park, D. H., & Han, I. (2008). The effect of negative online consumer reviews on product attitude: An information processing view. *Electronic Commerce Research and Applications*, 7(3), 341-352.
- Lee, M., Rodgers, S., & Kim, M. (2009). Effects of valence and extremity of eWOM on attitude toward the brand and website. *Journal of Current Issues & Research in Advertising*, 31(2), 1-11.
- Lee, M., & Youn, S. (2009). Electronic word of mouth (eWOM): How eWOM platforms influence consumer product judgement. *International Journal of Advertising*, 28(3), 473-499.
- Lee, M. K. O., Cheung, C. M. K., Sia, C. L., & Lim, K. H. (2006). *How Positive Information Social Influence Affects Consumers? Decision of Internet Shopping?* Paper presented at the 39th Hawaii International Conference on System Sciences, Hawaii, USA.
- Lee, M. K. O., Shi, N., Cheung, C. M. K., Lim, K. H., & Sia, C. L. (2011). Consumer's decision to shop online: the moderating role of positive informational social influence. *Information & Management*, 48(6), 185-191.
- Lee, Y. L., & Song, S. (2010). An empirical investigation of electronic word-of-mouth: Informational motive and corporate response strategy. *Computers in Human Behavior*, 26(5), 1073-1080.
- Lehmann, D. R. (1988). An alternative procedure for assessing convergent and discriminant validity. *Applied psychological measurement*, 12(4), 411-423.
- Li, C., & Wang, X. (2013). The power of eWOM: A re-examination of online student evaluations of their professors. *Computers in Human Behavior*, 29(4), 1350-1357.

- Li, X., Hitt, L. M., & Zhang, Z. J. (2011). Product Reviews and Competition in Markets for Repeat Purchase Products. *Journal of Management Information Systems*, 27(4), 9-42.
- Li, Y.-M., Lee, Y.-L., & Lien, N.-J. (2012). Online social advertising via influential endorsers. *International Journal of Electronic Commerce*, 16(3), 119-154.
- Liao, J., & Zhong, C. (2010). *The influence of electronic word-of-mouth on consumers' quadratic selection: Based on the positive research of banks in mainland China*. Paper presented at the Industrial Engineering and Engineering Management (IEEM), 2010 IEEE International Conference on.
- Lim, K. H., Sia, C. L., Lee, M. K. O., & Benbasat, I. (2006). Do I trust you online, and if so, will I buy? An empirical study of two trust-building strategies. *Journal of Management Information Systems*, 23(2), 233-266.
- Lin, C.-L., Lee, S.-H., & Horng, D.-J. (2011). The effects of online reviews on purchasing intention: The moderating role of need for cognition. *Social Behavior and Personality: an international journal*, 39(1), 71-81.
- Liu, F., Chou, M.-Y., Liu, Y.-L., & Chen, H.-Z. (2013). The Role of Medical Word-of-Mouth on Sport Therapists: A Patient Psychological Perspectives. *Open Journal of Medical Psychology*, 2, 7-10.
- Liu, R. R., & Zhang, W. (2010). Informational influence of online customer feedback: An empirical study. *Journal of Database Marketing & Customer Strategy Management*, 17(2), 120-131.
- Liu, Y. (2006). Word of Mouth for Movies: Its Dynamics and Impact on Box Office Revenue. *Journal of Marketing*, 70(3), 74-89.
- Lo, L. Y.-S., & Lin, S.-W. (2013). *Enhancing Buyers' Perceptions of Product Quality: From Seller and Product Signals to eWOM*. Paper presented at the Nineteenth Americas Conference on Information Systems (AMCIS), Chicago, Illinois.
- Looney, C. A., Akbulut, A. Y., & Poston, R. S. (2008). Understanding the Determinants of Service Channel Preference in the Early Stages of Adoption: A Social Cognitive Perspective on Online Brokerage Services. *Decision Sciences*, 39(4), 821-857.

