

THE UNIVERSITY OF HULL

Beyond Mobile Advertising: an empirical investigation of
customer engagement and empowerment with mobile marketing
communication campaigns

being a Thesis submitted for the Degree
of Doctor of Philosophy in Management
in the University of Hull

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November 2014

ABSTRACT

The importance of customer engagement to sustain and foster business growth in an interactive environment has been recognised in the practitioner literature. It has also been observed that engaged customers become empowered in a given marketing communication environment. Yet, there has been very little, if any, academic enquiry examining these concepts within the mobile communications context. This is surprising given that we are living in an increasingly mobile technology dominated world. Thus, the aim of this research is to examine customer engagement behaviour and its relationship to customer empowerment in the context of mobile communication. A conceptual model is built on the foundations of the technology acceptance model (TAM). This model seeks to explain the level of engagement and empowerment of customers in mobile marketing campaigns with subjective norms, information seeking, perceived ease of use and perceived usefulness as antecedents. The inquiry extends to examining the impact of moderating factors that influence customer engagement and empowerment along with behavioural intention as a consequence.

Following Churchill (1979), a scale to measure engagement was developed. Given the positivist foundations of this study, an online questionnaire was used to collect data. Respondents were recruited from several popular electronic forums in Saudi Arabia. Following data collection, covariance based Structural Equation Modelling was employed in the analysis.

The study makes a contribution both on a theoretical level and at a practical level. On a theoretical level, a new scale is developed to measure customer engagement. This will provide a basic understanding of customer behaviour in mobile marketing communication. The relationship between customer engagement and customer empowerment was significant. Subjective norms and information seeking were significant to customer empowerment, while only

subjective norms were significant to customer engagement. Perceived usefulness was significant to customer engagement and customer empowerment, while perceived ease of use was insignificant to both of them. In addition, behavioural intention was significant to customer empowerment. On a practical level, the developed scale will help to improve customers' relationships with businesses; as marketers are now able to enhance engagement by providing an outlet for social interaction, for example. Furthermore, a better understanding of customers' behaviour will help marketing professionals to better segment and target the appropriate customers to enhance their loyalty.

ACKNOWLEDGMENTS

I would like to acknowledge the support and advice of my supervisor, Professor Chanaka Jayawardhena. Since the first meeting we had, he has been a source of encouragement and no words would be enough to thank him adequately. My deepest appreciation goes also to Dr. Wen-Ling Liu, my second supervisor, for her contribution and valuable feedback.

I would also like to acknowledge my fellow doctoral students in the Business School. Their support and help to get through research obstacles have been invaluable. My sincere thanks go to HUBS research office and graduate school for their help to facilitate my journey to accomplish my research project.

It would not have been possible to complete my PhD without the support from my country, Saudi Arabia. Financially, this programme has been funded by a generous grant from the Ministry of Education (MOE).

I would like to express my great gratitude and thanks to my family. My beloved father, Saleem, for his unwavering support to complete this study. My compassionate mother, Jamilah, for her prayers and silent role in making me what I am today. My brothers and sisters, Mashhor, Fatimah, Talea, Talal and Wejdan for their support and help in the study. I also extend my thanks to my family in law for their endless support and encouragement.

I would like to especially thank my wife, Faten Alzaidi, for her understanding, encouragement, support and love over the course of my study. For the past few

years you have been a constant source of positivity and compassion. You climbed many mountains with me and have stood by my side during the toughest times, particularly after the loss of our first child in April 2014. Those days won't be forgotten and will stay in living memory.

Finally, and most importantly, I thank Allah (God) for helping me through and giving me the strength to finish this research.

TABLE OF CONTENTS

ABSTRACT	ii
ACKNOWLEDGMENTS	iv
LIST OF FIGURES	xiv
LIST OF TABLES	xvi
LIST OF PUBLICATIONS	xviii
CHAPTER ONE: INTRODUCTION	1
1.1 A Personal Note.....	2
1.2 Introduction.....	2
1.3 Research Background	3
1.4 Research Gaps.....	6
1.4.1 Mobile Marketing Communications	6
1.4.2 Customer Engagement.....	9
1.4.3 Customer Empowerment.....	10
1.4.4 Summary of Research Gaps	11
1.5 Research Question	12
1.6 Research Objectives.....	12
1.7 Research Context and its Importance.....	13
1.8 Contributions and Implications of the Study.....	15
1.8.1 Theoretical Contribution	17
1.8.2 Practical Implications	18
1.9 Thesis Structure.....	18
CHAPTER TWO: LITERATURE REVIEW	22
2.1 Introduction.....	23
2.2 The Rise of Mobile Media	23
2.2.1 Mobile Internet	24
2.2.2 Mobile Ubiquity and Commerce.....	27

- 2.2.3 Consumers’ Perceptions of Mobile Advertising in KSA..... 31
- 2.3 Previous Research on Mobile Communication Marketing 33
- 2.4 Engagement Behaviour 43
- 2.4.1 Engagement in Human Resources Literature..... 45
- 2.4.2 Customer Engagement and Mobile Devices..... 48
- 2.4.3 Operational Definition of Engagement 50
- 2.4.4 Antecedents of Customer Engagement..... 55
- 2.4.4.1 Mobile Device as a Medium..... 56
- 2.4.4.2 Communities and Social Media..... 57
- 2.4.4.3 Word of Mouth in the Virtual Word..... 62
- 2.5 Consequence of Engagement..... 64
- 2.5.1 Empowerment Behaviour 64
- 2.5.2 Empowering Experience 72
- 2.5.3 Consumer-Centric Marketing..... 76
- 2.6 Theoretical Foundations..... 78
- 2.6.1 Relationship Marketing 79
- 2.6.2 Service Dominant Logic..... 81
- 2.6.3 Diffusion of Innovations Theory..... 83
- 2.6.4 Uses and Gratifications Theory 85
- 2.6.5 Attitudes and Behaviour Theories..... 86
- 2.6.5.1 Theory of Reasoned Action 88
- 2.6.5.2 Technology Acceptance Model 89
- 2.7 A Critique of the Theoretical Lenses 91
- 2.8 Summary Remarks..... 92
- CHAPTER THREE: CONCEPTUAL FRAMEWORK AND HYPOTHESIS DEVELOPMENT 93**
- 3.1 Introduction..... 94

3.2	Technology Acceptance Model	94
3.3	Hypothesis Development	95
3.3.1	Subjective Norms	95
3.3.2	Information Seeking	96
3.3.3	Relationship between Customer Engagement and Empowerment.....	97
3.3.4	Perceived Usefulness	99
3.3.5	Perceived Ease of Use	100
3.3.6	Moderating Effects:	101
3.3.6.1	Age.....	101
3.3.6.2	Gender	101
3.3.7	Customer Empowerment and Behavioural Intentions	102
3.4	Summary Remarks.....	103
CHAPTER FOUR: METHODOLOGY.....		104
4.1	Introduction.....	105
4.2	Research Design	105
4.2.1	Research Philosophy	105
4.2.2	Research Approach	109
4.2.3	Research Strategy.....	109
4.2.3.1	Cross Sectional versus Longitudinal Research	110
4.2.4	Sampling Process	111
4.2.4.1	Definition of the Target Population	111
4.2.4.2	Choice of Respondents and Sampling Frame	112
4.2.4.3	Selection of Sampling Technique	112
4.2.4.4	Sample Size	112
4.2.4.5	Sampling and Nonsampling Error	113
4.2.4.6	Non-Response Error	113
4.2.5	Data Collection Method	114

4.2.5.1	Questionnaire Design	115
4.3	Construct Operationalisation and Scale Development.....	116
4.3.1	Item Generation for Customer Engagement	118
4.3.2	Items Adaptation for Customer Empowerment.....	135
4.3.3	Items Adaptation for Perceived Ease of Use and Perceived Usefulness.....	135
4.3.4	Items Adaptation for Subjective Norms.....	136
4.3.5	Items Adaptation for Information Seeking	137
4.3.6	Items Adaptation for Behavioural Intention	137
4.3.7	Other Information Collected.....	139
4.3.8	Response Form	139
4.3.8.1	Back translation of Saudi Measurement Instrument	140
4.4	Data Collection.....	140
4.4.1	Pilot Test	140
4.4.2	Main Survey	141
4.4.3	Missing Data.....	141
4.4.4	Sample Characteristics.....	141
4.4.4.1	Demographic Data	143
4.4.4.2	Smartphone Usage	143
4.5	Analytical Procedures	144
4.5.1	Chosen Analytical Technique.....	144
4.5.2	Sample Size for SEM.....	146
4.5.3	Data Screening	147
4.5.4	Structural Equation Modelling.....	147
4.5.5	Stage One – The Measurement Model.....	148
4.5.5.1	Developing the Overall Measurement Model.....	148
4.5.5.2	Exploratory versus Confirmatory Factor Analysis	149
4.5.5.3	Factor Extraction Techniques.....	150

4.5.5.4	Rotation Techniques	151
4.5.5.5	Assessing the Measurement Model	151
4.5.5.5.1	Stand-alone or Absolute Fit indices	152
4.5.5.5.2	Incremental Fit Indices.....	156
4.5.5.5.3	Parsimonious Fit Indices	157
4.5.5.6	Reliability.....	159
4.5.5.7	Validity.....	161
4.5.5.8	Unidimensionality of Measures	164
4.5.5.9	Measure Purification	165
4.5.5.10	Common Method Variance	166
4.5.6	Stage Two – The Structural Model	168
4.5.6.1	Specifying the Structural Model	168
4.5.6.2	Assessing Structural Model Validity	171
4.5.6.3	Model Interpretation and Modification	173
4.5.7	Testing Moderator Hypotheses	176
4.5.7.1	Multi-group Comparison	176
4.5.8	Limitations of Structural Equation Modelling	177
4.6	Ethical Issues.....	177
4.7	Summary Remarks.....	178
CHAPTER FIVE: DATA ANALYSIS I - ENGAGEMENT SCALE DEVELOPMENT		180
5.1	Introduction.....	181
5.1.1	Normality Test.....	181
5.1.2	Detecting Outliers.....	182
5.2	Measure Purification	183
5.2.1	Split Samples	184
5.3	Customer Engagement Scale.....	184
5.3.1	Data Adequacy for Factor Analysis	184

- 5.3.1.1 Exploratory Factor Analysis (EFA) for Engagement - First Iteration 185
- 5.3.1.2 EFA for Engagement Second Iteration 188
- 5.3.1.3 EFA for Engagement Third Iteration..... 189
- 5.3.2 Initial Data Preparation using AMOS..... 190
- 5.3.2.1 Confirmatory Factor Analysis for Engagement..... 191
- 5.3.2.1.1 CFA for Engagement First Iteration..... 191
- 5.3.2.1.2 CFA for Engagement Second Iteration 192
- 5.3.2.1.3 CFA for Engagement Third Iteration 193
- 5.3.2.1.4 CFA for Engagement Fourth Iteration 194
- 5.3.2.1.5 CFA for Engagement Fifth Iteration..... 195
- 5.3.2.1.6 CFA for Engagement Sixth Iteration..... 196
- 5.3.2.2 Reliability Test..... 197
- 5.3.2.3 Validity Test..... 198
- 5.3.2.3.1 Discriminant and Convergent Validity 199
- 5.3.2.4 Misspecification of the Engagement Scale..... 200
- 5.4 Summary Remarks..... 204

CHAPTER SIX: DATA ANALYSIS II - MEASUREMENT AND STRUCTURAL MODELS.....205

- 6.1 Introduction..... 206
- 6.2 Data Adequacy for Factor Analysis 206
- 6.2.1 Exploratory Factor Analysis (EFA) for Measurement Model - Stage One..... 207
- 6.2.2 Confirmatory Factor Analysis 212
- 6.2.3 Nomological Validity..... 217
- 6.2.3.1 Convergent Validity - Reliability test..... 218
- 6.2.3.2 Discriminant Validity test 218
- 6.2.4 Common Method Bias 219
- 6.2.4.1 Marker Variable 219

6.2.4.2	Harman’s single factor test - EFA	222
6.2.4.3	Harman’s single factor test - CFA.....	223
6.3	Structural Model – Stage two:	224
6.3.1	Structural Model – Iteration One	224
6.3.2	Structural Model – Iteration Two	226
6.4	Summary Remarks.....	227
CHAPTER SEVEN: HYPOTHESIS TESTING		228
7.1	Introduction.....	229
7.2	Test of Hypotheses	229
7.3	Summary Remarks.....	236
CHAPTER EIGHT: DISCUSSION		237
8.1	Introduction.....	238
8.2	Discussion:	238
8.3	Measure Development.....	240
8.4	Nomological Validity and the Structural Model	241
8.4.1	Significant Relationships	241
8.4.2	Insignificant Relationships.....	245
8.4.3	Indirect Relationships.....	246
8.4.4	Explained Variance in Constructs.....	247
8.5	Country Context.....	248
8.6	Research Questions’ Answers	250
8.7	Summary Remarks.....	251
CHAPTER NINE: CONCLUSION.....		252
9.1	Introduction.....	253
9.2	Theoretical Contribution	255
9.2.1	Theoretical Contribution: Development of Customer Engagement Scale	256

9.2.2	Theoretical Contribution: Development in the Understanding of Customer Engagement.....	258
9.2.3	Theoretical Contribution related to Customer Empowerment Literature	259
9.2.3.1	Theoretical Contribution: Development of the Understanding of Customer Empowerment.....	259
9.2.4	Theoretical Contribution to the Literature related to TAM.....	261
9.2.5	Theoretical Contribution to the Literature related to Mobile Marketing Context	262
9.2.6	Theoretical Contribution to the Literature related to Demographic Factors	263
9.3	Practical Implications	264
9.3.1	Implications of Customer Engagement and its Measurement Scale.....	264
9.3.2	Customer Engagement – Implications for Customer Experience	265
9.4	Limitations and Future Research Directions	266
9.4.1	Conceptual Limitations	266
9.4.2	Methodological Limitations.....	267
9.5	Future Research Directions	267
9.6	Conclusion	270
	References.....	271
	Appendix A: Questionnaire English and Arabic.....	296
	Appendix A-A : HUBS Research Committee Ethical Approval.....	326
	Appendix A-B : Frequencies Table.....	327
	Appendix B: Tables showing Skewness, Kurtosis and Normality Tests.....	330
	Appendix C: Age Group Differences.....	359
	Appendix D: Gender Group Differences	361

LIST OF FIGURES

Figure 1-1: Research Implications.....	16
Figure 2-1: Mobile ubiquity.....	27
Figure 2-2: Google search volume.....	28
Figure 2-3: Mobile internet subscribers in Saudi Arabia.....	30
Figure 2-4: TAM Model.....	90
Figure 3-1: Conceptual Framework.....	95
Figure 4-1: Procedures for Developing a Questionnaire.....	116
Figure 4-2: Overview of steps employed in developing the engagement scale.....	117
Figure 4-3: Scale items for Customer Empowerment.....	135
Figure 4-4: Scale Items for Perceived Ease of Use.....	136
Figure 4-5: Scale Items for Perceive Usefulness.....	136
Figure 4-6: Scale Items for Subjective Norms.....	136
Figure 4-7: Scale items for Information Seeking.....	137
Figure 4-8: Scale items for Behavioural Intention.....	138
Figure 5-1: Scree Plot.....	187
Figure 5-2: Engagement Scale 1st iteration CFA.....	192
Figure 5-3: Engagement Scale 2nd iteration CFA.....	193
Figure 5-4: Engagement Scale 3rd iteration CFA.....	194
Figure 5-5: Engagement Scale 4th iteration CFA.....	195
Figure 5-6: Engagement Scale 5th iteration CFA.....	196
Figure 5-7: Engagement Scale 7th iteration CFA.....	197
Figure 5-8: Engagement Scale, Baseline Model.....	201
Figure 5-9: Engagement Scale, Model #1.....	202
Figure 5-10: Engagement Scale, Model #2.....	202

Figure 5-11: Engagement Scale, Model #3.....	203
Figure 5-12: Engagement Scale, Model #4.....	203
Figure 6-1: CFA 1 st iteration.....	212
Figure 6-2: CFA 2 nd iteration	213
Figure 6-3: CFA 3 rd iteration.....	214
Figure 6-4: CFA 4 th iteration	215
Figure 6-5: Marker Variable.....	220
Figure 6-6: Harman’s Single Factor - CFA	223
Figure 6-7: SEM Model # 1	225
Figure 6-8: SEM Model # 2	226
Figure 7-1: Conceptual Framework.....	236
Figure 8-1: Indirect Relationships.....	247
Figure 9-1: Research Implications.....	256

LIST OF TABLES

Table 2-1: Overview – Engagement Conceptualisations in Marketing & Management Literature.....	52
Table 2-2: Overview – Empowerment Conceptualisations in the Marketing & Management Literature	68
Table 2-3: Product-Centric vs. Customer-Centric Approaches	77
Table 4-1: Items Generation Pool.....	119
Table 4-2: Experts’ opinion for customer engagement measurement form 1ST round ..	126
Table 4-3: Experts’ opinion for customer engagement measurement form 2nd round..	130
Table 4-4: Customer Engagement Items.....	133
Table 4-5: Summary of the main variables	138
Table 4-6: Gender.....	142
Table 4-7: Age	142
Table 4-8: Location	142
Table 4-9: Two Stages of SEM	148
Table 5-1: KMO categories	184
Table 5-2: KMO and Bartlett's Test	185
Table 5-3: Total Variance Explained	186
Table 5-4: Pattern Matrix.....	188
Table 5-5: Pattern Matrix.....	189
Table 5-6: Pattern Matrix.....	190
Table 5-7: Retained items of Engagement Scale	198
Table 5-8: Convergent and Discriminant Validity.....	200
Table 5-9: Misspecification of Engagement Scale	201
Table 6-1: Constructs in the Study	206
Table 6-2: KMO and Bartlett's Test	207
Table 6-3: Total Variance Explained	208

Table 6-4: Pattern Matrix.....	209
Table 6-5: Total Variance Explained	210
Table 6-6: Pattern Matrix.....	211
Table 6-7: Retained items used in structural model.....	216
Table 6-8: Correlation Matrix.....	217
Table 6-9: Discriminant Validity Test	219
Table 6-10: Standard Regression Weights.....	221
Table 6-11: Total Variance Explained	222
Table 6-12: Regression Weights.....	225
Table 6-13: Regression Weights.....	226
Table 8-1: Items of Customer Engagement Scale	239
Table 8-2: Significant Relationships	241
Table 8-3: Insignificant Relationships.....	245
Table 8-4: Indirect Relationships.....	246
Table 9-1: Items of Customer Engagement Scale	254

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2. Alotaibi, I., & Jayawardhena, C. (2012), "Beyond Mobile Advertising: An exploratory study of customer engagement and empowerment behaviour via mobile devices in relation to marketing communication campaigns in Saudi Arabia." *Academy of Marketing*. Southampton, UK.
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CHAPTER ONE: INTRODUCTION

1.1 A Personal Note

It would not be an exaggeration to assert that mobile phones are shaping our day to day activities in most of the developed world and in some parts of the less developed world. This is because we are living in an increasingly interconnected and information heavy world, many users find these devices are a necessity to go about their daily life. The consistently high demand of mobile telecommunications has led to advancements in the technology of mobile devices to match new waves of innovation in technology. These innovations have their effect on business and customer behaviour. On a personal level, the author has found these devices fascinating and interesting. This interest led to a desire to understand and explore how these devices change people's behaviour.

1.2 Introduction

The tools of communication did not change greatly until the onset of the industrial revolution. The invention of the telegraph and telephone in the 19th and 20th centuries dramatically closed the communications gap between people all over the world. The emergence of television, videocassettes, and audio tapes continued to improve communications. The information revolution in the latter part of the last century opened up a new dimension by enabling individuals to possess powerful devices such as personal computers (PC) and embrace the information age. Moreover, the emergence of mobile handsets has enhanced communications and given people easy access to information via the internet and global system of mobile communication (GSM) (Ishii, 2006). Hence, the topic of this study is beyond mobile advertising, an empirical investigation of customer engagement and empowerment with mobile marketing communication campaigns.

In what follows, an overview of the research background and the relevant research question to the research is presented. Then, research gaps are briefly explored and summarised, before outlining the research objectives.

Thereafter, theoretical and practical contributions of this research study are identified. Finally, an outline of the thesis structure is provided.

1.3 Research Background

Communication channels are known to be the means by which a message goes from a source to a receiver in a basic form of a communication loop with feedback (Schramm and Roberts, 1971). According to Smith et al. (1997), the basic form of communication can be seen in person-to-person communication, while in a business operation, it is not the same case. The main role of marketing communications is to have a positive impact on individual decision making toward the product/service/brand (Pickton et al., 2005). Therefore, to find the impact of marketing campaigns, feedback has to come from traditional communication tools such as sales force, point-of-purchase and advertising (Smith et al., 1997), while the mobile phone, as a new addition to communication tools, is not fully utilised.

Mobile phones are one of the communication channels that have been around since the 1960s, but due to their limitations and inaccessibility, they were not widely known commercially until the digitalising process took place and revolutionised mobile technology. The commercial aspect started in the 1980s when the Federal Communications Commission (FCC) in the USA ended AT&T's monopoly and opened up the competition to other service providers (Green and Haddon, 2009). The mobile handset has undergone ongoing improvement constrained by the network features, starting with the first generation (1G) and currently ending on the edge of the fourth generation (4G). Due to these developments in the last decade, the mobile phone has begun to be recognised as a medium by which marketers can send advertising messages to customers with a simple text. As a result, academic researchers have slowly taken up the challenge to investigate scientifically this phenomenon and how customers respond to such mobile advertising.

A great quantity of research has been carried out on mobile advertising and mobile marketing, which explored customers' perceptions of what has been sent to them (Barwise and Strong, 2002; Barnes, 2002; Tsang et al., 2004; Vincent, 2005; Bauer et al., 2005; Nysveen et al., 2005a; Wu and Wang, 2005; Peters et al., 2007; Kim et al., 2008; Zhang and Mao, 2008; Pihlström and Brush, 2008; Choi et al., 2008; Jayawardhena et al., 2009). Yet, the potential capability of a mobile handset to be used as an engagement medium with customers beyond mobile advertising in the virtual world was lacking in this research and remained poorly understood. Moreover, whether customer engagement by using a mobile handset could lead to customer empowerment has not yet been disclosed.

In 2007, a global study was carried out by the Economist Intelligence Unit to explore challenges facing customer engagement. It conducted an online survey of 311 executives from different industries and defined engagement as the "creation of a deeper, more meaningful connection between the company and the customer, and one that endures over time. Engagement is also seen as a way to create customer interaction and participation" (Voyles, 2007 : 02). The study found that 90 per cent of respondents agreed on the importance of engagement in sustaining a good relationship with customers.

Cellular machine-to-machine (M2M) communications will account for no less than 10 per cent of the global mobile market by 2020 (GSMA, 2014). The role of many contemporary customers has changed from reactivity to pro-activity because of the appearance of the internet and mobile devices. Many of them have an account on Facebook where there are more than 1.44 billion active users; the average user has 130 friends and users spend over 700 billion minutes per month on it in total (Facebook, 2015). On Twitter there are 106 million active accounts, which increases daily by 300,000 and 37% of access to it is via mobile devices (DigitalTrends, 2011). Users are actively involved in

social media networks, chatting with their friends and expressing their thoughts, feelings and experiences.

There are 798 million active users who access Facebook via their mobile devices on March 2015 and more than 1.25 million people engage with Facebook by end of March 2015 (Facebook, 2015). In Saudi Arabia, the Facebook population has reached 4 million, these being the earlier adopters, and is still growing (Checkfacebook.com, 2011). Furthermore, 56 per cent of apps downloaded in the USA were for social networking, putting it in third place after games (64 per cent) and weather (60 per cent) and putting maps/search/navigation into fourth place (51 per cent) (Nielsen, 2011). Downloads of apps are forecasted to reach 182.7 billion by 2015 (Ellison, 2011).

Moreover, in April 2011, a study conducted by ROI research entitled “S-Net: The Impact of Social Media” in the USA found that 60 per cent of social media network users were likely to take action when a friend in their network posted something about a product/service or brand/ company on a social media site. It also found that of users who followed brands on Facebook, 53 per cent would purchase the product/service, while on Twitter, 61 per cent would mostly talk about the product/service, although 59 per cent would recommend it and 58 per cent would purchase a product/service (eMarketer, 2011), mainly carried out via mobile handsets.

The utilisation of mobile smartphone in marketing communication and how such new wave of technology would change the course of marketing strategies and customer adoption to such technology raise changes to marketers. Furthermore, a great opportunity to explore the full potential impact of mobile is yet to be unveiled in customer engagement domain. The next section elaborates on the research gaps in details.

1.4 Research Gaps

1.4.1 Mobile Marketing Communications

Most early studies in the field of mobile marketing communications focused more on consumer attitudes to mobile advertisements than to social norms that decode the message content and the targeted audience (Tsang et al., 2004; Vincent, 2005; Maneesoonthorn and Fortin, 2006), whereas the impact on consumer intention to buy a product/service or even factors that evoke the sense of loyalty to a brand and how long that lasts via mobile have seldom been discussed (e.g. Pihlström and Brush, 2008). There have been a few cross-cultural studies examining factors that drive mobile advertising (e.g. Choi et al., 2008). However, two major streams can be recognised in these studies, the customer perspective of mobile advertising, and technology acceptance. The first stream focuses on the customer perspective of mobile advertising and how such advertising is accepted in a social context. A comparison between Korean and American consumers found more positive evaluations among Americans. It also found that informativeness had more influence on Americans than Koreans, while the perceived value of advertising had a greater influence on Korean consumers (Choi et al., 2008).

Marketing tools have been developed and improved over the past years. Newspapers, radio, TV and the Internet have been and still are considered by marketers as media tools to reach consumers (Pickton and Broderick, 2005). In addition to the traditional word of mouth (WOM) tool, which represents the power of the human voice and human contact, they are the most powerful communications tools. In the Japanese context, mobile WOM youth consumers were more open to accepting their peers' recommendations and trusted them due to their strong social ties, even if they were not interested in advertisements (Okazaki, 2008).

Moreover, Barwise and Strong (2002) found that the role of permission-based mobile advertising clearly evinced a positive attitude toward mobile advertising.

In fact, sending short message service (SMS) messages to users without their permission will generate negative attitudes and might reduce brand equity, because the mobile handset is seen as a personal space and individuals are very attached to it (Vincent, 2005). Bauer et al. (2005) found that entertainment and information were the strongest drivers of mobile advertising adoption. In addition, among antecedents to permission-based mobile marketing, institutional trust was a more important antecedent than personal trust, perceived control and experience (Bauer et al., 2005; Jayawardhena et al., 2009). However, Peters et al. (2007) argue that customer attitude was not necessarily negative, even toward messages sent without permission. In fact, customers may be motivated to accept mobile advertising by other elements that affect their behaviour toward positivity, such as process, socialisation and content motivations (Peters et al., 2007).

The other stream of research focuses on technology acceptance, including mobile services and mobile commerce. Adoption of the SMS by Korean customers was found to be affected by four factors: perceived enjoyment (PENJ), perceived monetary value (PMV), perceived usefulness (PU), and perceived ease of use (PEU). Furthermore, customer perceptions of SMS as enjoyable and pleasant affect their perceptions of PU and PEU (Kim et al., 2008). The intention to adopt SMS advertising among Chinese customers was found to be determined by PU and PEU alongside trust (Zhang and Mao, 2008). In terms of mobile information and entertainment services, it has been indicated that word of mouth intention was influenced by the emotional and social values of users more in entertainment use than in information use in post-purchase behaviour (Pihlström and Brush, 2008). However, this study lacks the element of tangibility and there is a need for a study to be carried out to bridge the gap in customer engagement behaviour via mobile devices.

A triangular model based on the Theory of Reasoned Action (TRA), Theory of Planned Behaviour (TPB) and Technology Acceptance Model (TAM) was used

to investigate the intention to use mobile communication technology by Nysveen et al. (2005). The study also added non-utilitarian motives such as perceived enjoyment and expressiveness to the construct. It indicated that subjective norms and perceived control are important antecedents of intention to use, while perceived enjoyment and expressiveness are indirect determinants (Nysveen et al., 2005a). Moreover, the increased penetration of mobile technology has led to some studies to investigate the effect of the mobile on the commercial environment. In Taiwan, 29% of mobile users were found to be familiar with mobile commerce, which was not a very large proportion, but they were between the ages of 20 and 39 and almost 50% were categorised as having a high income level (Wu and Wang, 2005).

The two main streams of research in mobile marketing communication looked at advertising via mobile as a new way to reach customers and how they would perceive it. Moreover, they focused on the attitudinal elements that captured customers' reaction when the ads reached them. They mostly examined the role of customer perception of mobile advertising but did not go beyond in terms of customer engagement behaviour via mobile handsets. It is, however, apparent that there are many issues that have not been examined by the academic literature. For example, in a study carried out by the Economist Intelligence Unit in 2007, the role of engagement was emphasised and it was suggested that this in turn would foster business growth in interactive environment (Voyles, 2007), as is the case for mobile devices.

The nature of the mobile device as an interactive medium raises an important issue to be studied and uncovered. It is not only a medium for receiving or sending advertising text; the present capabilities and particularly the future potential are far greater. In fact it is an environment where a deeper, more meaningful connection between the company and the customer, and one that endures over time, can be created. In such an environment, not only would customers be engaged, they would become empowered. This highlights the

importance of the concepts of customer engagement and empowerment in a mobile marketing context. In what follows, the concepts of customer engagement and customer empowerment are briefly introduced.

1.4.2 Customer Engagement

The word engagement comes from the verb 'to engage', which is defined by the Oxford Dictionary (1999) as "to occupy subjects, thoughts, time, interest, etc" (p.249), and is a new concept in the marketing literature. According to Gambetti and Graffigna (2010) the engagement concept is currently seen "as a fundamental driving force behind postmodernist consumer behaviour and decision making" (p.804), although a clear and comprehensive definition of the new concept is lacking. However, in marketing communication literature, customer/consumer engagement is concerned with how the individual is or can be engaged by a brand, advertisement or communication medium, while brand engagement, advertising engagement and media engagement focus on brand, advertising message and the mass media as contexts capable of eliciting engagement in the individuals exposed to them (Wang, 2006; Kilger and Romer, 2007; Bowden, 2009; Heath, 2009; Schau et al., 2009).

Four themes have been identified in the engagement literature. The first regards engagement as an interaction between employee and customer, and emphasises the usage of virtual communities as primary interaction tools with customers. The second considers it as an alliance between company and customer, a type of strategic implementation, with a focus on enhancing trust and loyalty between companies and customers. The third sees it as a co-production of contents between a company and customer, which takes place specifically in communication programmes and is intended to explore consumers' attitudes and expectations. The last theme considers engagement as a top management effort towards its employees that exists in an organisational context (Gambetti and Graffigna, 2010). Of these, both the first and second themes are relevant to exploring further the engagement practices

in the Saudi Arabian context in this research. Yet, the themes lack unified measurement to test out the level of engagement behaviour in mobile marketing communications.

However, van Doorn et al. (2010) argue that customer engagement behaviour goes beyond transactions and is more rooted in psychological elements, while Kumar et al. (2010) find it important to understand the engagement relationship between business and customer in order to improve companies' profitability. Thus, in this research, customer engagement is defined to be "the initial interest and further actions taken by the customer in marketing communication, which it can be cognitive, emotional and behavioural involvement in a specific brand interaction in B2C and C2C relationship" (Alotaibi and Jayawardhena, 2012:5). This definition, due to lack of clarity in the literature, is developed to establish scale development for customer engagement in mobile marketing communication context, see Chapter Two, section 2.2 for detail. Meanwhile, customer engagement could affect customer empowerment, which will be discussed in the next section; this provides an important foundation for understanding the customer engagement behaviour in the mobile technology context.

1.4.3 Customer Empowerment

Most of the literature on customer empowerment discusses its internal side, with much of it related to the human resources field (e.g. Kahn 1990). However, a handful of researchers have examined the external side, whereby a customer is seen as being empowered by involvement in new product development (NPD) (e.g. Hoyer et al., 2010). These researchers agreed to some extent that having customers involved in the NPD and taking their wants/needs into consideration will enhance the purchase intention (Cronin Jr et al., 2000; Brady, 2001; Wathieu et al., 2002; Ramani and Kumar, 2008; Hoyer et al., 2010). In this respect, enabling customers to communicate their thoughts, feelings and enthusiasm or even their disappointment about a

product is considered to be a sign of empowerment, given the necessary channels to facilitate engagement (Füller et al., 2009).

However, the link between engagement and empowerment in a mobile marketing communication context is absent in most of the literature reviewed. Most of such studies of empowerment were in the human resource field and mostly focused on the service sector. Thus, the establishment of a brand platform, as in the case of Nutella, was considered an engagement with the brand; a conversation among peers was carried on through the forum, and at the same time, it was seen as empowerment (Cova and Pace, 2006). This concurs with Turnquist's (2004) definition of customer empowerment, which considers consumer empowerment as increasing consumer value by providing additional access, content, education and commerce to wherever the consumer is located.

Thus, for the research purpose, Füller et al.'s (2009) definition of customer empowerment as "any means strengthening a person's perception of self-determination and self-efficacy and reducing conditions contributing to feelings of powerlessness" (pp. 74-75), will be adopted to test the relationship between customer empowerment and customer engagement in the conceptual framework.

1.4.4 Summary of Research Gaps

In summarising the above, it is possible to highlight the following:

1. Customer engagement in marketing campaigns has received relatively little attention, in particular the mobile marketing communications context remains unexplored.
2. The existing literature on customer empowerment in relation to mobile communications is limited.

3. There is an absence of a unified scale to measure the engagement construct.
4. There is a general lack of understanding of engagement and its motivations.

1.5 Research Question

Given the gaps in the literature, the main research questions for this research are the following:

- 1- To what extent does customer engagement affect customer empowerment?
- 2- What are the antecedents and consequences of customer engagement and empowerment via mobile handsets?
- 3- To what degree do demographic factors influence the relationships between these variables?

1.6 Research Objectives

In responding to the research question on the relationship between engagement and empowerment of customers in mobile communications, the following research objectives are proposed:

- 1- To develop a scale to measure the customer engagement construct.
- 2- To evaluate the relationship between customer engagement and empowerment.
- 3- To investigate the antecedents and possible consequences of customer engagement and empowerment.
- 4- To investigate the impact of moderating factors that influence customer engagement and empowerment.

1.7 Research Context and its Importance

The research context is Saudi Arabia due to the growing interest in the mobile industry by both companies and consumers that is shown by the high penetration of mobiles at nearly 200% (CITC, 2011). A further reason is the author's easy access to Saudi communities and advantage in speaking the native language, Arabic. Furthermore, the majority of the population is categorised as youth and in their early stage of maturity (CDSI, 2010), which highlights the importance of winning their loyalty in a competitive market.

The Kingdom of Saudi Arabia (KSA) national census carried out in 2010 found that the population reached more than 27 million, of which 68.9 per cent were of Saudi nationality and 31.1 per cent foreigners, who number around 8 million. The demographic data shows that 50.9 per cent were male and 49.1 per cent were female. It was found that the most populated provinces are Riyadh (23 per cent) and Makkah (22 per cent), located on the west side of the country near the Red Sea. Third is the Eastern province located on the Arabian Gulf, with 15.5 per cent (CDSI, 2010). The size of families has been decreasing to reach an average of 4.6 members per family in 2009, down from 6.2 members in 1985. The life expectancy rose to 70 in 2008 compared to 61 in 1980 (Alqitsadiah, 2009).

In terms of economic factors, the GDP growth for 2011-2012 was estimated to be 7.5% based on 2009 which was estimated at US\$ 578.566 billion (GFM, 2010). The official GDP in 2010 was nearly £1.280 billion (MOEP, 2010). The main income comes from crude oil exportation and the petrochemical sector, which represent nearly 90 per cent. The other 10 per cent comes from diversified products, agriculture and manufactured products. The average age for marriage for men is 25.4 years old while for women it is 20.2 years old, based on a 2007 survey. Family expenditures reach nearly £1000 on a monthly basis according to a survey made by CDSI in 2000 and this is expected to grow due to inflation.

Communication technology has developed considerably since the liberalisation of the telecommunication sector in 2005. Three operators share the market: Saudi Telecommunication (STC), Mobily and Zain, along with two mobile virtual network operators (MVNO) Virgin Mobile and Friendly Mobile, which launched in 2014. Landline penetration reached 15.2 per cent and broadband reached 44 per cent in 2011, while there were 11 million Internet users (CITC, 2011). Internet penetration in the Kingdom is higher than the world average by 28.7 per cent, by the Arab States' average by 24.9 per cent and by the developing countries' average by 21 per cent, but is lower than the developed countries' average by 71 per cent (CITC, 2010). For wireless services, Saudi Arabia was the top country in terms of mobile penetration at 188 per cent in 2010 (Fredriksson et al., 2011). Mobile subscribers in 2011 jumped to 53.3 million which represents a 191 per cent penetration of the whole population, compared to 14 million in 2005. It is higher than the world average of 67 per cent, the developing countries' average of 57 per cent and the developed countries' average of 114 per cent. In addition, more than 50 per cent of KSA's population is comprised of youths and young professionals (CDSI, 2010).

The telecommunication sector showed healthy turnover according to the Oxford Business Group (OBG). STC operating revenues alone reached \$13.53 billion in 2009, up 6.9 per cent from \$12.66 billion in 2008. However, net income for the year fell 2% to \$2.89 billion from \$2.94 billion the previous year. Mobily operating revenues rose 21 per cent to reach \$3.48 billion from \$2.88 billion in the previous year, while the net income rose 44 per cent to \$804 million from \$558 million in 2008 (OBG, 2010). It has been forecast by OBG that nearly \$90 billion will be spent on the ICT infrastructure in Saudi Arabia by 2012, and \$67 billion is projected to be spent on the telecommunications sector. Moreover, the amount invested in the infrastructure will reflect positively on the growth of the national economy.

The economic factors along with the social development of life style and family spending promote the importance of the context to be study. Further, examines the role of ICT in changing customer behaviour.

1.8 Contributions and Implications of the Study

A key point of examination in a Doctoral thesis is some measure of 'contribution' to knowledge, yet surprisingly little discourse can be found on the subject of what constitutes a contribution. Corley and Gioia (2011) classified contribution to knowledge into two theoretical dimensions, namely, originality and utility. Originality represents the value-added contributions to the accumulated body of knowledge, which can be incremental or revelatory as progressively advance the understanding of a certain issue. Utility represents the usefulness of the contribution which can be practical or scientific as advancement to improve conceptualisation or a particular idea specification or its potentiality to be tested and operationalised, see figure 1-1 for research implications illustration. It goes in line with Sandberg and Alvesson's (2011) argument of contribution based on gap-spotting in literature via neglected spotting, under-researched areas, as the case in customer engagement and empowerment. It differs from confusion mode as in spotting confusion in existing literature throughout competing explanation. Also, differs from application spotting mode as looking for a shortage in a specific theory or perspective in particular area and provide an alternative perspective. Both of these modes are not in the context of this research.

Figure 1-1: Research Implications

Originality	Revelatory	4	1
	Incremental	3 X	2 X
		Practically useful	Scientifically useful
		Utility	

Note: the X letter in boxes 3 and 2 indicate the areas where the incremental contribution of this study lies. Adopted from Corley and Gioia (2011).