- Luo, C., Luo, X. R., Schatzberg, L., & Sia, C. L. (2013). Impact of Informational Factors on Online Recommendation Credibility: The Moderating Role of Source Credibility. *Decision Support Systems*, 56, 92-102.
- Mahadevan, B. (2000). Business Models for Internet-Based E-Commerce: AN ANATOMY. *California Management Review*, 42(4), 55-69.
- Maheswaran, D., & Meyers-Levy, J. (1990). The influence of message framing and issue involvement. *Journal of Marketing Research*, 361-367.
- Maheswaran, D., & Sternthal, B. (1990). The effects of knowledge, motivation, and type of message on ad processing and product judgments. *Journal of Consumer Research*, 17(1), 66-73.
- Mangold, W. G., Miller, F., & Brockway, G. R. (1999). Word-of-mouth communication in the service marketplace. *Journal of Services Marketing*, 13(1), 73-89.
- Manning, K. C., Bearden, W. O., & Madden, T. J. (1995). Consumer innovativeness and the adoption process. *Journal of Consumer Psychology*, 329-345.
- Martin, W. C., & Lueg, J. E. (2013). Modeling word-of-mouth usage. *Journal of Business Research*, 66(7), 801-808.
- Marton, C. (2010). How Women with Mental Health Conditions Evaluate the Quality of Information on Mental Health Web Sites: A Qualitative Approach. *Journal of Hospital Librarianship*, 10(3), 235-250.
- Massey, A. P., Khatri, V., & Montoya-Weiss, M. M. (2007). Usability of Online Services: The Role of Technology Readiness and Context. *Decision Sciences*, 38(2), 277-308.
- Mauri, A. G., & Minazzi, R. (2013). Web reviews influence on expectations and purchasing intentions of hotel potential customers. *International Journal of Hospitality Management*, 34, 99-107.
- McGraw, K. O., & Wong, S. (1996). Forming inferences about some intraclass correlation coefficients. *Psychological Methods*, 1(1), 30-46.
- McKinley, J., Cattermole, H., & Oliver, C. W. (1999). The quality of surgical information on the Internet. *Journal of the Royal College of Surgeons of Edinburgh*, 44(4), 265-268.

- McMellon, C. A., & Ducoffe, R. H. (1995). Sorting the mail: a study of categorization and deliberative processing. *Journal of Direct Marketing*, 9(1), 56-66.
- Melas, C. D., Zampetakis, L. A., Dimopoulou, A., & Moustakis, V. S. (In Press). An empirical investigation of Technology Readiness among medical staff based in Greek hospitals. *European Journal of Information Systems*, In Press, 1-19.
- Meric, F., Bernstam, E. V., Mirza, N. Q., Hunt, K. K., Ames, F. C., Ross, M. I., Kuerer, H. M., Pollock, R. E., Musen, M. A., & Singletary, S. E. (2002). Breast cancer on the world wide web: cross sectional survey of quality of information and popularity of websites. *BMJ*, 324(7337), 577-581.
- Meservy, T. O., Jensen, M. L., & Fadel, K. J. (2013). Evaluation of Competing Candidate Solutions in Electronic Networks of Practice. *Information Systems Research*, 25(1), 15-34.
- Meuter, M. L., Bitner, M. J., Ostrom, A. L., & Brown, S. W. (2005). Choosing among alternative service delivery modes: An investigation of customer trial of self-service technologies. *Journal of Marketing*, 69(2), 61-83.
- Meyers, L. S., Gamst, G., & Guarino, A. J. (2006). *Applied multivariate research: Design and interpretation*. Thousand Oaks, CA.: Sage Publications, Inc.
- Midgley, D. F., & Dowling, G. R. (1978). Innovativeness: the concept and its measurement. *Journal of Consumer Research*, 229-242.
- Miller, C. C., & Goel, V. (2013, October 12, 2013). Google to Sell Users' Endorsements. *The New York Times*.
- Misra, R., & McKean, M. (2000). College Students' Academic Stress and its Relation to Their Anxiety, Time Management, and Leisure Satisfaction. *American Journal of Health Studies*, 16(1), 41-51.
- Mitra, K., Reiss, M. C., & Capella, L. M. (1999). An examination of perceived risk, information search and behavioral intentions in search, experience and credence services. *The Journal of Services Marketing*, 13(3), 208-228.
- Molla, A., & Licker, P. S. (2005). Perceived e-readiness factors in e-commerce adoption: an empirical investigation in a developing country. *International Journal of Electronic Commerce*, 10(1), 83-110.
- Montazemi, A. R., & Conrath, D. W. (1986). The use of cognitive mapping for information requirements analysis. *MIS Quarterly*, 10(1), 45-56.