Hence, this research has made advancement in knowledge in relation to customer engagement, customer empowerment and the Technology Acceptance Model (TAM) literature in the context of mobile marketing as incremental contribution. It builds upon early research in marketing field by developing scale for customer engagement as a response to Leeflang's (2011) and to test out its relationship with other constructs, in the conceptual framework, as an extension of van Doorn et al. (2010), van Doorn (2011), Brodie et al. (2011) and Brodie et al. (2013), works on customer engagement from a behavioural lens. The relationship between customer engagement and customer empowerment was significant. Subjective norms and information seeking were significant to customer empowerment, while only subjective norms were significant to customer engagement. Perceived usefulness was significant to customer engagement and customer empowerment, while perceived ease of use was insignificant to both of them. In addition, behavioural intention was significant to customer empowerment. Hence, this research provides incremental contributions in both practical and scientific forms based on Corley and Gioia's (2011) framework. See Chapter Nine for further details.

1.8.1 Theoretical Contribution

This research is intended to assist in understanding the role of mobile technology in communicating with customers. The nature of the interactive dialogue carried out via these technologies provides marketing studies with an important opportunity to understand customer behaviour in the communication process. Hence, the focus of this study was to find out how customers use mobiles as a medium to communicate with business before and after the launch of a marketing campaign. Furthermore, it tested the level of customer engagement and empowerment via development of measurement scale to customer engagement, which is a significant contribution to the literature on customer behaviour. However, the scale development could be considered as an important output in itself, as it will theoretically improve researchers' understanding and help to advance the knowledge in the mobile marketing communication field. More precisely, it could provide a basic understanding of customer engagement behaviour and customer empowerment to help improve targeting the appropriate segment. Hence, the scale would empirically assure its importance by improving research' perceptions in the communication field. Moreover, it will enable researchers to assess marketing campaign success in different market sectors.

The other important aspect of this study is to understand customer-to-customer communication about products and the way it could evolve in social network media. Although many studies have been conducted on mobile advertising to test the customers' acceptance of receiving advertising on their handsets, little has been conducted on understanding this technology as a way to engage and communicate with customers. The research will enhance theoretical understanding of the way customers communicate in marketing campaigns. Hence, this study helps to fill the gap in literature by exploring the implications of such technology in business communication strategies to advance further knowledge.

1.8.2 Practical Implications

The implication of this study on the managerial level is in terms of business communication strategies. Understanding customer behaviour after marketing campaigns would help to improve companies' return on investment (ROI). Further, it helps in targeting and managing the communication process in such an environment. In addition, understanding the customer empowerment conferred by such technology and how it is used would help to enhance the prediction of customer behaviour, and how it could be better targeted and segmented in campaigns. This would impact on relationship management practices to enhance customers' loyalty.

The study provides a measurement scale, which companies could use to test their effectiveness in launching a campaign. Moreover, it would improve their customers' relationships with their products and enhance the communication experience, bearing in mind that this is the heart of any interaction. It also helps companies to manage customers' perceptions in the virtual environment and minimise negative side effects. Further, the pressure of social presence around a customer could be capitalised on by increasing the exposure of advertisements in social media sites and increasing their products presence where friends or followers would influence a customer decision to buy a product.

Mobile phone is the new frontier for business growth in the future and marketers should incorporate mobile communication into their balanced score card (BSC) for their performance in long and short term communication strategy. It also, can be embedded in integrated marketing communications strategy to target the right customer and deliver a coherent message to get customer engagement.

1.9 Thesis Structure

Following on from the objectives outlined above, below the rest of the thesis is organised, as follows:

Chapter Two: Literature Review

In Chapter Two, the context for this study with regard to current mobile marketing communications literature is established. The review begins with a descriptive account of the rise of mobile media. This is then expanded to examine previous research into mobile marketing. Thereafter, consumer perception of mobile advertising in Saudi Arabia is explained. This is followed by a review on the two central constructs in this thesis: engagement and empowerment. The concluding section examines the theoretical foundations underpinning the research.

Chapter Three: Conceptual framework and Hypotheses Development

In Chapter Three, the fundamental theory Technology Acceptance Model (TAM) is the appropriate to this research and discussed in detail. Then, the development of hypotheses is discussed in relation to the conceptual framework.

Chapter Four: Methodology

In Chapter Four, the methodology adopted in this research is explained. Research philosophies and approaches are compared and detailed justification of the chosen approach given with its pros and cons in addressing the research questions. Thereafter, research strategy types are described and further explanation given of which is selected, including the sampling size. Then, questionnaire design along with the measurement scale is detailed and the development of an engagement scale explained, followed by discussion of the chosen data collection instrument and sample characteristics. Next, the analytical procedure chosen is detailed. Finally, the structural equation modelling (SEM) technique employed in this research is discussed, followed by consideration of ethical issues.

Chapter Five: Development of Engagement Scale

In Chapter Five, the normality test and outliers are discussed. Then, the purification process for the developed scale is explored, followed by the findings of exploratory factor analysis (EFA) of the customer engagement scale with the first dataset. Thereafter, confirmatory factor analysis (CFA), carried out to purify the engagement scale, is reported, followed by reliability and validity testing.

Chapter Six: Measurement and Structural Model

In Chapter Six, the measurement model and examines its findings based on the second dataset are discussed. Then, the structural model along with the findings is discussed in further details in the light of the proposed theoretical framework. Thereafter, reliability and validity tests are examined along with the marker variable.

Chapter Seven: Hypothesis Testing

Chapter Seven examines the research hypotheses and their findings in relation to the theoretical framework and in the light of the literature review chapter. It concludes with a summary of which hypotheses are supported and not supported.

Chapter Eight: Discussion

In Chapter Eight, the main conclusions drawn from the research findings are summarised, the measurement development, and the structure model are discussed. Thereafter, the conceptual framework model and the tested hypothesised relationships are discussed, in relation to the research question and objectives.

Chapter Nine: Conclusion

Chapter Nine illustrates the main contribution achieved by conducting this research at both theoretical and practical levels. The final part of this chapter discusses research limitations and future research directions.

CHAPTER TWO: LITERATURE REVIEW

2.1 Introduction

The purpose of this chapter is to establish the context for this study with regard to current mobile marketing communications literature. The reviewed literature explains the rise of mobile media, and previous research into mobile marketing is discussed and critically examined. After that, consumer perception of mobile advertising in Saudi Arabia is explained. Then, engagement behaviour is reviewed and its relevance to the mobile marketing communications is explained. The concept of empowerment behaviour is also examined and reviewed in regard to mobile marketing. Theoretical lenses and underpinnings relevant to this research are discussed and reviewed, followed by summary remarks.

2.2 The Rise of Mobile Media

Media channels such as the medium of television are considered to be the means to deliver messages. The effects of these channels vary according to their nature, and the features and the context of the message. The situation of receiving a message and geographical or physical boundaries limit the effectiveness of individual feedback. In addition, the vast range of media channels is difficult to detail and test. Therefore, two recently emerged media, the Internet and mobile handsets, are the focus of this research. These media can be encompassed in Keeler's (1995) definition of cyber-marketing as the use of e-media, e.g. the World Wide Web, multimedia and virtual reality.

The development of the Internet can be traced back to the first e-mail message sent in 1979 at North Carolina University, and the word 'Internet' itself is shorthand for "Interconnecting networks". In 1991 an important step in advancing the core idea of the Internet was the development of the hypertext system which enabled the linkage of several documents in multiple windows, and this led to the beginning of context enrichment (Lin and Atkin, 2002).

Mobile phones were introduced to a consumer market in the 1980s, starting with 1G and reaching 4G in 2012. According to Green and Haddon (2009), the International Telecommunications Union (ITU) focused on standardising the network operation protocols to enable roaming services worldwide but not enough attention was paid to mobile Internet, which betrayed a lack of vision with regard to personal communications services (Green and Haddon, 2009). A handheld mobile is a programmable device that first appeared on the market in 1999 and has become ubiquitous since 2003 (Sooryamoorthy, 2014). However, things began to change as service providers introduced 3G services, and data plan packages. Since then, the role of smartphones in everyday life has gone from strength to strength, particularly for the younger generation (Rowles, 2013).

2.2.1 Mobile Internet

The growing use of smartphones and the use of mobile Internet paved the way for emerging mobile commerce (m-commerce). This technology promises a new frontier for marketplace exchanges of goods and services. Researchers started to examine the importance of this technology in customer behaviour and factors influencing mobile adoption. According to a study by Bruner and Kumar (2005), consumers are likely to have favourable attitudes to adopting mobile devices both for entertainment value and practical purposes. The study applies the TAM to test how utilitarian and hedonic aspects drive consumer adoption, and the results show that perceived usefulness (utilitarian aspect) contributes to consumer adoption of Internet devices, but fun attributes (hedonic aspect) contribute even more. Moreover, it suggests that an important way to increase the fun associated with using a device is to make it easy to use (Bruner II and Kumar, 2005). The study concludes that marketers may need to emphasise both the usefulness aspect as well as the fun aspect in communication with their target markets.

Furthermore, mobile users rely on their mobile devices to guide them through every step of the purchase process (San-Martín et al., 2013). According to Millennial Media/comScore's mobile retail study (2011), more than half (52 per cent) reach for their mobile phones to determine if they need a product; 42 per cent of consumers research products on their phone to decide which products best satisfy their needs; 38 per cent use mobiles when making a purchase; 29 per cent when comparison shopping for a specific product; and 12 per cent for evaluating a product post-purchase (MillennialMedia/comscore, 2011).

Further research has established the importance of customer loyalty in mobile commerce. Lin and Wang (2006) developed a customer loyalty model in m-commerce based on the TRA. The results show that customer loyalty was affected by customer satisfaction, habit, perceived value and trust. Moreover, customer satisfaction plays a crucial intervening role in the relationship of perceived value and trust to loyalty. The results consistently supported prior studies, in which both perceived value and satisfaction were significant predictors of customer loyalty. Furthermore, repurchase behavioural intentions are partly the product of a rational assessment of perceived value, trust and customer satisfaction, and the results showed that repeat mobile purchase intentions are also the product of habitual prior usage. The study suggests that in order to improve customer loyalty, m-commerce practitioners must continuously work to improve the value perceived by consumers. Likewise, marketers should increase the quality of their content, product, service and system, paying more attention to the pricing strategy of their products/services to appear competitive (Lin and Wang, 2006).

In the same field of mobile commerce research, Kim et al.'s (2007) study examines the adoption of Mobile Internet (M-Internet) as a new Information and Communication Technology (ICT) from the value perspective. M-Internet is a fast growing enabling technology for m-commerce (Cheong and Park, 2005). However, despite its exceptional growth and although M-Internet

essentially provides the same services as non-mobile Internet, its adoption rate in many countries is very low compared to that of non-mobile Internet, which had increased via the emergence of online retailing (Childers et al., 2002). The TAM was used to explain the adoption of M-Internet with four antecedents (usefulness, enjoyment, technicality, and perceived fee). Also, the study adopted the theory of consumer choice in the economics and marketing traditions to develop the Value-based Adoption Model (VAM) to explain technology adoption. It found that value perception is a major determinant of M-Internet uptake by testing the mediating affect of perceived value on the relationship between a customer's benefit and sacrifice-related beliefs and the customer's adoption intention. As perceived value is a prominent factor in understanding M-Internet adoption, hence adoption of M-Internet is a prerequisite for the adoption and increase of M-commerce (Kim et al., 2007). Furthermore, providing customers with the right products (such as a mobile website that enables them to search, view, compare and purchase, with a flexible returns and refunds policy) would enable mobile shopping to flourish (Wu and Wang, 2006), and increase pressure on marketers to anticipate the future of marketing strategies (Danciu, 2013). Mobile subscriptions worldwide are anticipated to reach over 9 billion by the end of 2019, and 80 per cent of these subscriptions will be for mobile broadband; moreover, a 10 fold growth in mobile data is predicted in 2013 - 2019 (Qureshi, 2014).

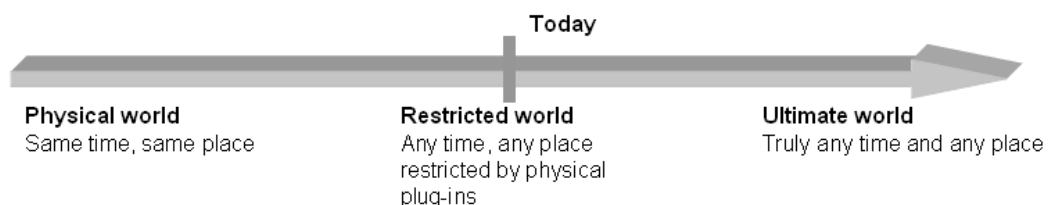
This is particularly relevant in the Saudi Arabian context, given the recent growth of Internet subscribers to 43 per cent of the population (11.8 million users) together with the high penetration of mobiles at 191 per cent, representing 53.3 million subscribers (CITC, 2011). According to a recent report from STC, the biggest telecommunication company in Saudi Arabia, the vast majority of consumers access their network via Nokia handsets (83 per cent) followed by Blackberry (2.76 per cent) and Apple (1.83 per cent). Furthermore, 42.85 per cent of all handsets have 3G capability while 57.14 per cent are still on 2G, which indicates that a growing number are shifting to 3G (STC, 2011). Moreover, the global mobile handset market is moving towards

smartphones, which have more features and capabilities, and are more data-intensive. ABI research in 2011 forecast that the prevalence of smartphones would triple between 2008 and 2015 and shipments of smartphones will reach 650 million by 2015, representing almost 40 per cent of overall mobile device shipments (Solis, 2011). In Saudi Arabia, smartphone uptake is forecast to grow by 12.4 per cent in 2016/17 (Eruomonitor, 2013). Hence, these technological developments and Saudi Arabians' growing acceptance of them give rise to the question of their potential role in marketing communications in the Saudi context, which warrants investigation.

2.2.2 Mobile Ubiquity and Commerce

Mobile marketing communication relies heavily on mobile attributes and, more importantly, on the ubiquity element. Ubiquity means people are able to access networks and can be reached anytime and anywhere via an access point, e.g. tablets and mobile devices. Perceived ubiquity is considered to be a multidimensional construct consisting of continuity, immediacy, portability, and searchability (Okazaki and Mendez, 2013). It is also defined as a person's perception of mobile wireless technology which provides personalised and uninterrupted connection and communication between individuals or networks (Kim and Garrison, 2009). Ubiquity commerce is the natural evolution practice of e-commerce and mobile commerce, shifting from point-of-sale transactions to point-of-convenience, regardless of the location of the transaction (Hong et al., 2008; Watson et al., 2002) – see Figure 2.1 below.

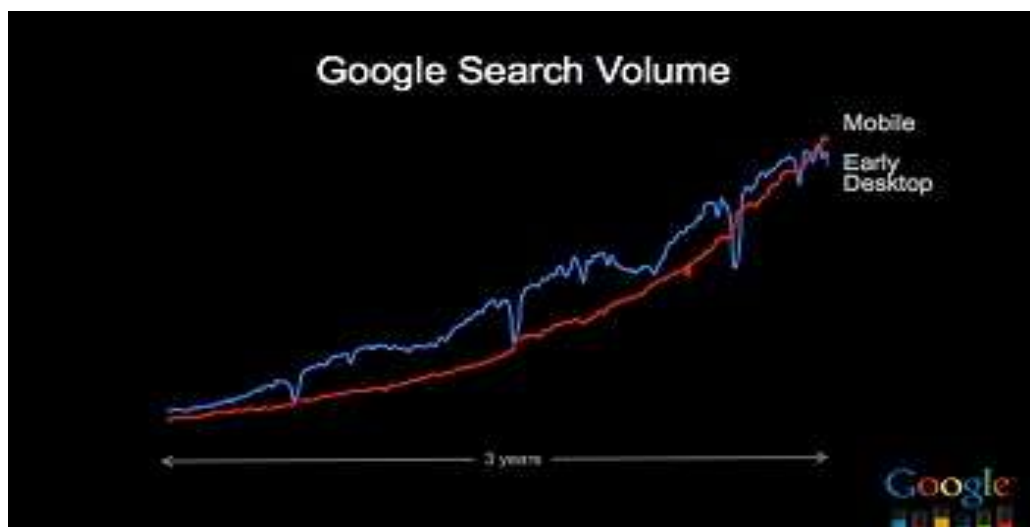
Figure 2-1: Mobile ubiquity



Source: Junglas and Watson (2006)

This theoretical perspective is supported by recent data from Google showing that in the past couple of years mobile search traffic on Google's search engine has grown five-fold, by 400 per cent. Mr. Singhal, a Google fellow, at a media event in San Francisco said, "Mobile search today is growing at a comparable pace to Google in the early years" (Singhal, 2011), as shown in Figure 2.2. Furthermore, Portio research stated that there were 480.6 million users of mobile e-mail worldwide in 2010 and the number is expected to grow four-fold by 2015 (Murphy, 2011).

Figure 2-2: Google search volume



Source: Official Google blog, 2011

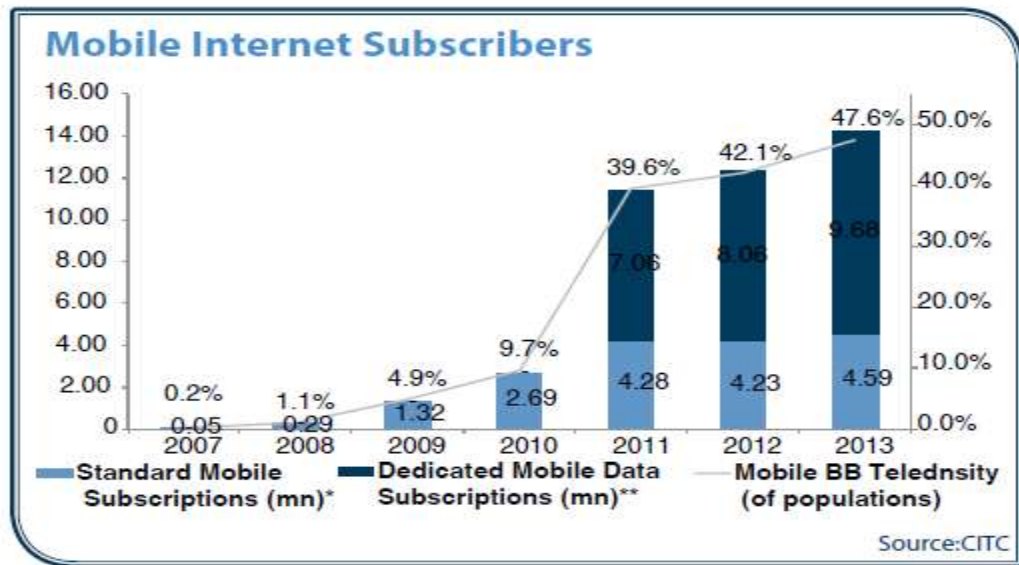
A recent survey carried out by TNS and a commission by Google about online shopping in European countries shows the UK has the highest age of people who make a purchase every month via smartphone: 32 per cent. Sweden comes second with 19 per cent, followed by Germany (15 per cent), Italy (8 per cent) and France (8 per cent) (Skeldon, 2014). However, countries with a higher rate of 3G connections enjoy greater Gross Domestic Product (GDP) per capita growth than countries with comparable total mobile penetration but lower 3G penetration (Bilbao-Osorio et al., 2014). On the rank index of the 2013 Global Information Report, Saudi Arabia moved up to 31, compared to 2012 when it was 34 in regards to network readiness (Bilbao-Osorio et al., 2013). Moreover, Saudi Arabia came second on mobile subscription worldwide

after Hong Kong for the second time in 2011-2012. Mobile communication is the fastest diffusing medium in history (Castells et al., 2009).

According to Bilbao-Osorio et al. (2013), there is a positive relationship between the volume of mobile data used by each 3G connection and increases in economic growth. They state that if countries doubled their consumption of mobile data per 3G connection between 2005 and 2010, across a sample of 14 countries, these countries would have experienced a growth rate of GDP of 0.5 percentage points each year. Hence, mobile data usage per 3G connection has a positive effect on the growth rate of GDP per capita.

Furthermore, smartphone penetration in the Arab region is increasing; in the United Arab Emirates it represents 74 per cent, Saudi Arabia 73 per cent, Egypt 26 per cent and Kuwait 26 per cent, with 47 per cent on average in the Arab world – this opens the door for mobile payment. In fact, according to the PayFort report (2014), the high penetration of smartphones enabled users to shop using their handsets and make transactions using mobile payment channels. In Saudi Arabia no less than 47 per cent of mobile spending occurs on airline tickets and mobile applications (PayFort, 2014), led by the growth of mobile internet which reached nearly 48 per cent in 2013 (Nazar and Al-Jubran, 2014), see figure 2.3, and ranked 39 by the United Nations Educational, Scientific and Cultural Organization (UNESCO) in 2014 (Biggs et al., 2014).

Figure 2-3: Mobile internet subscribers in Saudi Arabia



*Wimax, Internet Dongle, 3G/4Gmodems

** 3G/4G connection on mobile devices

Source: Nazar and Al-Jubran (2014)

However, mobile data will bring a surge in the growth of m-commerce as a consequence of mobile penetration. According to the Cisco report (2014), 3G smartphones represented only 27 per cent of total global handsets in use in 2013, but represented 95 per cent of total global handset traffic. In 2013, the typical smartphone generated nearly 50 times more mobile data traffic (529 MB per month) than the typical basic-feature cell phone (i.e. 2G). Moreover, in 2013 mobile data traffic was nearly 18 times the size of the entire global Internet in 2000. One exabyte of traffic traversed the global Internet in 2000, and in 2013 mobile networks carried nearly 18 exabytes of traffic (Cisco, 2014). It is expected that global mobile data traffic will surpass 15 exabytes by 2018.

According to Banerjee (2008), consumers who prefer to shop anytime anywhere use the internet in a variety of ways and show greater willingness to use and pay for mobile Internet. Furthermore, consumers who spend more time on shopping-related tasks are more open to receiving advertisements via

their mobile handsets. Mobile advertisements were more significant in public locations than private ones through location-based services.

2.2.3 Consumers' Perceptions of Mobile Advertising in KSA

In 2009, Alotaibi (2011) conducted a survey in KSA to explore the attitude of mobile handset holders toward mobile advertising based on a questionnaire distributed in three shopping malls. The study consisted of a sample of 110 respondents, of whom 46 per cent were female and 54 per cent were male. Respondents were categorised in six age ranges, with the highest proportion of respondents (51 per cent) aged 15-25, 31 per cent between 26 and 35, 10 per cent aged 36-45, 5 per cent aged between 46 and 55, 3 per cent over 56 years old and only 3 per cent under 15 years old. The age distribution of participants reflected statistics of the Saudi Arabia population, of whom more than 50 per cent are regarded as 'youth'.

The respondents' professional status was categorised into five types. Employees represented 45 per cent of the respondents, which was the largest group. Students represented 43 per cent, 8 per cent were self-employed, 4 per cent were housewives and only 1 per cent were retired. In the questionnaire, respondents who had received a mobile advertising message (96 per cent) were asked about their reaction when they got it. The highest proportion (45 per cent) read it right away, while 35 per cent deleted it, and 15 per cent of respondents read it later. Most of these received messages (85 per cent) were in SMS, which is the dominant format of mobile advertising in Saudi Arabia.

In addition, the respondents were asked about their feelings when they received mobile advertisement messages. The survey revealed that nearly 56 per cent either strongly agreed or agreed that they often felt annoyed. Conversely, 44 per cent felt positive or neutral towards the advertisements. When asked if the advertisements were entertaining, 66 per cent of

respondents disagreed or strongly disagreed, a minority of 10 per cent expressed neutral opinions, whilst 24 per cent agreed or strongly agreed that the received messages were entertaining. Respondents were also asked if the messages were informative; 33 per cent believed that the messages were informative, 15 per cent gave neutral responses and 52 per cent believed they were not informative. Moreover, the respondents generally agreed that they did not forward the messages to their friends. The result showed that the highest proportion of respondents (83 per cent) either disagreed or strongly disagreed that they would forward the messages to friends, a minority of 9 per cent agreed, while 9 per cent neither agreed nor disagreed.

In terms of incentive-based advertising messages, the result showed a dramatic change in attitudes toward mobile advertising; the majority (72 per cent) of the respondents would accept incentive-based advertising messages. In contrast, other respondents showed disagreement with accepting messages on that basis, 21 per cent either disagreed or strongly disagreed. Only 6 per cent of respondents had not made up their mind. Furthermore, 71 per cent of respondents would accept the exchange of advertisement messages for free minutes or texts. Respondents, who disagreed or strongly disagreed represented 20 per cent, while 9 per cent neither disagreed nor agreed. Finally, the respondents who agreed to incentive-based advertising were asked how many messages they would expect to receive per day; 52 per cent of them said they would like to receive 1-3 messages, 17 from 4-7 and 10 per cent from 8-10, while 21 per cent disagreed about the incentive-based advertising concept. These results clearly support the assumption that incentives can change attitudes, making them positive. However, the credibility of the messages was an important factor to consumers. Of the respondents in Saudi Arabia, 51 per cent believed they would trust advertisement messages sent by the carrier more than the advertising company itself or the brand directly.

Moreover, these findings are consistent with Al-Meshal and Almotairi's (2013) study which confirmed that providing information, content sharing, content access, personal attachment, and perceived value were antecedents to mobile marketing acceptance by women in Saudi Arabia. Further, Saudi women believe that their culture's changes and technological advancements have a positive impact on their lifestyles (Al-Meshal and Almotairi, 2013). The next section will discuss the previous research on mobile communication marketing.

2.3 Previous Research on Mobile Communication Marketing

Several academic studies have been conducted on mobile commerce and consumer acceptance of mobile advertising. According to Merisavo et al. (2005), Barwise and Strong (2002) conducted the first empirical study on incentive-based mobile text message (SMS) advertising in the United Kingdom. In their study, respondents received more than 120 messages during the six-week trial period and were paid a £5 fee on recruitment, and £0.05 per message. The findings show that 51 per cent were very satisfied and 42 per cent fairly satisfied. Moreover, 84 per cent stated that they were likely to recommend the service to their friends. Consequently, the findings show that almost all of the respondents were satisfied or very satisfied. In addition, most of them (81 per cent) read all messages, 63 per cent responded or took action and 17 per cent forwarded at least one message. The findings suggested that mobile advertising works best for marketing simple and inexpensive products and services (Barwise and Strong, 2002). Other research started to approach an understanding of the effect of mobile marketing and conceptualise it by looking at the bigger picture (e.g. Pousttchi and Wiedemann, 2006).

Multimedia Message Services (MMS) provide more multimedia communication with entertainment effects than the text-based SMS according to Hsu et al. (2007). The study applies innovation diffusion theory to examine the factors that influence the adoption of MMS. Their study proposed a model that was empirically tested. Their findings indicate that perceptions of use were different

across various stages of innovation diffusion theory phases. Further, there was a significant difference between potential adopters and users. The study shows that consumers adopt MMS because of its relative advantages to users (Hsu et al., 2007). The rapid growth of mobile phones and other mobile devices has opened up a new channel for marketing. The use of the SMS to get to customers through their handheld devices is gaining popularity, making the mobile phone the ultimate medium for one-to-one marketing. Tsang et al. (2004) conducted an investigation into consumer attitudes towards mobile advertising and the relationship between attitude and behaviour; they found that consumers generally have negative attitudes toward mobile advertising unless they have granted consent, and there is a direct relationship between consumer attitudes and consumer behaviour. Hence, the study suggests that sending SMS advertisements to potential customers without prior permission may result in negative consequences (Tsang et al., 2004); a similar finding was obtained in India, where negative attitudes towards mobile advertising generally prevail (UI Haq, 2012).

Mobile communication technology offers companies the opportunity to communicate directly with their consumers, anytime and anywhere. Scharl et al. (2005) examine the success factors of mobile marketing by investigating the highly adopted form of mobile communication, SMS, via a quantitative content analysis of the Fortune Global 500 Websites and qualitative interviews with European experts. One of their important findings was that advertisers should have permission and convince consumers to 'opt-in' before sending advertisements (Scharl et al., 2005), which goes in line with findings in developing countries such as Bangladesh (Hossain and Bahar, 2013).

Another study involving 1,028 respondents was conducted by Bauer et al. (2005), which identified entertainment and information values as the strongest drivers of mobile advertising (m-advertising) acceptance. The findings suggest that in order for consumers to develop a positive attitude towards mobile

advertising, messages have to be creatively designed and entertaining (Bauer et al., 2005). However, provision of good information valued by the customer will also enhance the overall acceptance of m-advertising. That supports the findings of Watson et al. (2013); the general attitude towards mobile advertising acceptance is negative, whilst trust in a company is significantly impacted by the appearance, entertainment, value and functionality of a mobile website. They also identified that smartphone users felt more strongly about delivery in these areas than users of older technologies; expectations are increasing. However, some pull technologies, such as Quick Response (QR) codes, have considerable potential to supplant text-based mobile marketing communications and help marketers to overcome consumers' negative attitudes towards mobile marketing communications. In contrast, Raines (2013) found in-app pull-based mobile advertising generated negative attitude toward ads. However, consumers respond more positively towards QR code advertising than they do towards SMS advertising, because they feel more in control (Watson et al., 2013).

A cross-cultural comparison of Korean and American consumers found that on average Koreans used mobile devices for a longer period of time than Americans. It also found that Americans used their mobile devices and the Internet more than Koreans (Choi et al., 2008). Moreover, American consumers generally showed more positive evaluations of mobile advertising than Korean consumers did, while young Korean consumers' attitudes toward SMS advertising are more positive than Americans'. Interestingly, American consumers showed higher scores on the key variables of attitude, purchase intention and value than Koreans. However, perceptions of the informativeness factor varied between them. Among American consumers, informativeness positively influenced attitudes toward mobile advertising, while for Korean consumers, the perceived value of mobile advertising positively influenced attitude. Moreover, informativeness and irritation did not have any significant effects on Korean consumers. It was concluded that people in low-context cultures such as the US tend to favour sufficient information in an explicit

format more than those in high-context cultures such as Korea. The study concluded that informativeness was the most important predictor of value, followed by credibility, control, and irritation in Americans. In another study, for Koreans, perceived control and informativeness appeared as strong influencers of mobile advertising value, followed by two-way communication and credibility and found the Koreans were found to be more positive than American towards SMS advertising (Choi et al., 2008; Muk and Chung, 2014). Similarly, in New Zealand young users were more willing to accept permission-based location-award mobile advertising as their attitude is influenced by content being entertaining, informative, not irritating, and including some form of incentive, while subjective norm plays an important role in users' confidence (Richard and Meuli, 2013).

Another cross-cultural study carried out by Gao et al. (2013) found consumers' express permission for mobile marketing increases the positive influence of attitude on mobile marketing activities. The results show that in all three markets (US, China and Europe), consumer attitude toward mobile marketing was influenced by personal attachment, innovativeness and perceived usefulness, while in China and Western Europe it was further reduced by consumers' risk avoidance (Gao et al., 2013). Similarly, with regard to using mobile coupons, it was found that customers would accept using them as social pressure encourages them to do, which consequently minimises the risk of disclosing their information (Im and Ha, 2013).

According to Turel et al.'s (2007) study, wireless value-added pay-per-use services, such as SMS, have attracted increased attention in recent years. The study examined SMS adoption by combining marketing and information system perspectives through an empirical survey of 222 young-adult SMS users in North America adopting the Unified Theory of Acceptance and Use of Technology. The results showed that perceived value affects users' behavioural intentions. Furthermore, perceived value consisting of price,

emotion and quality supported the notion of the effect of the overall perceived value on behavioural intention and was found to be critical drivers in the adoption decision apart from social value.

Another study was conducted on Japanese youth to find out the effect of mobile word of mouth (WOM) and the result was in accordance with the premise of the high/low context culture theory (Okazaki, 2008). The results indicated that consumers who learned of the campaign via e-mails forwarded by their peers accepted their recommendations even when they were not very interested in the subject. Because of strong social ties, teenagers are likely to use mobile WOM to satisfy both entertainment and predetermined instrumental purposes.

A study of the acceptance of SMS advertising among young Chinese consumers carried out by Zhang and Mao (2008) found two key determinants of the Technology Acceptance Model (TAM); perceived usefulness and perceived ease of use of SMS advertising messages, predicted the intention to use them. The study also found that trust in SMS advertising and subjective norms also contributed to the intention to use and, overall, the developed model is well supported. Trust greatly increases users' perceptions of the usefulness of SMS advertising when they are confident to act on the ads and mobile applications (Janson et al., 2013). Hence, SMS advertising is a reasoned action, and it can therefore be studied with a Theory of Reasoned Action derived model such as the TAM (Zhang and Mao, 2008). This is in line with Parreño et al.'s (2013) findings, which confirm that perceived usefulness reduces irritation. Furthermore, entertainment, irritation and usefulness are key drivers of teenagers' attitudes toward mobile advertising acceptance (Parreño et al., 2013; Chokera, 2014). However, QR codes generate more positive responses among customers, and are considered an effective form of mobile marketing communication. Hence, it is deemed to be a profitable medium to

communicate with consumers who use their mobile phones for shopping (Ryu, 2013; Di Betta and Lucera, 2013; Cata et al., 2013).

Another study, conducted by Rettie et al. (2005), analysed 26 different mobile advertising campaigns and 5,401 respondents, and found that overall acceptance of SMS advertising was 44 per cent. Also, 89 per cent read most of the messages they received. Moreover, around 5 per cent of respondents forwarded the ad to friends. Overall, acceptance was significantly correlated with campaign interest, campaign relevance, and monetary incentives. This corresponds with Pescher et al.'s (2014) findings; high ties users would forward the ads, which created viral marketing via mobile, but a disadvantage of such practice was the forwarding of messages to consumers on whom they have limited impact. Hence, the viral marketing process may lead to a high number of referrals that are ignored by their receivers, which might potentially limit the success of the campaign (Pescher et al., 2014) .

While most of the previous studies highlighted the necessity of prior permission to accept mobile advertising, others found it unnecessary. For example, Peters et al. (2007) carried out an in-depth study and found that consumers in the target market did not necessarily have negative attitudes toward wireless advertising. Furthermore, they could be motivated to adopt wireless advertising messages without prior permission. The study adopted the TAM based on usefulness and ease of use, but found that there were many other important elements to consumer behaviour in the context of wireless advertising adoption, expressed as process motivation, socialisation motivations and content motivations (Peters et al., 2007). Another study explored the managerial perspective of strategic adoption of mobile marketing. It founds that managers from Europe, Japan and the US were more likely to adopt the wireless message advertising strategy if it would help to build the brand (Okazaki and Taylor, 2008; Okazaki et al., 2009), without jeopardising the privacy of customers (Okazaki et al., 2009).

The growing awareness of the mobile handset as a media vehicle to market goods and services has led to the emergence of mobile commerce. Mort and Drennan (2007) developed a system of relationships and used structural equation modelling to test the factors influencing the use of m-services, in the context of consumers' existing relationships with mobile devices. They found that m-service use was strongly related to the perceived importance to consumers of mobile phones as a product category, and the importance of the purchase of their own particular mobile phone. Thus, the results indicate that while the perceived utilitarian value of mobile phones drives both involvement in the mobile device itself and purchase involvement, perceived hedonic values drive only purchase involvement when an individual is deciding which particular phone to buy for their own use (Mort and Drennan, 2007). According to Bauer et al. (2005), their study identified that entertainment and information values were the strongest drivers of mobile advertising acceptance. The researchers suggest that in order for consumers to develop a positive attitude towards mobile advertising, mobile advertising messages must be creatively designed and entertaining. Moreover, the relevance of information provided via messages and valued by customers will also enhance the overall acceptance of m-advertising (He and Mo, 2013).

Moreover, another study was carried out to examine the trust factor in relation to attitude to and recall of mobile advertising messages (Okazaki et al., 2007). The types of product tested proved that it is essential to take into consideration the product life cycle and the context of the message. Hence, the study's conclusion opened up a potential gap by considering that there might be a relationship between the three elements (product type, cycle and group age), which could be tested to verify the findings.

Indeed, considering the essential role of segmentation in defining the targeted customer, it is worthwhile exploring age groups, particularly the Y generation. This age group (between 14 and 31 years old) is recognised as being made up

of students and young professionals who have different patterns of consumption (Sullivan and Heitmeyer, 2008). The study revealed a great sense of product value and durability, provoked by socialisation, uncertainty reduction, reactance, self-discrepancy and feelings of accomplishment. However, Grant and O'Donohoe (2007) explore young people's motivations for using mobile phones. Older adolescents' everyday uses of traditional and new forms of mediated communication were explored in the context of their everyday lives. The study found that there is a universal appeal of mobile phones to a youth audience. It also found that entertainment and social-related motivations dominated, while information and commercially-orientated contact were less appealing. The study stated that young people associated commercial appropriation of this medium with irritation, intrusion and mistrust. The findings indicate little motivation among young people to use mobile phones to obtain commercial information or advice; instead, these devices were valued for their non-commercial, personal and socially-orientated uses. Hence, the findings suggest that for mobile marketing communications, the way forward is not pretending to be young consumers' friend, but rather offering content that helps them maintain or develop the personal friendships that matter to them (Grant and O'donohoe, 2007). Furthermore, the young consumers were more concerned with their friends and inner circle than their outer circle about products/services.

Bart et al. (2014), however, considered Mobile Display Advertising, including banners on mobile web pages and in mobile applications, one of the most popular types used by marketers for mobile advertising. The study covered 54 mobile displays advertising campaigns between 2007 and 2010 and involved nearly 40,000 consumers in the United States. It found that consumers' favourable attitudes and purchase intentions increased when the ads featured products with utilitarian aspects and high involvement (Bart et al., 2014). This is in line with findings of strong purchase intention being influenced by perceived ease of use and perceived usefulness (Morosan, 2013). However, Wu and Wang (2005), in a study carried out in Taiwan, found that just 29 per

cent of respondents were familiar with mobile commerce as a consequence of purchases intention, although 99 per cent of respondents had a mobile handset and 76 per cent of them were aged between 20–39. Although nearly 50 per cent of the respondents had a monthly income considered to be high, they were not engaged. It was found that the cost effect and risk had a significant impact in deterring them (Wu and Wang, 2005).

In regard to other continents, a study was carried out in China to investigate the most effective time for mobile advertising (Baker et al., 2014). It found that utilitarian products are most effective during morning hours, peaking between 10.00am and noon. In contrast, ads for hedonic products are most effective during the afternoon, peaking between 2:00 and 4:00pm. It also found that ads with utilitarian framing decrease the likelihood of consumer purchases on mobile devices by 80 per cent, while optimally framed mobile ad copies can boost purchase rates by 71.8 per cent. The findings suggest marketers should optimise timing, ad copy framing, and consumer segmentation to enhance mobile ad effectiveness in the field.

Kim and Han (2014) developed a comprehensive advertising model that combines a web advertising model, personalisation and flow theory in understanding the antecedents of purchase intention in smartphone advertising. Flow theory refers to a “fully immersed state that people experience when they act with total involvement” (p.258) which was originally introduced by Csikszentmihalyi and Lefevre (1989). The results show that personalisation has a positive association with entertainment, informativeness, and the credibility of the advertising message, whilst having a negative association with irritation. Purchase intention is increased by advertising value and flow experience. Furthermore, ad value has a positive relationship with credibility, entertainment, and incentives. On the one hand, flow experience is positively associated with credibility, entertainment and incentives. On the other hand, irritation negatively affects flow experience and advertising value

(Kim and Han, 2014). Their study also confirms that the relationships from personalisation to cognitive, affective, and economic factors and their relationships to advertising value and flow experience and the purchase intention chain is a mechanism that illustrates how customers respond to smartphone advertisements.