- Montazemi, A. R., Pittaway, J. J., Qahri Saremi, H., & Wei, Y. (2012). Factors of stickiness in transfers of know-how between MNC units. *The Journal of Strategic Information Systems*, 21, 31-57.
- Montazemi, A. R., & Qahri Saremi, H. (2013). *Factors Affecting Internet Banking Pre-Usage Expectation Formation*. Paper presented at the Hawaii International Conference on Systems Sciences (HICSS 2013), Maui, Hawaii.
- Montazemi, A. R., & Qahri Saremi, H. (2014). *The Effectiveness of Electronic Word of Mouth on Consumers' Perceptions of Adopting Products/Services – A Literature Review*. Paper presented at the 10th International Conference on Web Information Systems and Technologies (WEBIST 2014), Barcelona, Spain.
- Moore, S. (2012). Some Things Are Better Left Unsaid: How Word of Mouth Influences the Storyteller. *Journal of Consumer Research*, 38(6), 1140-1154.
- Mudambi, S. M., & Schuff, D. (2010). What makes a helpful online review? A study of customer reviews on Amazon. com. *MIS Quarterly*, 34(1), 185-200.
- Mukherjee, A., & Hoyer, W. D. (2001). The effect of novel attributes on product evaluation. *Journal of Consumer Research*, 28(3), 462-472.
- Nah, F. F.-H., & Benbasat, I. (2004). Knowledge-based support in a group decision making context: An expert-novice comparison. *Journal of the Association for Information Systems*, 5(3), 5.
- Nah, F. F.-H., Hong, W., Chen, L., & Lee, H.-H. (2010). Information search patterns in e-commerce product comparison services. *Journal of Database Management (JDM)*, 21(2), 26-40.
- Nah, F. H., Mao, J., & Benbasat, I. (1999). The effectiveness of expert support technology for decision making: individuals versus small groups. *Journal of information technology*, 14(2), 137-147.
- Nakache, P. (2010). Why E-Commerce Is Flourishing. <http://www.forbes.com/2010/08/02/groupon-facebook-shopstyle-technology-ecommerce-social-media.html>.
- Nakayama, M., Wan, Y., & Sutcliffe, N. (2010). *WOM or eWOM or Something Else: How Does the Web Affect Our Dependence on Shopping Information*

Sources? Paper presented at the Sixteenth Americas Conference on Information Systems (AMCIS 10), Lima, Peru.

Nelson, P. (1970). Information and consumer behavior. *The Journal of Political Economy*, 78(2), 311-329.

Nelson, P. (1974). Advertising as information. *The Journal of Political Economy*, 82(4), 729-754.

Nunnally, J. (1978). *Psychometric Theory*. New York: McGraw-Hill.

O'Brien, R. G., & Kaiser, M. K. (1985). MANOVA method for analyzing repeated measures designs: an extensive primer. *Psychological Bulletin*, 97(2), 316-333.

Pagani, M. (2007). A vicarious innovativeness scale for 3G mobile services: integrating the domain specific innovativeness scale with psychological and rational indicators. *Technology Analysis & Strategic Management*, 19(6), 709-728.

Pan, L.-Y., & Chiou, J.-S. (2011). How much can you trust online information? Cues for perceived trustworthiness of consumer-generated online information. *Journal of Interactive Marketing*, 25(2), 67-74.

Park, B. I., Giroud, A., & Glaister, K. W. (2009). Acquisition of managerial knowledge from foreign parents: evidence from Korean joint ventures. *Asia Pacific Business Review*, 15(4), 527-545.

Park, C., & Lee, T. M. (2009). Antecedents of online reviews' usage and purchase influence: an empirical comparison of US and Korean consumers. *Journal of Interactive Marketing*, 23(4), 332-340.

Park, C., & Lee, T. M. (2009). Information direction, website reputation and eWOM effect: A moderating role of product type. *Journal of Business Research*, 62(1), 61-67.

Park, D. H., & Kim, S. (2008). The effects of consumer knowledge on message processing of electronic word-of-mouth via online consumer reviews. *Electronic Commerce Research and Applications*, 7(4), 399-410.

Park, D. H., & Lee, J. (2008). eWOM overload and its effect on consumer behavioral intention depending on consumer involvement. *Electronic Commerce Research and Applications*, 7(4), 386-398.