In terms of mobile information and entertainment services usage in relation to post-purchase behaviour, Pihlström and Brush (2008) found that positive WOM intention was influenced by the emotional and social values of the users. Moreover, emotional values had a stronger effect on information service users and social values had a stronger effect on WOM for entertainment service users. Entertainment services are used in a social context, so users express their impressions about them to friends. On the contrary, information services are more often used alone. However, the study emphasised that the core difference between information service and entertainment users in post-purchase behaviour was that information service users' behaviour is principally influenced by convenience value, in contrast to entertainment service users, for whom continuous service use is primarily influenced by emotional value. The study highlighted elements that affect post-purchase behaviour in relation to intangible products/services consumed over the mobile handset, but not tangible ones. In addition, the initial purchase decision has to be explored in depth before jumping to post-purchase decisions, particularly as some of these intangible products are categorised by high involvement, e.g. navigation system apps. However, Bijmolt et al. (2010) suggest that customer engagement could be examined by predicting the number of WOM referrals initiated by business-to-consumer (B2C), assuming that WOM communication positively or negatively affects firms' revenue by applying a truncated-at-zero negative binomial distribution (NBD) model which represents customer acquisition.

The previous studies can be categorised broadly into two main groups: the customer perspective of mobile advertising, and technology acceptance. They looked at mobile advertising as a new way to reach customers and how they would perceive it. Moreover, they focused on the attitudinal elements that captured their reaction when the ads reached them. They mostly examined the role of customer perception of mobile advertising but did not go beyond it. There is a lack of information on different kinds of products or services, which could offer the potential to advance knowledge. Thus, further research needs to be carried out to explore further products and services to see how that could affect the customer decision-making process and intention to purchase. Hence, mobile devices were considered as an interactive medium and capable of opening up a two-way communication loop; customer engagement in the marketing communication campaigns is the natural evolution from one way advertising. The potential gap of customer engagement over their smartphones was under looked by previous research; hence, it is an important gap to be bridge. The next section will discuss engagement behaviour in details and in relation to the marketing communication field.

2.4 Engagement Behaviour

The concept of engagement first came to academic attention due to the conceptual shift from a product-centric to a customer-centric organisation, which has been a topic of discussion for over a decade (Verhoef et al., 2010). However, in recent years in both managerial practice and academia, significant activities have emerged around the concept of customer engagement that represent a step closer to creating a stronger customer centricity, and this is starting to become recognised as an important new direction for customer management. Furthermore, the terms 'engage' and 'engagement' appear to be replacing more traditional relational concepts, including 'involvement' and 'participation' (Brodie et al., 2011). Mobiles offer lower cost opportunities for entry and more equitable access, through user-focused, intuitive interfaces of new-generation devices, making it inevitable to engage in the digital era (Gordon et al., 2013).

A study was conducted by Gambetti and Graffigna (2010) was based on the EBSCO database, which yielded 237 titles related to engagement. The findings were grouped into four clusters using Thematic Analysis of Elementary Contexts and T-Lab software. The first cluster considers engagement as an interaction between employee and customer, and places more emphasis on the usage of virtual communities, as primary interaction tools with customers. The second cluster considers engagement as an alliance between company and customer, a sort of strategic implementation which focuses on enhancing trust and loyalty with customers. The third cluster considers it as a co-production of contents between a company and customer, which takes place specifically in communication programmes, and plans that intend to explore consumers' attitudes and expectations. The fourth cluster considers engagement as a top management effort towards its employees that exists in an organisational context. Hence, both the first and second cluster lead the way to explore further the engagement practices in the Saudi Arabian context in this research, due to the lack of concept clarity from a marketing communication perspective.

In its 2006–2008 Research Priorities, the Marketing Science Institute (MSI) called for a better understanding of 'engagement', as "rapid changes in communications technology as well as globalization of markets are creating communities of customers and prospects rather than a multitude of isolated customers...companies are discovering new ways to create and sustain emotional connections with the brand...thus engaging customers through innovation and design" (MSI 2006:2-4). Customer engagement (CE) continues to be a research priority of MSI in 2010–2012; MSI considers CE "*customers' behavioural manifestation toward a brand or firm beyond purchase*" (MSI 2010:4). This research is interested in the engagement of 'beyond the purchase' individuals who interact with the brand, without necessarily purchasing it or planning on purchasing it, or on events and activities engaged in by the consumer that are not directly related to search, alternative evaluation, and decision making involving brand choice. On the recent

Marketing Science Institute ranking of 2012–2014, the research priorities states that “Priority 4: Mobile Platforms and their impact on how people live their lives and the operation of markets” (MSI 2012:5).

According to Mollen and Wilson (2010), there are three identifiable themes in the research on the emerging concept of engagement. Firstly, it is a mental state that is accompanied by active and sustained, even complex, cognitive processing (Jones, 1998; KearsleyG and Schneiderman, 1998; Douglas and Hargadon, 2000; Douglas and Hargadon, 2001; Herrington et al., 2003; Mathwick and Rigdon, 2004). Secondly, engagement is associated with the satisfying of utility and relevance (Fiore et al., 2005). Thirdly, engagement involves emotional bonding or impact (Heath, 2007), emotional congruence (Douglas and Hargadon, 2000, 2001) and pleasure and satisfaction (Mathwick and Rigdon, 2004; Fiore et al., 2005).

2.4.1 Engagement in Human Resources Literature

Drawing on human resources literature, Kahn (1990) was the first to establish the concept of engagement within the work environment. He believes in the existence of personal engagement and disengagement. Engagement is defined as “the harnessing of organization members' selves to their work roles; in engagement, people employ and express themselves physically, cognitively, and emotionally during role performances.” (p. 694). Disengagement was defined as “the uncoupling of selves from work roles; in disengagement, people withdraw and defend themselves physically, cognitively, or emotionally during role performances” (p. 694). The concept incorporates the need of employees for self-expression and self-employment (Kahn, 1990). He proposed that employees vary in their self-expression in work roles and those who perceive more supportive conditions for authentic expression tend to be engaged. He also identified three psychological conditions associated with engagement or disengagement at work: meaningfulness, safety and

availability. These psychological conditions were tested in other research and found to be significantly related to engagement (May et al., 2004).

Maslach et al. (2001) define work engagement as a “persistent, positive affective motivational state of fulfilment” (Maslach et al., 2001:417). According to Vivek et al. (2012), engagement in various subfields of psychology has been categorised as involving vigour, dedication and absorption (Schaufeli et al., 2002), attention and absorption (Rothbard, 2001), and the opposite of burnout (Maslach et al., 2001). However, Kahn (1990) suggested three psychological conditions are differing conceptualisations of the term ‘customer engagement’, and a review of the literature shows no agreement exists as to the exact nature of engagement and its role in marketing. Hence, there are gaps as to what engagement means to marketing and its stakeholders (Vivek et al., 2012).

Schaufeli et al. (2002) defined engagement as “a positive, fulfilling, work-related state of mind that is characterized by vigour, dedication, and absorption.” (p. 74). They argue that engagement is the antithesis of burnout. Hence, vigour is characterised by high levels of energy and mental resilience while working; dedication refers to being strongly involved in one’s work and experiencing a sense of significance, enthusiasm, inspiration, pride, and challenge; and finally, absorption refers to a pleasant state of total immersion in one’s work (Schaufeli et al., 2002). Furthermore, the dimensions of burnout - exhaustion, cynicism and ineffectiveness - stand as opposites to energy, involvement and efficacy as in the engagement dimensions (González-Romá et al., 2006; Maslach and Leiter, 2008).

On the one hand, efficacy as a dimension of engagement has been addressed in Social Cognitive Theory (Bandura, 1997), wherein efficacy beliefs are defined as the “beliefs in ones capabilities to organize and execute the course of action required to produce given attainments” (p.4), and should be

measured “in terms of particularized judgments of capability that may vary across realms of activity” (p.42). Perceived self-efficacy occupies an essential role in the fundamental structure of Social Cognitive Theory because efficacy beliefs affect adaptation and change (Bandura, 2001).

On the other hand, in a study made by Llorens et al. (2007) on the gain spiral model it is observed that there might be existing in engagement, whereby efficacy leads to increased engagement (vigour and dedication), which in turn enhances future efficacy beliefs. Furthermore, efficacy beliefs were seen as a mediator between task resources and engagement (Llorens et al., 2007). Task resources would foster efficacy beliefs and work engagement, which consequently would have a positive impact on efficacy beliefs and task resources. These findings confirm that efficacy beliefs play a central role. Hence, mobile media are devices that “mediated social connectivity with the user in physical motion” (Campbell, 2013:9). The efficacy beliefs relate to empowerment behaviour and will be explored in more detail in the empowerment section.

However, the nature of any smartphone is its capability for interactivity and facilitates customer engagement, as users use it to interact with others and engage with them. According to Gao et al. (2010), there is a positive relationship between internet experience and the perceived interactivity of mobile advertising. Also, young users are most likely to interact via mobile than seniors (Gao et al., 2010). The mobile phone lends itself to increasing a campaign’s reach through viral effects. A viral effect develops if people who receive advertising messages forward them to other people who were not the initial target group of the campaign. The advertising message received from a familiar sender can be expected to have a greater effect on the receiver than a message directly from the advertiser. It has been proven that messages from neutral senders are perceived as more trustworthy than those coming from a self-interested sender (Kroeber-Riel and Weinberg, 2003). Viral marketing

increases both the reach of mobile marketing campaigns and their effectiveness (Bauer et al., 2005).

2.4.2 Customer Engagement and Mobile Devices

In reviewing the literature discussed in the preceding sections, it was stated that most of the research has been conducted on mobile advertising and customer acceptance on receiving such ads. To the best of the researcher's knowledge, no research has been conducted on customer engagement via mobile devices in mobile marketing communication and beyond mobile advertising. Furthermore, the emerging term of engagement opens up the door for this research to investigate such behaviour. However, there are a few papers that have tapped into customer engagement from relationship marketing and service logic domain perspectives, which should be distinguished from this research.

In a recent research paper, Brodie et al. (2013) carried out an exploratory study on consumer engagement in virtual communities from a relationship marketing perspective. They identify four themes of customer engagement which all include the interactive element between B2C and C2C. The study identified five specific consumer engagement sub-processes, which are learning, sharing, advocating, socialising and co-developing based on blog posts. It also found that the consumer engagement process would generate feelings of connection, commitment, trust, consumer loyalty, satisfaction, and empowerment. The study adopted a qualitative approach to reach these findings. Although their conceptual model was quite big, the study suffered from the inherent limitations of this approach. Furthermore, challenged by Baldus et al. (2014) new development of online brand community engagement scale with 11 dimensions. However, Brodie et al. (2013) suggested integrating other theoretical perspectives to advance the knowledge of customer engagement mainly from behaviour theories and the dyadic aspects of engagement in B2C and C2C. In a similar manner, Hollebeek

(2012), made an exploratory study on customer engagement and its effect on generating customer value with hedonic/utilitarian brands. It found limited effect on utilitarian compared with hedonic brands, which, based on interviewees, have a growing customer engagement which would increase customer value. The study provides an insight into customer behaviour incorporating the value element in this relation which differs to this research's objectives.

Persaud and Azhar (2012) investigate consumers' willingness to accept marketing through their smartphones. The results indicate that value, consumers' shopping style and brand trust are key motivations for engaging in mobile marketing through their smartphones. The authors concludes that further research should focus on the specific tactics marketers use to engage customers beyond marketing messages; that is, how they engage customers in dialogue to build relationships, encourage purchases and build loyalty. Hence, this could uncover how customers actually want to engage with mobile marketing.

Engagement behaviour was examined by Kim et al. (2013) who proposed a model for mobile user engagement (MoEN) to explain MoEN intention through users' motivations, perceived value and satisfaction. Their findings show that mobile users' engagement motivations do influence perceived value, satisfaction and mobile engagement intention. Mobile engagement behaviour is thought to be driven by utilitarian and hedonic purposes with social influences which encourage further engagement. However, the research fails to differentiate between high tech smartphones and other early generation mobile handsets, which is a limitation since users vary in terms of adoption and ease of use. Furthermore, the role of mobile advertising evoking customer engagement via mobile handset was undetermined.

Hollebeek et al. (2014) developed a Consumer Brand Engagement (CBE) 10-item scale in a social media network. The study defined CBE as “a consumer's positively valenced brand-related cognitive, emotional and behavioral activity during or related to focal consumer/brand interactions” (p.154). Their findings suggest that while consumer brand ‘involvement’ acts as a CBE antecedent, consumer self-brand connection and ‘brand usage intent’ represent key CBE consequences. However, Sarker et al. (2014) suggested that ‘brand love’ alone was not enough to predict customer engagement, but both ‘brand jealousy’ and ‘brand love’ would do so efficiently. The study developed a brand jealousy scale and identified self-esteem, self-expressiveness of a brand and romantic brand love as antecedents of romantic brand jealousy, with active engagement and purchase intention as consequences.

The early researches did not capture the capability of mobile handset in marketing communication context. Hence, the present research is an extension of van Doorn et al (2010), van Doorn (2011), Brodie et al (2011) and Brodie et al.'s (2013) works on customer engagement: to investigate this concept via mobile devices in a marketing communication context underpinned by the TAM. It is also a response to Leeflang's (2011) call to develop a measurement scale for customer engagement.

2.4.3 Operational Definition of Engagement

Gambetti and Graffigna (2010) argue that there are three factors involved in engagement concept construction: customer-related factors that are concerned with current trends in individual behaviour; media-related factors where the constant changes in media technology influence the message carrier; and finally company-related factors where companies evolve in their profile as a reflection of customer constant change in their needs/wants. All were evolved around customer-brand relationships driven by a customer-centric approach. Table 2-1 illustrates an overview of the definition and conceptualisation of engagement (pg.51).

According to Brodie et al. (2011), few papers existed in marketing and service literature before 2005 that tapped into consumer engagement or customer engagement. However, in other fields of research such as education and organisational studies, concepts such as student engagement and employee engagement were well established. For example, many researchers express the importance of student engagement in the learning environment where classrooms across different age groups discuss the effectiveness of teaching strategies (Blumenfeld and Meece, 1988). In fact, the term 'engagement' started emerging in organisational psychology in the 1990s (Simpson, 2009; Roberts and Davenport, 2002; Catteeuw et al., 2007).

Over the last two decades, the term 'engagement' has been used extensively in many fields including organisational behaviour and sociology, political science, psychology and information systems, leading to a variety of conceptual approaches that highlight different aspects of the concept. In the information system field, users' engagement is conceptualised as users who are "affectively involved, motivated, and perceive themselves to be in control over the interaction" (O'Brien and Toms, 2008:4). It even anticipated association with some forms of flow theory aspects "in which people are so involved in an activity that nothing else seems to matter; the experience itself is so enjoyable that people will do it even at great cost, for the sheer sake of doing it" (Csikszentmihalyi, 1990:4).

After reviewing the literature for appropriate definitions of engagement from a marketing communication perspective, see table 2-1, and due to the absence of such a definition, the author developed an operational definition to use in the scale development stage. Hence, customer engagement is defined to be "the initial interest and further actions taken by the customer in marketing communication, which it can be cognitive, emotional and behavioural involvement in a specific brand interaction in B2C and C2C relationship" (Alotaibi and Jayawardhena, 2012:5).

Table 2-1: Overview – Engagement Conceptualisations in Marketing & Management Literature

Author(s)	Definition/Conceptualisation	Concept
(Jen-Her and Shu-Ching, 2005)	Defined to be in the context of B2C Marketing Communication and involves engaging in transactions on a wireless network.	Mobile commerce engagement
Sawhney et al. (2005)	Virtual CE is customer-centric, active, two-way and continuous, focuses on social and experiential knowledge, and has direct as well as mediated interactions with prospects and potential customers.	Customer engagement
Advertising Research Foundation (ARF, 2006)	Engagement is turning on a prospect to a brand idea enhanced by the surrounding media context.	Media Engagement
The Economist Intellectual Unit (2007)	It is a creation of a deeper, more meaningful connection between the company and the customer, and one that endures over time. Engagement is also seen as a way to create customer interaction and participation.	Customer engagement
Higgins & Scholer (2009)	A state of being involved, occupied, fully absorbed or engrossed in something (i.e. sustained attention), generating the consequences of a particular attraction or repulsion force. The more engaged individuals are to approach or prevent a target, the more value is added to or subtracted from it.	Engagement
Bowden (2009)	A psychological process that models the underlying mechanisms by which customer loyalty forms for new customers of a service brand, as well as the mechanisms by which loyalty may be maintained for repeat purchase customers of a service brand.	Customer engagement

Author(s)	Definition/Conceptualisation	Concept
Heath (2007)	The amount of subconscious feeling/thinking going on when an advertisement is being processed.	Engagement
Mollen and Wilson (2010)	It is a cognitive and affective commitment to an active relationship with the brand as personified by the website or other computer-mediated entities designed to communicate brand value. It is characterised by the dimensions of dynamic and sustained cognitive processing and the satisficing of instrumental value (utility and relevance) and experiential value (emotional congruence with the narrative schema encountered in computer-mediated entities).	Online engagement
Gambetti & Graffigna (2010)	The authors differentiate between the soft, relational and pragmatic, managerial aspects of engagement.	Engagement
Abdul-Ghani et al. (2010)	The ongoing attention of a consumer to an object of consumption such as a website or brand in customer-to-customer (C2C) relationship.	Engagement
Van Doorn et al. (2010)	Customers' behavioural manifestation toward a brand or firm, beyond purchase, resulting from motivational drivers, including WOM activities.	Customer engagement behaviour
Bergkvist and Bech-Larsen (2010)	The degree to which the individual is willing to spend time, energy, money and other resources in the brand beyond those expended during actual purchase or consumption of the brand.	Engagement
Hollebeek (2011)	The level of a customer's cognitive, emotional and behavioural investment in specific brand interactions.	Customer brand engagement

Author(s)	Definition/Conceptualisation	Concept
Pagani and Mirabello (2011)	The state of being involved, occupied, and interested in something. (Pagani and Mirabello, 2011)	Engagement
Brodie et al. (2011)	It is a psychological state that occurs by virtue of interactive, co-creative customer experiences with a focal agent/object (e.g. a brand) in focal service relationships...It is a multidimensional concept subject to a context- and/or stakeholder-specific expression of relevant cognitive, emotional and/or behavioural dimensions.	Customer engagement
Vivek et al. (2012)	CE is the intensity of an individual's participation in and connection with an organization's offerings or organizational activities, which either the customer or the organization initiates.	Customer engagement
Alotaibi and Jayawardhena (2012)	Customer engagement is defined to be the initial interest and further actions taken by the customer in marketing communication, which it can be cognitive, emotional and behavioural involvement in a specific brand interaction in B2C and C2C relationship.	Customer engagement
Hollebeek et al. (2014)	A consumer's positively valenced brand-related cognitive, emotional and behavioural activity during or related to focal consumer/brand interactions.	Consumer brand engagement
Costa et al. (2014)	An affective–cognitive state characterized by vigour, dedication, and absorption.	Work engagement
Kaltcheva et al. (2014)	It is a multidimensional concept subject to a context- and/or stakeholder-specific expression of relevant cognitive, emotional and/or behavioural dimensions.	Customer engagement

2.4.4 Antecedents of Customer Engagement

According to Bowden (2009) engagement has also been discussed in advertising literature, where it has been suggested that it can be used as an alternative measure of the company's strength with customer relationships based on the extent to which customers have formed both emotional and rational bonds with a brand. Moreover, it is formed in three dimensions: customer engagement, consumer engagement and brand engagement. Engagement is argued to include feelings of confidence, integrity, pride, and passion in a brand (McEwen, 2004), while in the hotel industry it is expressed in customer reviews as an act of customer engagement (Wei et al., 2013).

Abdul-Ghani et al. (2010) argued that engagement refers to the ongoing attention of consumers to an object of consumption such as a website or brand, while Higgins and Scholer (2009) saw it as a state of being involved, occupied and fully absorbed in something, giving it sustained attention. Engagement is also considered to be an antecedent to outcomes such as usage, effect and responses to advertising (Calder et al., 2009). In this context, a recently published study was carried out in Saudi Arabia by Al-Maghrabi et al. (2011) to test the antecedents of the continuance of online shopping. It found that enjoyment, subjective norms, and perceived usefulness are the main determinants of online shopping continuity. Furthermore, enjoyment was found to be a stronger predictor than usefulness and subjective norms (Al-Maghrabi et al., 2011). However, the willingness of customers in Saudi Arabia to shop online is as yet little understood, which raises the need to understand the engagement level as a response to advertising. In this respect, measures of the hedonic and utilitarian dimensions of attitude enable marketers to test the effectiveness of advertising campaigns that would stress practical and efficient positioning of strategies (Park et al., 1986).

2.4.4.1 Mobile Device as a Medium

However, a study carried out by Kilger and Romer (2007) to explore the relationship across three different media channels of engagement and the likelihood of purchase and advertising receptivity found that these engagement dimensions were positively related to the likelihood of purchasing products that had been advertised through these media vehicles. This suggests that advertising embedded within engaging media vehicles, as in mobile, may increase the sales of the products that are being featured in those advertisements. Furthermore, the use of a mobile device can be seen as a medium that receive these advertisements and an engaged channel in the same time where these device facilitate such communication with a company's contact channels.

A conceptual study carried by van Doorn et al. (2010), focused on the behavioural consequences of the psychological processes embedded in consumer-brand connections. They proposed that customer engagement has three behavioural focuses, which are Customer-Based Factors Affecting CEB, Firm-Based Factors Affecting CEB and Context-Based Factors Affecting CEB. The study argues that customer engagement behaviour goes beyond transactions and holds that customer satisfaction is an antecedent of customer engagement (van Doorn et al., 2010). Thus, making suggestions to improve the consumption experience will help service providers and other customers to consume better. It will also improve the level of engagement experience which clearly reflects customer engagement behaviour. The study proposed five dimensions of CEB that channel the ways in which consumers may choose to engage. These are valence, form or modality, scope, nature of its impact, and customer goals.

Kumar et al. (2010) conducted a conceptual study to define Customer Engagement Value (CEV) components and their effect on companies'

profitability. They suggested that the higher the engagement, the higher will be the growth in the relationship between business and customer, and vice versa. Although purchasing behaviour is normally perceived as a strong indicator of involvement based on transactional facts, the study argued that customers can create a detract value for a firm through the sharing of positive/negative news and opinions. The study proposed CEV metrics that could offer a comprehensive evaluation of how much an individual customer is contributing to the firm in several ways (Kumar et al., 2010; Kumar, 2013). Furthermore, customer engagement is considered as the new frontier in customer value management (Beckers et al., 2014), where mobile devices could potentially ride on the new frontier wave as a medium. Thus, the new technology can be capture be perceive of usefulness and perceive ease of use behaviour.

2.4.4.2 Communities and Social Media

Consumers may engage in several types of behaviours in communities, such as helping other customers or sharing experiences with them (Nambisan and Baron, 2009). Furthermore, many consumers engage in non-interactive behaviours such as reading others' comments, or reading but not actively participating (lurking). Shang et al. (2006) found that lurking enhanced customer loyalty even more than commenting did. Online communities have different types of users based on how strong their ties are to the brand and to the other community members. Not all customers engage in the same way with firms. For example, previous research has shown that Internet users differ in what they typically do online (Brandtzæg et al., 2011) and in their satisfaction with different types of online community behaviours (De Valck et al., 2009). Because increasing numbers of people spend time in online communities it is meaningful to investigate consumers' engagement in them (Kaplan and Haenlein, 2010; Ouwersloot and Odekerken-Schröder, 2008). Customer engagement evolved within brand community leads to brand trust (Mosavi and Kenarehfar, 2013).

Brand communities on Facebook are characterised by certain special elements compared with other virtual brand communities that may offer clues to the kind of benefits consumers are seeking. According to research by Kaplan and Haenlein (2010), brand communities in social media share three characteristics. First, they enable social presence in the form of acoustic, visual and physical contact, which emerges between communication partners. Second, according to the theory of media richness, the goal of any communication is avoiding uncertainty and reducing ambiguity; some media are more effective than others in resolving these concerns, and brand communities in social media are especially well suited for this purpose due to the large amount of information being transmitted at any given time. Third, brand communities in social media are also strongly connected to the concept of self-presentation, meaning that individuals desire to control the impression that other people form of them.

Self-disclosure is also an important part of relationship development, which often occurs in social media and especially on social networking sites like Facebook. These goals indicate that customers may gain social and practical information benefits (Dholakia et al., 2004) by engaging in community behaviours. It is also likely that consumers experience other types of relationship benefits, such as entertainment benefits, by engaging in the Facebook community. Furthermore, consumers who engage with inner self-expressive brands are more likely to offer WOM for that brand (Wallace et al., 2014).

According to Gummerus et al. (2012), customer engagement behaviours are essential for the success of any virtual community, as without active commentators and likers there will not be much to read or write about. Therefore, companies need to track and encourage customer engagement behaviours in such a way that it not only leads to more commenting and liking, but also to purchase behaviour. Firms may want to encourage and

reward consumers to become more active on the site to receive maximal relationship benefits from the Facebook community. As noted by Libai (2011), customer engagement behaviours can be collected unobtrusively by analysing social networking sites, brand communities and other sources, which enables companies to detect highly engaged customers, who may be engaged further in developing services, spreading word of mouth, or performing other marketing activities. However, Libai (2011) also warns against placing too much importance on highly engaged customers, who usually form a tiny minority of brand community users.

Companies need to create content that keeps customers visiting the Facebook site and encourages them to engage also in transactional behaviours. By combining customers' interactive, transactional and word of mouth behaviours with a customer profitability analysis, customer segments can be created that may be better and more profitably managed (Gummerus et al., 2012). For this purpose, the construct of engagement is helpful in deciding which customer segments to focus on while designing the strategy and content of the Facebook site.

In an ongoing relationship it is difficult to separate antecedents of customer engagement from its moderators and consequences, since it is likely that a circular logic exists here. On the one hand, engagement behaviours may affect relationship outcomes and perceived benefits (Brodie et al., 2011), whereas on the other hand, these constructs may influence engagement behaviours (van Doorn et al., 2010). There is also a need to study customer engagement behaviours across all the channels that customers use to engage with a firm. However, these studies were limited to the engagement behaviour in a Facebook brand community, while customers also engage with the brand in other ways. A need was concluded for future studies to investigate customer engagement types based on all their brand-related behaviours and to study their effect on brand-related outcomes.

Sashi (2012) found that customer engagement turns customers into fans in the sphere of social media networks where customers participate in value-adding by connecting and interacting with sellers and other customers as well as non-customers. Social media allows fans to connect and interact with each other, which increases common satisfaction and advocacy. Also, they can connect and interact with non-customers and try to turn them into transactional customers. Sashi proposed a customer engagement cycle consisting of connection, interaction, satisfaction, retention, commitment, advocacy, and engagement. He argues that to achieve customer engagement, it is necessary to facilitate customers' transition through several stages in the customer engagement cycle (Sashi, 2012). This suggests that mobile as a device would facilitate customer engagement behaviour shape it especially in early stages of the cycle and subjective norms would drive this behaviour.

According to Bergkvist and Bech-Larsen (2010), active engagement shows a positive influence by 'brand love', which is determined by a sense of community and brand identification. Although active engagement became a consequence rather than a medium in itself, further investigation needs to be done on whether it facilitates interactive dialogue with a brand (Wirtz et al., 2013). Moreover, an important study was carried out by van Doorn et al. (2010) to conceptualise Customer Engagement Behaviour (CEB). The study argued that customer engagement behaviour went beyond transactions, and defined CEB as "customer's behavioural manifestations that have a brand or firm focus, beyond purchase, resulting from motivational drivers" (van Doorn et al., 2010: 254).

Thus, it was suggested that customer satisfaction is an antecedent of customer engagement, while Calder et al. (2009) consider antecedents as an outcome, such as usage, effect, and responses to advertising. However, Wang (2006) points out that there are drivers for engagement in an online

advertising context as in advertising recall, message involvement, message believability, attitude toward message and attitude toward advertising. The study confirms that engagement is increased by these drivers. Hence, Wang argues that the more effective these factors are in addressing in the context of messages, the better will be the outcome of the advertising (Wang, 2006). However, this is out of the research scope and will not be examined.

Cooil et al.'s (2007) study of customer satisfaction based on their characteristics, which found that demographic variables, such as income, gender and education, moderate the link between customer satisfaction and behaviour. They argued that it is critical for companies to direct their efforts to improve satisfaction, since greater customer satisfaction levels correspond with a higher share of their spending stream in company revenue (Cooil et al., 2007). Researchers have shown this in the role of social media networks, as demonstrated in other research on virtual communities. For example, a recent study explored the impact of new media on Customer Relationship Management (CRM). According to Hennig-Thurau et al. (2010), the new media have opened up a new set of opportunities for establishing new business models where content is mainly user-generated. The study defined social media as “websites and other digital communication and information channels in which active consumers engage in behaviors that can be consumed by others both in real time and long afterwards regardless of their spatial location” (Hennig-Thurau et al., 2010 : 312).

Such media offer a platform for customers to communicate with each other about their various interests that relate to a product/service and exchange their experiences, whether positive or negative. These platforms are to some extent form the social pressure toward emerging phenomena such as engagement, which represented in subjective norms. However, CRM strategies have to move on and respond to these emerging platforms and

understand their potential importance to companies' profitability and even their existence in business.

Two phenomena which are important in this research context are highlighted in this study: digital consumer articulation and mobile technologies. Given the ubiquity of mobile device works as facilitator, a customer can easily contribute to the wallet share factor among other customers via social media networks (i.e. Facebook, Twitter, Myspace & YouTube). The level of contribution can determine levels of customer engagement and the duration of its impact. For instance, a message delivered to a recipient via mobile would initiate the customer's engagement whereby they could become interested in the product/service. This may lead them to search online for more information about the product, and read comments posted on social media that either recommend or criticise the product. The scenario might be different when the customer has a previous experience of the product/service, depending on how positive or negative that experience but none the less can be encapsulated in information seeking behaviour as an antecedent of engagement.

2.4.4.3 Word of Mouth in the Virtual Word

Hennig-Thurau et al. (2004) defined electronic WOM as 'any positive or negative statement made by potential, actual, or former customers about a product or company, which is made available to a multitude of people and institutions via the Internet' (Thorsten Hennig-Thurau et al., 2004 : 39). They then went online to test the eWOM and found that trust, strength of ties, informational influence and normative influence were positively associated with users' overall eWOM behaviour, whereas a negative relationship was found with regard to homophily. Chu and Kim (2011) carried out a study to determine consumer engagement in social network sites on the Internet. The study established the significance of word-of-mouth (WOM) in the offline

world and how it affects consumer perception, intention and attitude towards brands, products and services.

However, Hennig-Thurau et al.'s (2004) study identified three aspects of behaviour related to eWOM in social network sites: opinion seeking, opinion giving and opinion passing. It was argued that consumers with a high level of opinion-seeking behaviour tend to search for information and advice from others when making a purchasing decision (Shu-Chuan and Yoojung, 2011). In contrast, individuals with a high level of opinion-giving behaviour may exert a great influence on others' attitudes and behaviours (Flynn et al., 1996). Moreover, it is a communication that involves individuals: "those who are active in receiving and passing on ideas from the media and those who mainly rely on other personal contacts as their guides" (McQuail and Windahl, 1993:63), where "the individuals who were likely to influence other persons in their immediate environment" counted as opinion leaders (Katz and Lazarsfeld, 1955:3). Hence, blogger and micro-blogger engagement is perceived as being an important channel for sharing brand messages to a targeted audience, where readers/followers are equally important for spreading the information to their own network (Uzunoğlu and Misci Kip, 2014). Thus, the presence of eWOM on internet whatever that forms or shapes can be seen as a source for information seekers.

Giving the theoretical foundation found in reviewed earlier research the antecedents; perceive usefulness, perceive ease of use, subjective norms and information seeking were conceptualised and illustrated in Chapter Three, as they are the most appropriate ones to fulfil the research objectives. The next section will discuss empowerment behaviour and its relation to customer engagement behaviour as a consequence.

2.5 Consequence of Engagement

2.5.1 Empowerment Behaviour

According to Harrison et al. (2006), empowerment as a concept has its roots in a number of traditions; including consumerism, anti-racist civil rights, and the women's movement. Hence, empowerment holds different meanings in a range of contexts with different underpinning assumptions and ideologies (Harrison et al., 2006). Empowerment expressed in the human resources field has been related intensively to the self-efficacy concept derived from social cognitive theory. According to Bandura (1977), self-efficacy can be defined thus: "an efficacy expectation is the conviction that one can successfully execute the behavior required to produce the outcomes" (p.193). Thus, perceived self-efficacy influences choice of behavioural settings and the stronger it is, the more active the efforts will be formed. In management studies, empowerment is defined as "the process by which a leader or manager shares his or her power with subordinates. Power, in this context, is interpreted as the possession of formal authority or control over organizational resources" (Conger and Kanungo, 1988 : 473).

Zimmerman (1990) stated that there are different levels of empowerment in any social context: individual, organisational and community. At an individual level it includes motivations to exert control, participatory behaviour, and feelings of efficacy and control. At an organisational level it includes shared leadership, opportunities to develop skills, expansion, and effective community influence. At a community level it includes opportunities for citizen participation in community decision making, and allows for fair consideration of multiple perspectives during times of conflict (Chebat and Kollias, 2000). Yet each level of empowerment intensity varies over time (Zimmerman, 1990). In this research, attention will be directed to consumerism in the marketing field and its relationship with engagement. The consumerism perspective is focused on giving individuals choice, and

assumes that empowered consumers are able to make effective and sensible choices from the services/goods on offer.

According to Newholm et al. (2006), the notion of empowerment could be viewed from Foucault's (1980) perspective, as "being set within disciplinary processes that allow freedom to choose only from a limited range of acceptable subject positions" (2006: 998). Therefore, customers can choose freely among available products and take responsibility for their choices. There are three conceptual models of customer empowerment, characterised by Denegri-Knott et al. (2006) as the sovereign, the cultural, and the discursive models. The sovereign model is based on self-determined and dispassionate market choices of sovereign consumers which are instrumental in directing the market. This would result in more efficient production, better and cheaper products, social progress, and increased general welfare. The cultural model contains consumer resistance and empowerment; the former is conceptualised as "the consumer's artisan-like inventiveness, trickery and guileful ruse to "make do" within market spaces designed by the power of the marketer..." while consumer empowerment "requires a consumer that is capable of manipulating and even producing these spaces" (p. 963). The discursive model of power is "the ability to construct discourse as a system in which certain knowledge is possible, while other knowledge is not" (p. 964). Hence, empowerment is defined as "the ability of the consumer to mobilize discursive strategies to determine what can be known and what actions can be undertaken in any particular field of action" (Denegri-Knott et al., 2006 : 964).

Thus, customers with more knowledge will feel more powerful (Foucault, 1972), and because knowledge is power, customer empowerment reflects consumers' enhanced ability to access, understand and share information. This is facilitated by Information Communication Technology (ICT), as technology is becoming more and more accessible to all, especially to

customers who rely on their mobile handset (Yang et al., 2013; Okazaki et al., 2014; Lee and Ma, 2012). According to Pires et al. (2006), consumer empowerment derives substantially from the knowledge that consumers gain from the Internet and from other sources. The level of empowerment depends on their ability to distinguish between useful information to assess different services and products on offer, and to satisfy their wants and needs by minimising time and effort (Pires et al., 2006).

Empowerment from a neo-liberal perspective conceptualises the customer being empowered to exercise choice where there are a variety of products/services to choose. Shankar et al. (2006) argue that Foucault (1972) had a different perspective of power by seeing it in knowledge, in the sense that power generates the discourses that limit and define what is knowable. The neo-liberal believes that power can be owned, acquired or lost; it is something which may be exercised by someone who has power over someone who does not. In contrast, Foucault did not understand power as a thing that is owned or lost, given away or acquired, as conceptualised in the transmutation from producers to consumers. Power creates both producers and consumers within discourses of knowledge in economic, political and managerial sphere where it circulates (Shankar et al., 2006; de Zúñiga et al., 2013; Martin, 2014). Therefore, in the context of marketing and consumption, this notion enables people to become well-organised as consumers through the effect of knowledge systems. Customers are empowered to spread their opinions about products through ICT to the virtual world via blogs, e-forums and social media networks (Uzunoğlu and Misci Kip, 2014). The accessibility of information via the Internet means customers are becoming more information savvy, well informed, knowledgeable and empowered to have greater control of their needs/wants (Jayawardhena and Foley, 2000). See Table 2-2 for an overview of empowerment definitions and conceptualisation (pg.67).

In the spheres of civilian and political movements, Zimmerman and Rappaport (1988) defined individual empowerment as the “process by which individuals gain mastery or control over their own lives and democratic participation in the life of their community” (1988: 726). However, Taylor et al. (1992) distinguished between market and democratic approaches to consumer empowerment; the market approach seeks to empower consumers by giving them choices among alternatives, while the democratic approach seeks to empower consumers by giving them a voice in services and a chance to change their existing services (Taylor et al., 1992).

Table 2-2: Overview – Empowerment Conceptualisations in the Marketing & Management Literature

Author(s)	Definition/Conceptualisation	Concept
Rappaport (1987)	The process of becoming able or allowed, to do some unspecified thing because there is a condition of dominion or authority with regard to that specific thing, as opposed to all things. That is, there are limitations as well as powers	Empowerment
Thomas and Velthouse (1990)	To empower means to give power.	Empowerment
Taylor et al. (1992)	Allowing customers to choose between alternatives offered by the market.	Empowerment market approach
West and Parent (1992)	The transfer of power and control over the values, decisions, choices, and directions of human services from external entities to the consumers of services, resulting in increased motivation to participate and succeed and a greater dignity for the consumer.	Customer empowerment
Spreitzer (1995)	It is increased task motivation resulting from an individual's positive orientation to his or her work role and the construct manifested in four cognitions: meaning, competence, self-determination, and impact.	Psychological empowerment
Fatout (1995)	A process for providing individuals with more control by placing boundaries around an area of potentially acceptable behaviour and allowing the individual to test and experiment with a variety of choices.	Empowerment
Gagné et al. (1997)	It is a term used to describe the on-the-job experiences of individual workers.	Empowerment

Author(s)	Definition/Conceptualisation	Concept
Kabeer (1999)	The expansion in people's ability to make strategic life choices in a context where this ability was previously denied to them.	Empowerment
Brady (2001)	Customer empowerment in new product development (NPD) to "have the customers' best interest in mind", to "try to figure out what customers' needs are", or to "try to find out what kind of product would be most helpful to customers".	CE in NPD
Wathieu et al. (2002)	Letting consumers take control of variables that are conventionally pre-determined by marketers; one of these variables is brand meaning. In other words, the ability of consumers to have control of their own choices has been reported to be central to the experience of empowerment.	Empowerment
Tumquist (2004)	Consumer empowerment is about increasing consumer value by providing additional access, content, education and commerce to wherever the consumer is located.	Consumer empowerment
Ouschan et al. (2006)	Customer empowerment derived from service providers is most relevant to professional services that require a collaborative customer-service provider relationship, a significant amount of customer self-service (self-care), customer input, customer cooperation, and customer competence to achieve desirable service outcomes.	CE in healthcare
Pires et al. (2006)	Internal customer empowerment means controlled delegation, involving clarification of the mandate, expected performance, and enablement; making available to employees whatever means are required for expected performance to be achieved.	Internal customer empowerment
Denegri-Knott et al. (2006)	Co-creative force that structures the possible field of interaction and exchange of free agents.	Empowerment

Hunter and Gamefeld (2008)	It is a customer's subjective experience that they have greater ability than before to intentionally produce desired outcomes and prevent undesired ones and that they are benefiting from the increased ability	Customer psychological empowerment
Author(s)	Definition/Conceptualisation	Concept
Ramani and Kumar (2008)	Firms might use empowerment as a strategy to give their customers a voice in and an opportunity to change a company's general offerings.	Empowerment democratic approach
Füller et al. (2009)	Empowerment can be conceptualized as any means strengthening a person's perception of self-determination and self-efficacy and reducing conditions contributing to feelings of powerlessness.	Empowerment
Fuchs et al. (2010)	A strategy firms use to give customers a sense of control over a company's product selection process, allowing them to collectively select the final products the company will later sell to the broader market.	Empowerment
Pranic and Roehl (2012)	A strategy firms use to give complainants sufficient information and a sense of control and competence over its service recovery, allowing them to self-select remedies the company will use to correct a wrong.	Customer empowerment
Khong et al. (2013)	It is the consumer's evaluation of the social media networks' innovative versatility and engagement.	Customer empowerment orientation
Alshibly (2014)	It is a positive subjective experience evoked by noting an increase in control. Empowerment includes the belief that one has benefited from this increased control.	Empowerment

Furthermore, research on how citizens use mobiles to engage with politics has clear significance for explaining important changes in public life (Kwak et al., 2011; Cook, 2010). It has been suggested that the low cost of use associated with mobiles enables more people to participate in politics (Bimber et al., 2009; De Zúñiga et al., 2009). In the Philippines' election, mobile communication campaigns were more effective than Internet-based forms of campaigning (Karan et al., 2009). Furthermore, in Colombia, social and mobile media were used to engage people with political campaigns (Rojas and Puig-i-Abril, 2009). Thus, mobile technologies behave in a similar way compared to online, especially if the rapid deployment and development of mobile phones in the developing world is taken into account. It implies that the benefits of ICT could reach many places through mobile phones rather than computers to democratise the election process.