- Park, D. H., Lee, J., & Han, I. (2007). The effect of on-line consumer reviews on consumer purchasing intention: The moderating role of involvement. *International Journal of Electronic Commerce*, 11(4), 125-148.
- Park, J. E., Yu, J., & Zhou, J. X. (2010). Consumer innovativeness and shopping styles. *Journal of Consumer Marketing*, 27(5), 437-446.
- Parthasarathy, M., & Bhattacherjee, A. (1998). Understanding post-adoption behavior in the context of online services. *Information Systems Research*, 9, 362-379.
- Pavlou, P. A., & Dimoka, A. (2006). The nature and role of feedback text comments in online marketplaces: Implications for trust building, price premiums, and seller differentiation. *Information Systems Research*, 17(4), 392-414.
- Pavlou, P. A., & Fygenson, M. (2006). Understanding and predicting electronic commerce adoption: An extension of the theory of planned behavior. *MIS Quarterly*, 30(1), 115-143.
- Pedhazur, E. J., & Schmelkin, L. P. (1991). *Measurement, design, and analysis: An integrated approach* (1st ed.). New York: Lawrence Erlbaum Associates.
- Perdue, B. C., & Summers, J. O. (1986). Checking the success of manipulations in marketing experiments. *Journal of Marketing Research*, 23(4), 317-326.
- Petty, R. E., Barden, J., & Wheeler, S. C. (2009). The elaboration likelihood model of persuasion: Health promotions that yield sustained behavioral change. In DiClemente, Crosby & Kegler (Eds.), *Emerging theories in health promotion practice and research* (2nd ed., pp. 71-99). San Francisco, California, USA: Jossey-Bass.
- Petty, R. E., & Cacioppo, J. T. (1986). The elaboration likelihood model of persuasion. *Advances in experimental social psychology*, 19(1), 123-205.
- Petty, R. E., Cacioppo, J. T., & Goldman, R. (1981). Personal involvement as a determinant of argument-based persuasion. *Journal of personality and social psychology*, 41(5), 847-855.
- Petty, R. E., & Wegener, D. T. (1998). Attitude change: Multiple roles for persuasion variables. In Gilbert, Fiske & Lindzey (Eds.), *The handbook of social psychology* (4th ed., Vol. 1, pp. 323–390). New York, NY: New York: McGraw-Hill.

- Petty, R. E., & Wegener, D. T. (1999). The Elaboration Likelihood Model: Current Status and Controversies. In Chaiken & Trope (Eds.), *Dual-process theories in social psychology*. New York, USA: The Guilford Press.
- Petty, R. E., Wheeler, S. C., & Bizer, G. Y. (2000). Attitude functions and persuasion: An elaboration likelihood approach to matched versus mismatched messages. In Maio & Olson (Eds.), *Why we evaluate: Functions of attitudes* (pp. 133-162). Mahwah, N.J., USA: Erlbaum.
- Petty, R. E., Wheeler, S. C., & Tormala, Z. L. (2003). Persuasion and attitude change. In Millon & Lerner (Eds.), *Comprehensive handbook of psychology* (2nd ed.). New York: John Wiley & Sons.
- Podsakoff, P. M., MacKenzie, S. B., Lee, J.-Y., & Podsakoff, N. P. (2003). Common method biases in behavioral research: a critical review of the literature and recommended remedies. *Journal of Applied Psychology*, 88(5), 879-903.
- Podsakoff, P. M., & Organ, D. W. (1986). Self-reports in organizational research: Problems and prospects. *Journal of management*, 12(4), 531-544.
- Poyry, E., Parvinen, P., Salo, J., & Blakaj, H. (2012). *Hedonic and Utilitarian Search for Electronic Word-of-Mouth*. Paper presented at the 45th Hawaii International Conference on System Sciences, Hawaii, USA.
- Qi, J., Liu, L., Tan, Y., Fu, X., Zhao, M., & Zhao, A. (2013). *Which Factors Determine User's First and Repeat Online Music Listening Respectively? Music Itself, User Itself, or Online Feedback*. Paper presented at the Thirty Fourth International Conference on Information Systems (ICIS), Milan, Italy.
- Qiu, L., Pang, J., & Lim, K. H. (2012). Effects of conflicting aggregated rating on eWOM review credibility and diagnosticity: The moderating role of review valence. *Decision Support Systems*, 54, 631-643.
- Rabjohn, N., Cheung, C. M., & Lee, M. K. (2008). *Examining the perceived credibility of online opinions: information adoption in the online environment*. Paper presented at the 41st Hawaii International Conference on System Sciences, Hawaii, USA.
- Racherla, P., & Friske, W. (2012). Perceived 'Usefulness' of Online Consumer Reviews: An Exploratory Investigation across Three Services Categories. *Electronic Commerce Research and Applications*, 11(6), 548–559.