One of the most notable uses of mobile and social media was during the Arab Spring uprisings in 2010-2011 which took place in Tunisia, Egypt, Libya, Syria, Yemen and Bahrain (Howard and Hussain, 2013). Protestors in Egypt relied on mobile and social media to disseminate information and mobilise people (Tufekci and Wilson, 2012; Lotan et al., 2011; Dunn, 2011). Egyptian protesters have continuously reported on news using mobile and social media in their movements (Howard and Hussain, 2011; Khondker, 2011; Allagui and Kuebler, 2011; Hussain and Howard, 2013).

In marketing, the role of mobile Internet as a channel to communicate with customers is obvious. The considerable growth of customer presence on social network media justifies the need for some companies to acknowledge it, as using the mobile for social media and texting news messages are found to have a positive effect in predicting charitable donations (Martin, 2013). For instance, companies can start a fan page on Facebook where they can post and invite customers to chat about new products. However, the level of engagement varies among customers and whether they will extend

this sort of dialogue to their friends or peers is still not clear. This issue is yet to be addressed in the present study.

The Internet opens up new opportunities for businesses and at the same time leads to overwhelming uncontrolled consumer power (Outi et al., 2007; Wang et al., 2000). The notion of controlling customer empowerment is due to the shifting of power from producer to consumers and the way companies develop strategies to cope with these changes (Maney et al., 2002). Yet, many businesses are unable to cope with the boom in communications and they cannot restrict customers' processes and the possible choices available to them through their use of information communication technology. Hence, the marketing implications of consumer empowerment present a challenge for marketing strategists, particularly in the era of mobile devices. Although consumer empowerment is ICT-enabled, as the power is not intentionally handed to consumers, the notion of controlling consumer choice clearly appears to be beyond any one business (Pires et al., 2006; Pires et al., 2005). Thus, customers are currently more empowered than previously, and the Internet is accelerating the trend toward greater customer empowerment (Dommeyer and Gross, 2003; Labrecque et al., 2013). Furthermore, ICT is considered as being a means to empowerment in developing countries and particularly for women (Ojokoh et al., 2013; Attom, 2013).

2.5.2 Empowering Experience

Conger and Kanungo (1988) indicate that individual empowerment has a self-driven force fostered by an internal need for self-determination, and external needs to control and cope with environmental demands. It has been defined in terms of motivational process in workers. Hence, to empower means "either to strengthen this belief or to weaken one's belief in personal powerlessness" (Conger and Kanungo, 1988: 474). Meanwhile, self-determination is defined as "the ability to chart one's own course in life"

(Fetterman, 1994 : 2). In other words, self-determination is “the capacity to choose and to have those choices, rather than reinforcement contingencies, drives or and other forces or pressures, be the determinants of one’s actions” (Deci and Ryan, 1985 : 38).

Bandura (1977) conceptualised empowerment as a process whereby an individual's belief in their self-efficacy is enhanced. He also pointed out that “the strength of peoples' conviction in their own effectiveness is likely to affect whether they would even try to cope with given situations...They get involved in activities and behave assuredly when they judge themselves capable of handling situations that would otherwise be intimidating...Efficacy expectations determine how much effort people will expend and how long they will persist in the face of obstacles and aversive experiences” (1977: 193-194).

Hence, Bandura (1977) differentiated between self-efficacy expectations and outcome expectations. The outcome expectations are defined as “a person's estimate that a given behavior will lead to certain outcomes”, while self-efficacy expectations are defined as “the conviction that one can successfully execute the behavior required to produce the outcomes” (p. 193). He defines empowerment as “a psychological or motivational process whereby the individual’s belief in his or her self-efficacy is enhanced” (Bandura, 1986:477).

Maslow’s hierarchy of needs could be linked to empowerment, as claimed by Schiffman and Kanuk (2007), in that egoistic needs are closely related to self-esteem by exercising power over people. Maslow's hierarchy of needs is a five-stage model which proposes that individuals are motivated by physiological, safety, love or belongingness, self-esteem, and self-actualisation needs. The lower level physiological needs have to be satisfied for a need at the next stage to emerge. However, each does not have to be

fully satisfied before moving on to the next, but there could be a progression to the next need when the first need has been assuaged to a certain extent.

Maslow (1972) considered that basic needs significantly shape an individual's behaviour until they have been relatively or fully gratified, but this is determined within an environmental context such as culture (Sollod et al., 2009). Self-actualisation means being able to fully explore what the self can be after satisfying the lower needs, and is motivated by metaneeds to enhance the person's being. Maslow (1972) proposed a set of metaneeds (being valued) that motivate self-actualisation. His rationale was that "*self-actualization people are not primarily motivated by basic needs; they are primarily metamotivated by metaneeds or B-values*" (Maslow, 1972 : 311). However, he believed that individuals may satisfy all their basic needs via self-esteem and not by self-actualisation. Hence, everyone has a self-system that enables them to exercise a measure of control over their thoughts, feelings, and actions (Bandura, 1986). Thus, empowerment serves as a self-regulatory function, providing individuals with the capability of changing their surrounding environment and influencing their actions (Alshibly, 2014).

However, Conger and Kanungo (1988) argued that when employees are empowered in a working environment, their personal efficacy expectations are strengthened and their outcome expectations are not necessarily affected. Thus, empowering enables individuals to improve their confidence, regardless of the outcome expectations and even if they fall short of gaining the desired outcomes. They may still feel empowered if their efficacy belief is reinforced by their leaders' appreciation of their performance (Conger and Kanungo, 1988). On the other hand, Thomas and Velthouse (1990) argued that empowerment is multifaceted and the meaning cannot be encapsulated in a single concept. They refer to psychological empowerment in the workplace as increased intrinsic task motivation recognisable in a set of four cognitions reflecting the individual's work role: impact, competence (self-

efficacy), meaningfulness, and self-determination (choice). Hence, they emphasise that these four components represent the pathway to enhance workers' empowerment, as organisational support mediates employee empowerment which affects the turnover intention of employees (Ertürk and Vurgun, 2014).

Yet, most of the research done on workers' empowerment is not in the field of marketing, which makes it difficult to apply it to a marketing communications context (Conger and Kanungo, 1988; Thomas and Velthouse, 1990; Spreitzer, 1995, 1996; Kirkman and Rosen, 1999; Wotruba, 1996; Kosciulek, 1999). However, Wathieu et al. (2002) explained that customer empowerment can be seen through the employees' empowerment literature lens, as customers control their exposure to advertising and product information, to learn about the experiences and choices of other consumers. They emphasise that such control leads to customer empowerment which is increased by information technology development. Hence, they argue that such empowerment could enhance customer satisfaction or contribute to increased feelings of dissatisfaction.

The argument extends to the subjective experience of empowerment, which is shaped by three components: control of choice set composition, progress cues and information about other customers. These influence customer empowerment and will eventually have positive or negative consequences for customer satisfaction. The study proposed five mechanisms that might help to reveal the long-term consequences of consumer empowerment, which are satisfaction versus achievement, increased opportunities of social comparison, gradual commitment, polarisation of judgment and self-serving attributions (Wathieu et al., 2002). Customer empowerment practices help institutionalise market orientation and branding capability through interaction activities that centre on the use of market intelligence and a shared sense of brand meaning (O'Cass and Ngo, 2011). However, Shaw et al. (2006) see

consumption as a synonym of demand, and as an indicator of consumer empowerment, either explicitly or implicitly, where customers exercise their demand in influencing the change of marketplace in their favour (Shaw et al., 2006). The next section will discuss the consumer-centric marketing approach and its relation to customer empowerment as the shifting caused by emerging technology.

2.5.3 Consumer-Centric Marketing

According to Sheth et al. (2000), Customer-Centric Marketing (CCM), “[emphasises] understanding and satisfying the needs/wants, and resources of individual consumers and customers rather than those of mass markets or market segments” (2000: 56-57). This differs from traditional marketing, such as the product centric approach – see Table 2-3 for comparison between the product-centric and customer-centric approaches (pg.76).

The growth of this approach will lead to non-intuitive consequences. First, CCM will lead the marketing function toward supply management while traditional marketing has been concerned with demand management. Second, traditional marketing practices focus on the acquisition of customers, while in contrast, CCM will lead firms toward outsourcing a subset of customers. Third, traditional firms and customers are institutionally separate with little interaction, while CCM will lead to customers and firms co-creating products, pricing and distribution. Fourth, CCM costs will be more fixed and less variable. Finally, vocabulary, metrics, and organisations will evolve toward a customer focus rather than a product focus or segment focus (Sheth et al., 2000).

Practitioners consider CCM as “the discipline of capturing and deploying consumer insights to enhance marketing effectiveness and better serve

those consumers that are a brand's best prospects” (Maney et al., 2002:3). This approach has shifted from product-centric marketing where products dominated the transaction market and there was no investment in building up long-term relationships with customers which increased the empowerment of customers. However, that has changed through the introduction of new ICT systems which help companies to communicate directly with customers in order to respond and tailor their needs/wants according to their individuality. Hence, the emergence of mobile handsets enables companies to target their customers with a unique set of specifications for the message, to maintain their interest and to stimulate their engagement with the advertisement which will pave the way for a device-centric approach. Further, in-mobile applications development, particularly in retailer sectors, implies an essential role in research and development stages for these applications to flourish (Jang and Chung, 2014; Taylor and Levin, 2014).

Table 2-3: Product-Centric vs. Customer-Centric Approaches

	<i>Product-Centric Approach</i>	<i>Customer-Centric Approach</i>
Basic philosophy	Sell products; we'll sell to whoever will buy	Serve customers; all decisions start with the customer and opportunities for advantage
Business orientation	Transaction-oriented	Relationship-oriented
Product positioning	Highlight product features and advantages	Highlight product's benefits in terms of meeting individual customer needs
Organisational structure	Product profit centres, product managers, product sales team	Customer segment centres, customer relationship managers, customer segment sales team
Organisational focus	Internally focused, new product development, new account development, market share	Externally focused, customer relationship development, profitability through customer

	growth; customer relations are issues for the marketing department	loyalty; employees are customer advocates
Performance metrics	Number of new products, profitability per product, market share by product/sub-brands	Share of wallet of customers, customer satisfaction, customer lifetime value, customer equity
Management criteria	Portfolio of products	Portfolio of customers
Selling approach	How many customers can we sell this product to?	How many products can we sell this customer?
Customer knowledge	Customer data is a control mechanism	Customer knowledge is valuable asset

Source: Shah et al. (2006)

Mobile devices facilitate the communication with customers which helps to improve customer perception about the products and services a company offers. That could lead to a certain behavioural intention, which manifested in intention of purchase as a consequence of empowerment. Moreover, strengthening the loyalty of their customers would devotionally lead to prospect growth in revenue if companies utilise this channel effectively and correctly. However, falling to do so might have a catastrophic impact on business development.

2.6 Theoretical Foundations

The sections that follow explore the theoretical underpinnings related to the research context. To summarise, previous studies have been examined through the following theoretical foundations: relationship marketing, service dominant logic, diffusion of innovations, uses and gratifications theory and theory of reasoned action. Each of these theoretical underpinnings is now taken in turn.

2.6.1 Relationship Marketing

In 1983 Berry presented a paper entitled “Relationship Marketing” at the American Marketing Association’s Services Marketing Conference. The paper was published in the conference proceedings and for the first time the phrase “relationship marketing” appeared in the marketing literature. Berry (1983) defined relationship marketing (RM) as “attracting, maintaining and in multi-service organization enhancing customer relationships” (p. 25). He believes that RM should exist in service firms as a core strategy to long lasting customer loyalty.

According to Grönroos (1994) the concept of relationship marketing has emerged within the fields of industrial marketing and service marketing. He agreed with Berry (1983) and defined RM as being: “to establish, maintain, and enhance relationships with customers and other partners, at a profit, so that the objectives of the parties involved are met. This is achieved by a mutual exchange and fulfilment of promises” (p.9). Berry (2002) stated that relationship marketing is core in service and service quality and trust are at the centre of it. Furthermore, Brodie et al.’s (1997) findings confirm the shifting in marketing practices from marketing mix toward relationship marketing.

Relationship marketing has benefited from technology advancement and in marketing practices. According to Berry (1995), information technology enhanced the practical value of relationship marketing. However, marketers of packaged goods would benefit from transactional strategy while service firms most probably benefit from relationship marketing (Fournier, 1998). Yet, Möller and Halinen (2000) argue that there is no well developed theory of relationship marketing and what exists is a variety of partial descriptions and theories focusing on the phenomenon. Further, relationship marketing is not a single entity but has two basic types: network-based relationship marketing and market-based relationship marketing. The former examines a complex

relationship in the business environment and the latter deals with simple exchange relationships within the market context (Möller and Halinen, 2000).

However, the RM theory as argued by Berry (1983) is meant to sustain a long relationship with customers to become loyal to a brand. Hence, strategies shifted from transactional-based to exchange commitment, which is the case of loyalty. It looks promising to companies to invest more in their loyalty programmes to maximise customer retention. That would not be viable without new technology innovation such as customer relationship management software enables companies to maintain a long term relationship with their customers. Yet, it would be hard in continuous technology advancement, especially in the telecommunication sector, where customer usages of a mobile device are increasing and demand for products/services that give them more value for their money. Hence, the emergence of a customer empowerment wave where customers are equipped with such high tech devices would change the notion of relationship marketing's existing map. Customers would no longer be underpowered and intimidated by companies; as a consequence they will gain more bargaining power and determine their engagement behaviour. Thus, in this context a RM lens would not be a perfect choice to investigate this change of customer behaviour on mobile devices.

Early in this chapter (section 2.3), it was stated that most of the research has been conducted on mobile advertising and customer acceptance on receiving such ads. To the best of the author's knowledge there has been no published research on customer engagement through mobile devices from a marketing communication perspective. Furthermore, the emerging term of engagement opens the door for this research to investigate such behaviour. There are few papers have touched on customer engagement (e.g. Brodie et al., 2013; Hollebeek et al., 2014) from relationship marketing and service dominant logic perspectives, but not from a behavioural perspective and on goods dominant logic as this research does from a marketing communication

perspective. The following section will shed light on the service dominant logic premises and how to distinguish it from this research context.

2.6.2 Service Dominant Logic

The service dominant logic is a rethinking of traditional marketing, which was based on transactions and on goods dominant logic, to shift economics to new perspective according to Vargo and Lusch (2004). They looked at economic exchange in goods as a channel for such exchange where knowledge and effort are encapsulated in an output whether tangible or intangible. They defined service as “the application of specialized competences (knowledge and skills) through deeds, processes, and performances for the benefit of another entity or the entity itself” (Vargo and Lusch, 2004 : 2). They argue that service-centred dominant logic perceives operant resources as primary, because they are the producers of effects. Furthermore, it implies value of co-creation with the consumer. Hence, goods are appliances which serve as alternatives to direct service provision and according to Hollebeek (2012) customer engagement serves as a driver to customer value in this relationship.

This is an alternative perspective to economic exchange where service is involved in every business even in the manufacturing industry. Vargo and Akaka (2009) argue that this perspective is the foundation for service science as the new economy shifting from a manufacturing to a service economy. Yet, some critics strongly oppose this new perspective, such as O’Shaughnessy and O’Shaughnessy (2009) who believe that the service sector remains the biggest in developed counties and therefore should be treated separately from the goods sector

Brodie et al. (2013) carried out an exploratory study on consumer engagement in virtual communities from a relationship marketing perspective. They identify four themes on customer engagement and all of

them have an interactive element between B2C and C2C. They argue that customer engagement has its roots in service-dominant logic as it is encompassed in co-production value and interactive experience. The study argued that consumer engagement consists of sub-processes which are learning, sharing, advocating, socialising and co-developing based on blog posts. It elaborates further on consumer engagement, which the authors go on to describe as a process which generates connection, commitment, trust, consumer loyalty, satisfaction, and empowerment. That is in line with Vivek et al.'s (2012) findings, which reinforce customer engagement as encompassed in service-dominant logic. However, both studies have adopted a qualitative approach to reach these findings and lack empirical evidence.

Although both conceptual models were quite big, they suffered the inherited limitations of this approach. Interestingly enough Brodie et al. (2013) suggest integrating other theoretical perspectives to advance the knowledge on customer engagement mainly from behaviour theories and the dyadic aspects of engagement as in B2C and C2C. This was touched on by Prahalad and Ramaswamy (2004) in terms of co-creation experiences in value creation between customers and firms. They argue that emerging technologies such as mobile phones provide a platform to create a two-way dialogue to create co-value, which is interactive in nature. Consequently, customers are no longer tied to a certain firm to satisfy their needs but can choose whoever they wish to fulfil their requirements and pay for their utility, not the firm's production cost. This is consistent with Sashi's (2012) argument that customer engagement is related to the shift from marketing orientation to a customer orientation.

Since communications are seen as crucial in firms' strategies, and this research will focus on use of mobile devices from a customer perspective to communicate with a company and with their friends as an extension of Calder et al.'s (2009) study. Therefore, relationship marketing and service-domain logic will not be used as a theoretical foundation as they are

inappropriate for this study. Further, this research examines customer behaviour via mobile and using electronic goods as a medium to test such behaviour. Hence, the adoption of mobile is the core medium to communicate with customers and the focus of this study, it is more appropriate to examine the adoption of mobile and its implication on customer behaviour. In the sections below, light will be shed on Diffusion of Innovations Theory along with Uses and Gratification Theory as other theoretical prospective.

2.6.3 Diffusion of Innovations Theory

The theory introduced by Rogers (1995) has been defined as “diffusion is the process by which an innovation is communicated through certain channels over time among the members of a social system...innovation is an idea, practice or object that is perceived as new by an individual or other unit of adoption. Communication is a process in which participants create and share information with one another...to reach a mutual understanding” (pp. 5-11). There are four elements in Rogers’s definition; innovation, communication, time and social system which contextualise the adoption of new ideas or innovations by a population follow a predictable pattern. The adoption defined as “the decision to make full use of the innovation as the best course of action available” (p.21), in relation the individual.