- Racherla, P., Mandviwalla, M., & Connolly, D. J. (2012). Factors affecting consumers' trust in online product reviews. *Journal of Consumer Behaviour, 11*(2), 94-104.
- Ranganath, K. A., Spellman, B. A., & Joy-Gaba, J. A. (2010). Cognitive "Category-Based Induction" Research and Social "Persuasion" Research Are Each About What Makes Arguments Believable A Tale of Two Literatures. *Perspectives on Psychological Science, 5*(2), 115-122.
- Rigdon, E. E. (1997, June 11, 1997). Not Positive Definite Matrices--Causes and Cures. June 25, 2014, from <http://www2.gsu.edu/~mkteer/npdmatri.html>
- Rivard, S., & Lapointe, L. (2012). Information technology implementers' responses to user resistance: nature and effects. *MIS Quarterly, 36*(3), 897-920.
- Rogers, E. M. (2003). *Diffusion of Innovations* (Fifth ed.). New York: The Free Press.
- Rosen, K. T., & Howard, A. L. (2000). E-retail: Gold rush or fool's gold? *California Management Review, 42*(3), 72-100.
- Ross, S. E., Niebling, B. C., & Heckert, T. M. (1999). Sources of stress among college students. *College Student Journal, 32*(2), 312-317.
- Rumelhart, D. E. (1978). Schemata: The Building Blocks of Cognition. In Rand, Bertram & William (Eds.), *Theoretical Issues in Reading Comprehension* (pp. 33-58). Hillsdale, NJ: Lawrence Erlbaum Associates.
- Sawicka, A. (2008). Dynamics of cognitive load theory: A model-based approach. *Computers in Human Behavior, 24*(3), 1041-1066.
- Schlosser, A. E. (2003). Experiencing products in the virtual world: the role of goal and imagery in influencing attitudes versus purchase intentions. *Journal of Consumer Research, 30*(2), 184-198.
- Schwarz, G. (1978). Estimating the dimension of a model. *The annals of statistics, 6*(2), 461-464.
- Sen, S., & Lerman, D. (2007). Why are you telling me this? An examination into negative consumer reviews on the Web. *Journal of Interactive Marketing, 21*(4), 76-94.
- Senecal, S., & Nantel, J. (2004). The influence of online product recommendations on consumers' online choices. *Journal of Retailing, 80*(2), 159-169.

- Sheng, H., Nah, F. F.-H., & Siau, K. (2008). An experimental study on ubiquitous commerce adoption: Impact of personalization and privacy concerns. *Journal of the Association for Information Systems*, 9(6), 344-376.
- Shrout, P. E., & Fleiss, J. L. (1979). Intraclass correlations: uses in assessing rater reliability. *Psychological Bulletin*, 86(2), 420-428.
- Sia, C. L., Lim, K. H., Leung, K., Lee, M. K. O., Huang, W. W., & Benbasat, I. (2009). Web strategies to promote internet shopping: is cultural-customization needed. *MIS Quarterly*, 33(3), 491-512.
- Sloan, F. A., & Kasper, H. (2008). *Incentives and Choice in Health Care* (1 ed.): The MIT Press.
- Sotiriadis, M. D., & van Zyl, C. (2013). Electronic word-of-mouth and online reviews in tourism services: the use of twitter by tourists. *Electronic Commerce Research*, 1-22.
- Sparks, B. A., & Browning, V. (2011). The impact of online reviews on hotel booking intentions and perception of trust. *Tourism Management*, 32(6), 1310-1323.
- Sparks, J. R., & Siemens, J. C. (2014). Judgment Difficulty and the Moral Intensity of Unethical Acts: A Cognitive Response Analysis of Dual Process Ethical Judgment Formation. *Ethics & Behavior*, 24(2), 151-163.
- Speier, C., & Morris, M. G. (2003). The influence of query interface design on decision-making performance. *MIS Quarterly*, 27(3), 397-423.
- Sridhar, S., & Srinivasan, R. (2012). Social Influence Effects in Online Product Ratings. *Journal of Marketing*, 76, 70-88.
- Srivastava, K., & Sharma, N. K. (2012). Consumer attitude towards brand-extension incongruity: The moderating role of need for cognition and need for change. *Journal of Marketing Management*, 28(5-6), 652-675.
- Steenkamp, J. B. E. M., & Baumgartner, H. (1992). The role of optimum stimulation level in exploratory consumer behavior. *Journal of Consumer Research*, 434-448.
- Steffes, E. M., & Burgee, L. E. (2009). Social ties and online word of mouth. *Internet Research*, 19(1), 42-59.
- Straub, D., Boudreau, M.-C., & Gefen, D. (2004). Validation guidelines for IS positivist research. *Communications of the Association for Information Systems*, 13(24), 380-427.

- Straub, D. W. (2009). Creating blue oceans of thought via highly citable articles. *Management Information Systems Quarterly*, 33(4), iii-vii.
- Suh, K.-S., & Lee, Y. E. (2005). The effects of virtual reality on consumer learning: an empirical investigation. *MIS Quarterly*, 29(4), 673-697.
- Sujan, M. (1985). Consumer knowledge: Effects on evaluation strategies mediating consumer judgments. *Journal of Consumer Research*, 31-46.
- Sun, T., Youn, S., Wu, G., & Kuntaraporn, M. (2006). Online Word - of - Mouth (or Mouse): An Exploration of Its Antecedents and Consequences. *Journal of Computer - Mediated Communication*, 11(4), 1104-1127.
- Surprenant, C. F., & Solomon, M. R. (1987). Predictability and personalization in the service encounter. *the journal of marketing*, 51(April), 86-96.
- Sussman, S. W., & Siegal, W. S. (2003). Informational influence in organizations: An integrated approach to knowledge adoption. *Information Systems Research*, 14(1), 47-65.
- Sweller, J. (1988). Cognitive load during problem solving: Effects on learning. *Cognitive science*, 12(2), 257-285.
- Sweller, J. (1994). Cognitive load theory, learning difficulty, and instructional design. *Learning and instruction*, 4(4), 295-312.
- Sweller, J., & Chandler, P. (1991). Evidence for cognitive load theory. *Cognition and instruction*, 8(4), 351-362.
- Sweller, J., Van Merriënboer, J. J. G., & Paas, F. G. W. C. (1998). Cognitive architecture and instructional design. *Educational psychology review*, 10(3), 251-296.
- Tam, K. Y., & Ho, S. Y. (2005). Web personalization as a persuasion strategy: An elaboration likelihood model perspective. *Information Systems Research*, 16(3), 271-291.
- Towbes, L. C., & Cohen, L. H. (1996). Chronic stress in the lives of college students: Scale development and prospective prediction of distress. *Journal of youth and adolescence*, 25(2), 199-217.
- Tsao, W.-C., & Hsieh, M.-T. (2012). Exploring how relationship quality influences positive eWOM: the importance of customer commitment. *Total Quality Management & Business Excellence*, 23(7-8), 821-835.

- Tseng, F., & Hsu, F. (2010). *The Influence of eWOM within The Online Community on Consumers' Purchasing Intentions-The Case of The Eee PC*. Paper presented at the The 2010 International Conference on Innovation and Management, Malaysia.
- Urbach, N., & Ahlemann, F. (2010). Structural equation modeling in information systems research using partial least squares. *Journal of Information Technology Theory and Application*, 11(2), 5-40.
- Van Hoye, G., & Lievens, F. (2007). Social Influences on Organizational Attractiveness: Investigating If and When Word of Mouth Matters. *Journal of Applied Social Psychology*, 37(9), 2024-2047.
- Van Merriënboer, J. J., & Sweller, J. (2005). Cognitive load theory and complex learning: Recent developments and future directions. *Educational psychology review*, 17(2), 147-177.
- Vargo, S. L., & Lusch, R. F. (2004). Evolving to a new dominant logic for marketing. *Journal of Marketing*, 1-17.
- Vargo, S. L., & Lusch, R. F. (2008a). Service-dominant logic: continuing the evolution. *Journal of the Academy of Marketing Science*, 36(1), 1-10.
- Vargo, S. L., & Lusch, R. F. (2008b). Why Service? *Journal of the Academy of Marketing Science*, 36(1), 25-38.
- Venkatesh, V., Brown, S., & Bala, H. (2013). Bridging the qualitative quantitative divide: Guidelines for conducting mixed methods research in information systems. *MIS Quarterly*, 37(1), 21-54.
- Venkatesh, V., & Brown, S. A. (2001). A longitudinal investigation of personal computers in homes: Adoption determinants and emerging challenges. *MIS Quarterly*, 25(1), 71-102.
- Venkatesh, V., & Davis, F. D. (2000). A theoretical extension of the technology acceptance model: Four longitudinal field studies. *Management Science*, 46(2), 186-204.
- Venkatraman, M. P., & Price, L. L. (1990). Differentiating between cognitive and sensory innovativeness: concepts, measurement, and implications. *Journal of Business Research*, 20(4), 293-315.
- Vermeulen, I. E., & Seegers, D. (2009). Tried and tested: The impact of online hotel reviews on consumer consideration. *Tourism Management*, 30(1), 123-127.

- Vessey, I., & Galletta, D. (1991). Cognitive fit: An empirical study of information acquisition. *Information Systems Research*, 2(1), 63-84.
- Viswanathan, S., Kuruzovich, J., Gosain, S., & Agarwal, R. (2007). Online infomediaries and price discrimination: Evidence from the automotive retailing sector. *Journal of Marketing*, 71(3), 89-107.
- Wahlers, R. G., Dunn, M. G., & Etzel, M. J. (1986). The Congruence of Alternative OSL Measures with Consumer Exploratory Behavior Tendencies. In Lutz (Ed.), *Advances in consumer research* (Vol. 13, pp. 398-402): Provo, UT: Association for Consumer Research.
- Wahlers, R. G., & Etzel, M. J. (1990). A Structural Examination of Two Optimal Stimulation Level Measurement Models. In Goldberg, Gom & Pollay (Eds.), *Advances in consumer research* (Vol. 17, pp. 415-425). Provo, UT: Association for Consumer Research.
- Wang, H.-C., & Doong, H.-S. (2010). Online customers' cognitive differences and their impact on the success of recommendation agents. *Information & Management*, 47(2), 109-114.
- Wang, N., Shen, X.-L., & Sun, Y. (2013). Transition of electronic word-of-mouth services from web to mobile context: A trust transfer perspective. *Decision Support Systems*, 54(3), 1394-1403.
- Wang, S. L. A. (2006). The effects of audience knowledge on message processing of editorial content. *Journal of Marketing Communications*, 12(4), 281-296.
- Weathers, D., Sharma, S., & Wood, S. L. (2007). Effects of online communication practices on consumer perceptions of performance uncertainty for search and experience goods. *Journal of Retailing*, 83(4), 393-401.
- Webster, J., & Watson, R. T. (2002). Analyzing the Past to Prepare for the Future: Writing a Literature Review. *MIS Quarterly*, 26(2), xiii-xxiii.
- Weiss, A. M., Lurie, N. H., & MacInnis, D. J. (2008). Listening to strangers: whose responses are valuable, how valuable are they, and why? *Journal of Marketing Research*, 45(4), 425-436.
- Wells, J. D., Valacich, J. S., & Hess, T. J. (2011). What Signals Are You Sending? How Website Quality Influences Perceptions of Product Quality and Purchase Intentions. *Management Information Systems Quarterly*, 35(2), 373-396.

- Whitman, N. A. (1984). *Student Stress: Effects and Solutions*. Washington D.C.: Association for the Study of Higher Education.
- Williams, L. J., Cote, J. A., & Buckley, M. R. (1989). Lack of method variance in self-reported affect and perceptions at work: reality or artifact? *Journal of Applied Psychology*, 74(3), 462.
- Wolfswinkel, J. F., Furtmueller, E., & Wilderom, C. P. M. (2013). Using grounded theory as a method for rigorously reviewing literature. *European Journal of Information Systems*, 22, 45–55.
- Wood, R. E. (1986). Task complexity: Definition of the construct. *Organizational behavior and human decision processes*, 37(1), 60-82.
- Wood, S. L., & Swait, J. (2002). Psychological indicators of innovation adoption: Cross-classification based need for cognition and need for change. *Journal of Consumer Psychology*, 12(1), 1-13.
- Woodruff, R. B., Cadotte, E. R., & Jenkins, R. L. (1983). Modeling consumer satisfaction processes using experience-based norms. *Journal of Marketing Research (JMR)*, 20(3), 296-304.
- Wothke, W. (1993). Nonpositive definite matrices in structural modeling. In Bollen & Long (Eds.), *Testing structural equation models* (pp. 256-293). Newbury Park, CA: Sage.
- Wright, J. J. (1967). Reported Personal Stress Sources and Adjustment of Entering Freshmen. *Journal of Counseling Psychology*, 14(4), 371-373.
- Wright, P. (1980). Message-evoked thoughts: Persuasion research using thought verbalizations. *Journal of Consumer Research*, 7(2), 151-175.
- Wright, P., & Rip, P. D. (1980). Product class advertising effects on first-time buyers' decision strategies. *Journal of Consumer Research*, 8, 176-188.
- Wu, J., & Gaytan, E. A. A. (2013). The role of online seller reviews and product price on buyers' willingness-to-pay: a risk perspective. *European Journal of Information Systems*, 22, 416-433.
- Wu, J., Wu, Y., Sun, J., & Yang, Z. (2013). User Reviews and Uncertainty Assessment: A Two Stage Model of Consumers' Willingness-To-Pay in Online Markets. *Decision Support Systems*, 55, 175-185.
- Wu, P. F., Van der Heijden, H., & Korfiatis, N. (2011). *The influences of negativity and review quality on the helpfulness of online reviews*. Paper

presented at the Thirty Second International Conference on Information Systems (ICIS 2011), Shanghai, China.

- Xia, L., & Bechwati, N. N. (2008). Word of mouse: the role of cognitive personalization in online consumer reviews. *Journal of Interactive Advertising*, 9(1), 3-13.
- Xia, W., & Lee, G. (2000). *The influence of persuasion, training and experience on user perceptions and acceptance of IT innovation*. Paper presented at the Twenty first international conference on Information systems (ICIS 2000), Brisbane, Queensland, Australia.
- Xiao, B., & Benbasat, I. (2007). E-commerce product recommendation agents: Use, characteristics, and impact. *MIS Quarterly*, 31(1), 137-209.
- Xiao, B., & Benbasat, I. (2014). Research on the Use, Characteristics, and Impact of e-Commerce Product Recommendation Agents: A Review and Update for 2007–2012. In Martínez-López (Ed.), *Handbook of Strategic e-Business Management* (pp. 403-431). Berlin, Germany: Springer.
- Xie, H. J., Miao, L., Kuo, P.-J., & Lee, B.-Y. (2011). Consumers' responses to ambivalent online hotel reviews: The role of perceived source credibility and pre-decisional disposition. *International Journal of Hospitality Management*, 30(1), 178-183.
- Xu, J., Benbasat, I., & Cenfetelli, R. T. (2014). Research Note-The Influences of Online Service Technologies and Task Complexity on Efficiency and Personalization. *Information Systems Research*, 25(2), 420-436.
- Xu, J. D., Benbasat, I., & Cenfetelli, R. T. (2013). Integrating Service Quality with System and Information Quality: An Empirical Test in the E-Service Context. *MIS Quarterly*, 37(3), 777-794.
- Yan, J., Liu, N., Wang, G., Zhang, W., Jiang, Y., & Chen, Z. (2009). *How much can behavioral targeting help online advertising?* Paper presented at the International World Wide Web Conference Committee (IW3C2), Madrid, Spain.
- Yang, J., & Mai, E. S. (2010). Experiential goods with network externalities effects: An empirical study of online rating system. *Journal of Business Research*, 63(9-10), 1050-1057.
- Yao, E., Fang, R., Dineen, B. R., & Yao, X. (2009). Effects of customer feedback level and (in) consistency on new product acceptance in the click-and-mortar context. *Journal of Business Research*, 62(12), 1281-1288.

- Ye, Q., Law, R., Gu, B., & Chen, W. (2011). The influence of user-generated content on traveler behavior: An empirical investigation on the effects of e-word-of-mouth to hotel online bookings. *Computers in Human Behavior, 27*(2), 634-639.
- Yeh, Y.-H., & Choi, S. M. (2011). MINI-lovers, maxi-mouths: An investigation of antecedents to eWOM intention among brand community members. *Journal of Marketing Communications, 17*(3), 145-162.
- Yeo, H., Roman, S., Air, M., Maser, C., Trapasso, T., Kinder, B., & Sosa, J. A. (2007). Filling a void: thyroid cancer surgery information on the internet. *World journal of surgery, 31*(6), 1187-1193.
- Yin, D., Bond, S., & Zhang, H. (2011). *Dreading and Ranting: The Distinct Effects of Anxiety and Anger in Online Seller Reviews*. Paper presented at the Thirty Second International Conference on Information Systems (ICIS 2011), Shanghai, China.
- Yin, D., Bond, S., & Zhang, H. (2014). Anxious or Angry? Effects of Discrete Emotions on the Perceived Helpfulness of Online Reviews. *MIS Quarterly, 38*(2), 539-560.
- Zeithaml, V. A., Parasuraman, A., & Malhotra, A. (2002). Service quality delivery through web sites: a critical review of extant knowledge. *Journal of the Academy of Marketing Science, 30*(4), 362-375.
- Zhang, J. Q., Craciun, G., & Shin, D. (2010). When does electronic word-of-mouth matter? A study of consumer product reviews. *Journal of Business Research, 63*(12), 1336-1341.
- Zhang, W., & Watts, S. A. (2008). Capitalizing on content: Information adoption in two online communities. *Journal of the Association for Information Systems, 9*(2), 73-94.
- Zhao, M., & Xie, J. (2011). Effects of Social and Temporal Distance on Consumers' Responses to Peer Recommendations. *Journal of Marketing Research, 48*(3), 486-496.
- Zigurs, I., & Buckland, B. K. (1998). A theory of task/technology fit and group support systems effectiveness. *MIS Quarterly, 22*(3), 313-334.
- Zuckerman, M. (1979). *Sensation seeking: Beyond the optimal level of arousal*: L. Erlbaum Associates Hillsdale, NJ.