The innovation element of mobile marketing as an idea has taking off rapidly in marketing industry and expected to accompany with consumers adoption. The communications element which is in mobile handset has been adopted as a medium to convey marketing campaigns to consumers. The time element in diffusion theory means the respondents’ recall which involve in three dimensions; innovation-decision process, innovativeness of individual and innovation’s rate of adoption (Rogers, 1995). Communication (which is the basic building block for all social relationships) involves a sender, a

message, and a recipient. The message contains information, which is to some extent encoded by sender and decoded by recipient according to MacGuire (1987). The recipient must decode the message to understand it and act on the information received, if motivated. Thus, communication is as much to do with persuading as it is with informing. Hence, mass media channels are more influential for creating awareness, whereas interpersonal channels are more influential at the persuasion stage (Greenhalgh et al., 2004). However, this diffusion pattern only occurs if the population is fixed and the influence of the innovation stays constant over time.

The innovation-decision process in its initial stage knowledge has been identified by earlier or later knows where in the first people characterised by more formal education, greater exposure to interpersonal and mass media channels, higher social status and greater social participation in contrast with later knows. Further, diffusion of innovation model suggested that individuals would only choose to adopt a technology if five perceived characteristics were present; relative advantage where the degree to an innovation is perceived as better than the idea it supersedes; compatibility as it is perceived as consistent with existing values, experiences and user potential needs. While complexity as the difficult to understand and use; testability as the ability to try it on limited basis and observable for benefits or attributed of innovations. However, the theory does not itself provide an explanation of why people adopt or fail to adopt particular innovations, nor does it predict whether efforts to influence adoption will work in particular circumstances (Greenhalgh et al., 2004). Also, it lacks the understanding of how effectively the process of diffusion taken place for adoption of new social behaviour and social support towards certain behaviour, hence, it is inappropriate for this research context.

2.6.4 Uses and Gratifications Theory

The Uses and Gratifications Theory (UGT) is rooted in psychology and the Theory of Reasoned Action (TRA) emphasises the attitudinal element in understanding human behaviour (Foxall et al., 1998). Katz et al. (1973) state that UGT assumes media users are goal-directed in their behaviour, and are active media users. Furthermore, they are aware of their needs and select the appropriate media to gratify these needs. In other words, the theory focuses on what people do with a medium, not what the medium does with them. The theory is long standing and attracts researchers related to any mass media communication and other newly emerged media. McQuail et al. (1972) have suggested a typology of audience gratification in mass media communication which consists of four levels: diversion, personal relationships, personal identity and surveillance. Furthermore, there are social origins of media-related needs, as explored by Katz et al. (1973), where a social situation could produce tensions and conflicts, leading individuals to relieve their pressure via mass media consumption. Social situations create an awareness of problems which require attention and information that can be gained from media. Hence, the general idea is that the individual user in everyday life seeks gratification in media and technology use based on their individual “needs” or “motivations” (Igbaria et al., 1996), as will be elaborated on further in relation to the Technology Acceptance Model.

According to Ruggiero (2000), human needs are influenced and shaped by culture, as are the ways in which they are gratified. He argues that the use of PCs has been associated with individuals’ motivations to use the internet for communication purposes, which is linked to the fulfilment of gratification needs, such as interpersonal communication, para-social interaction, social identity, escape, companionship, surveillance, and entertainment. However, the UGT may establish an understanding of what their needs are, where they originate, and how they are gratified. For instance, Papacharissi and Rubin’s (2000) study of factors that would predict people’s use of the internet

identified five motives: interpersonal utility, information-seeking, entertainment, a way of passing time, and convenience. Mobile handsets provide a similar environment where motives can be tested and contextualised in engagement communication. Research carried out on Myspace and Facebook found that the main usage was for “keeping in touch with friends”, reported by nearly 96% of respondents, which met their need to be gratified (Raacke and Bonds-Raacke, 2008).

Maslow’s hierarchy of (social) needs could be linked to the theory, as suggested by Katz et al. (1973) and media could contribute to their satisfaction. However, the basic questions of UGT remain the same: why do people become involved in a particular type of medium to communicate and what sort of gratification do they gain? (Ruggiero, 2000). Maslow (1970) considered that the basic needs shape an individual’s behaviour significantly until they have been relatively or fully gratified, but this is determined relatively within an environmental context such as culture (Sollod et al., 2009). That led to a focus on attitude, which is considered to be one component among others that can reveal people’s culture in a society.

2.6.5 Attitudes and Behaviour Theories

Researchers who are interested in consumer theories have relied extensively on the role of attitudes in explaining consumer behaviour. Moreover, measuring and understanding particular attitudes will allow marketers effectively to develop and promote products that consumers want (Foxall et al., 1998). Theorists suggest that consumer behaviour consists of purchases, recommendations to others, top ranking, beliefs, evaluations, and intentions, all of which are related to attitudes (Schiffman and Kanuk, 2007). Furthermore, personality affects people’s attitudes and behaviour and it formulates their individuality, which is determined by five basic factors according to some researchers: extraversion versus introversion,

agreeableness, conscientiousness, emotional stability and culture. For example, according to Ajzen (2005), people's personalities can be well described if a person can state how sociable, agreeable, conscientious, emotionally stable and cultured they are. Those characteristics are expected to find expression in behaviour.

Attitudes are defined by Secord and Backman (1969) as certain regularities of an individual's feelings, thoughts and predispositions to act towards some aspect of his/her environment (Secord and Backman, 1969 cited in Rice, 1993). Hughes (1971) defined attitudes as an "individual's favourable or unfavourable inclination towards an attribute of an object" (p.20). In a marketing context, consumers hold attitudes toward brands, products, companies or advertisements in terms of what they like and dislike. In a broad sense, there are two types of attitudes distinguished by researchers: attitude towards the object and attitude towards behaviour (Engel et al., 1990). A comprehensive definition of attitude by Allport (1935) is a "mental and neural state of readiness, organized through experience, exerting a directive or dynamic influence on the individual's response to all objects and situations with which it is related" (Allport, 1935 cited in Pratkanis et al., 1989 : 50).

These definitions of attitude agree that attitude is learned and affected by experiences. There is also a relationship between attitude and behaviour, which can be considered as an interchangeable effect. Hence, it can be said that attitude is learned or acquired, which comes as a result of personal experience, reasoning or information. The evidence confirms there is a close link between attitude and behaviour (Ajzen and Fishbein, 1980), hence customer engagement construct is argued to encompass behavioural dimension according to van Dorn et al. (2010).

De Mooij (2005) argues that Western consumer behaviourists' view reflects individualistic cultural attitude as a lasting, general evaluation of people, objects, advertisements or issues. Therefore, future behaviour is predictable because the person's feelings, attitudes and behaviour are consistent. In contrast, in the Eastern culture as a collectivistic culture, people form attitudes that fulfil their social identity functions and therefore there is no consistency (De Mooij, 2005). The argument has implications for measuring the effect of advertising on consumers' attitudes. De Mooij (2005) claims that the impact of an ad in individualistic cultures and in collectivistic cultures will not be the same. In individualistic cultures, individuals' wants are consistent with their attitudes and behaviours, whereas in collectivistic cultures, they are based on situational factors. That will be encapsulated in subjective norm to investigate potential change in customer behaviour.

Thus, the Theory of Reasoned Action along with the Technology Acceptance Model are argued to be the most suitable for this research context as they can capture customers' behaviour over mobile devices. The following sections will elaborate on this in further detail.

2.6.5.1 Theory of Reasoned Action

The Theory of Reasoned Action (TRA), developed by Fishbein and Ajzen (1975), incorporates the cognitive, affective and conative components of the basic tri-component attitude model. It represents an integrated model to predict the behaviour of consumers, influenced by their intention to act. In order to understand intention, and in order to be able to predict behaviour, a subjective norm needs to be understood. This can be found by measuring consumer feelings (Schiffman and Kanuk, 2007). Moreover, some social psychologists argue that a person's social actions are directed by his/her attitudes, whether that action involves political activity, buying and selling goods, religious belief or ways of earning a living (Ajzen and Fishbein, 1980).

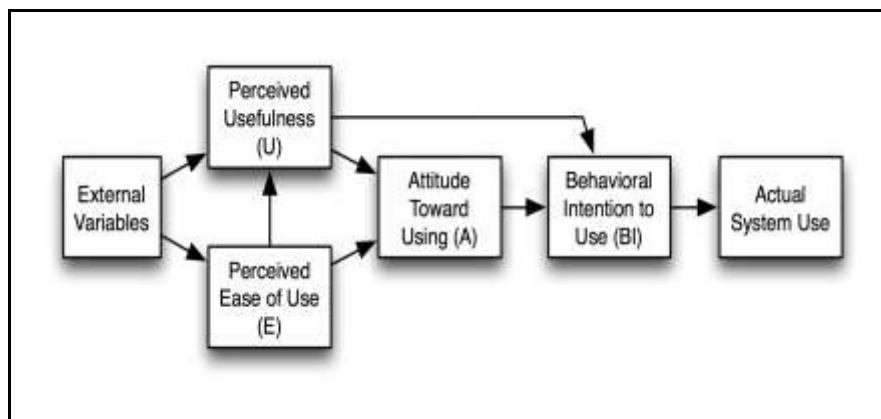
The TRA theory is based on the assumption that people are usually fairly rational and they make systematic use of the information available to them. That generates the intention towards certain behaviour, which is determined by two factors: personal in nature and reflecting social influence (Fishbein and Ajzen, 1975). TRA hypothesises that a person's behavioural intentions are determined by a personal component (attitudinal) and a social component (normative). The personal component or attitude refers to personal judgement of behaviour, whereas the social or normative component refers to social pressures on behaviour, such as the expectations of others (e.g. family, friends). Lee and Green (1991) assert that social pressure has a weak influence on individualists living in individualistic cultures, compared to collectivist cultures, where it is relatively strong. The theory of planned behaviour (TPB) is an extension from TRA developed by Ajzen (1991) and "made necessary by the original model's limitations in dealing with behaviours over which people have incomplete volitional control" (p.181). The addition of perceived behavioural control to the TRA model composed the new model of TPB (Ajzen, 1991). Thus, TRA and TPB are not suitable by themselves for this research context but the Technology Acceptance Model (TAM) developed by Davis (1989) to explain computer usage behaviour, which will be discussed in details in next section, is more appropriate and related to this study to examine customer engagement behaviour with mobile phones.

2.6.5.2 Technology Acceptance Model

The Technology Acceptance Model (TAM) developed by Davis (1989), based on the TRA theory, is specifically meant to explain computer usage behaviour and it includes five concepts: perceived ease of use, perceived usefulness, attitudes toward use, intention to use, and actual use. Two distinct variables, perceived ease of use and perceived usefulness, in TAM replace the attitudinal determinants of TRA. The model tries to explain actual computer usage based on the determinants of user acceptance of a wide range of end-user computing technologies, see figure 2.4. The behavioural

intention is determined by a combination of the person's attitude towards using the system and perceived usefulness, while the attitude towards computers is together determined by perceived usefulness and perceived ease of use and intention to use affects the actual usage behaviour.

Figure 2-4: TAM Model



Source: (Davis et al., 1989)

Perceived usefulness has its roots in use and gratification studies. According to Davis (1989), perceived usefulness is defined as “the degree to which a person believes that using a particular system would enhance his or her job performance” and perceived ease of use as “the degree to which a person believes that using a particular system would be free of effort” (p. 320). Furthermore, Fishbein and Ajzen (1975) defined attitude towards use as “an individual’s positive or negative feelings (evaluative affect) about performing the target behavior” (p. 216). Intention to use is based on Fishbein and Ajzen's (1975) definition of behavioural intention: “the strength of one’s intention to perform a specified behavior” (p. 288). Although the TAM is applied mainly to explain intention to use technology and systems in organisations, the constructs of the model are quite general and suitable for this research.

Venkatesh and Davis (2000) enhanced the original model and named it TAM 2. Their model incorporates additional constructs spanning social influence processes (subjective norm, voluntariness, and image) and cognitive

instrumental processes (job relevance, output quality, result demonstrability, and perceived ease of use). It provides a detailed account of the key forces underlying judgements of perceived usefulness. It reflects the impacts of three unified social forces: image, subjective norm and voluntariness. Image is defined as “the degree to which use of an innovation is perceived to enhance one’s status in the social system” (Moore and Benbasat, 1991). Subjective norm according to Fishbein and Ajzen (1980) is defined as a “person’s perception that important others desire the performance or non-performance of a specific behavior” (p.57), while voluntariness is defined by Venkatesh and Davis (2000) as “the extent to which potential adopters perceive the adoption decision to be non-mandatory” (p.188). It proposed to test employee in adopting or rejecting a new system, which is inappropriate for this research context.

Venkatesh and Bala (2008) proposed TAM3 by accompanied TAM2 and the determinants of perceived ease of use from (Venkatesh, 2000) to develop integrated model as it represent a complete nomological network of the determinants of individuals’ IT adoption and use. Moreover, Venkatesh et al. (2003), extended that and developed more unified model called the Unified Theory of Acceptance and Use of Technology (UTAUT) with four core determinants of intention and usage; performance expectancy, effort expectancy, social influence, and facilitating conditions with up to four moderators of key relationships; gender, age, experience and voluntariness of use. These models are not appropriate as they focus on a new system adoption in working environment and how to intervene.

2.7 A Critique of the Theoretical Lenses

In summary, neither RM nor S-D logic are related to this context, as they undertook customer engagement behaviour from different perspective and not from marketing communication perspective as in this research, while DIT concerned about technological evolution in deferent adoption stages and it is

inappropriate to explain customer engagement via mobile devices' and the impact of such behaviour on customer empowerment. Moreover, UGT concerned about the consumption of media and how individual user seeks gratification in media, which is not in the boundary of this research, thus it was eliminated.

The adoption of mobile handset in customer engagement behaviour is the focus of this study and the implication of such behaviour. Hence, to investigate these concepts via mobile devices in a marketing communication context, the Technology Acceptance Model is the most appropriate theoretical underpinning to this research and capable to answer the research's questions.

2.8 Summary Remarks

This chapter reviewed literature, starting with a brief explanation on the history of media followed by previous research made on mobile marketing, which was discussed and critically examined to identify positional gaps. Then, engagement behaviour was reviewed and its relevance to mobile marketing communications explained. In addition, empowerment behaviour was examined and reviewed in regard to mobile marketing. Theoretical lenses and underpinnings relevant to this research were discussed and reviewed. The next chapter will discuss the theoretical underpinning adopted for this research in relation to conceptual framework, along with hypothesis development.

**CHAPTER THREE: CONCEPTUAL
FRAMEWORK AND HYPOTHESIS
DEVELOPMENT**

3.1 Introduction

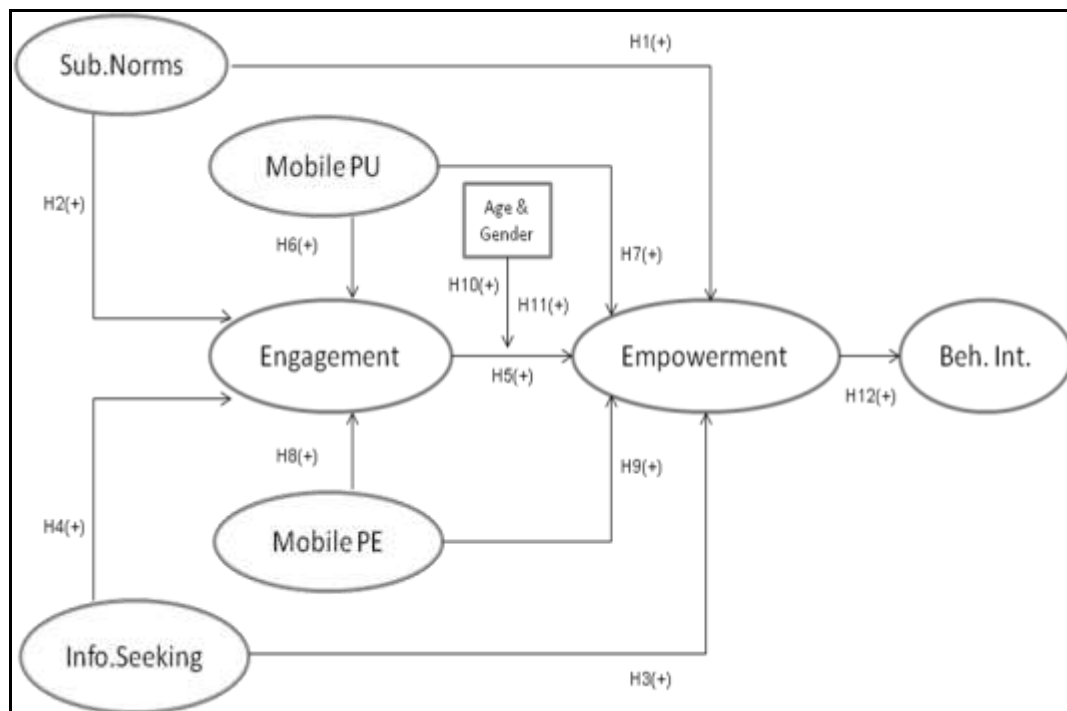
The previous chapter reviewed literature on customer engagement and customer empowerment in relation to mobile marketing communication. Now that a working definition of customer engagement has been developed suited for scale development, this chapter lays out the fundamental theory that is appropriate to this research and discusses it in detail.

3.2 Technology Acceptance Model

The Technology Acceptance Model (TAM) developed by Davis (1989), based on the conceptual foundations of the theory of reasoned action, is specifically meant to explain computer usage behaviour and it includes five concepts: perceived ease of use, perceived usefulness, attitudes toward use, intention to use, and actual use. Given that mobile technologies and related devices are most closely related to computers, the TAM model is more applicable to examine emerging technology and related behaviour. The model helps to explain the adoption of Mobile handset in customer engagement behaviour. The importance of emerging technology as a smartphone dictates the changing landscape of marketing communication practices and therefore remains a growing adoption to the technology to engage with marketing campaigns.

Based on the theoretical foundations of both TAM and TRA, the conceptual framework (figure 3-1), postulates that customer engagement and customer empowerment are positively related and both are drivers of behavioural intentions. The preceding literature review demonstrated the relevance of both engagement and empowerment in explaining behaviours, and by extension behavioural intentions. Subjective norms and information help to explain how customer needs are gratified (Papacharissi and Rubin, 2000) and these in turn are argued to drive consumer engagement..

Figure 3-1: Conceptual Framework



3.3 Hypothesis Development

This section discusses the development of hypotheses and their assumptions based on the conceptual framework. Thus, it is worth recalling the definition of customer engagement as “the initial interest and further actions taken by the customer in marketing communication, which it can be cognitive, emotional and behavioural involvement in a specific brand interaction in B2C and C2C relationship” and customer empowerment as “any means strengthening a person’s perception of self-determination and self-efficacy and reducing conditions contributing to feelings of powerlessness” (Füller et al, 2009: 74-75), to explore their antecedents and consequences.

3.3.1 Subjective Norms

Social pressure can affect the behaviour of individuals to varying degrees in different societies depending on the culture. Their influence can be seen in social media sites and online communities where users tend to express

themselves and emphasis on a certain behaviour as to engage or disengage with marketing communication channel (Cooil et al., 2007; Sashi, 2012). Ajzen and Fishbein (1980) use the term “subjective norms” to refer to a person’s perception of the social pressures on him/her to perform the behaviour in question such as the expectations of others (e.g. family, friends). Lee and Green (1991) stress out that social pressure has a weak influence on individualists living in individualistic cultures, compared to collectivist cultures, where it is relatively strong. In a collectivist culture, as in Saudi Arabia (Al-Zahrani and Kaplowitz, 1993), users of mobiles are likely to be influenced by people who are close to them and have had experience with mobile handsets to increase their familiarity with mobile usage to empower them. Users of the mobile devices are predicted to be empowered by their capability, which could be influenced by other users. Thus, social influences result from subject norms which relate to individual consumers’ perceptions of the beliefs of other consumers as stated by Venkatesh et al. (2003) and Lim and Dubinsky (2005). Therefore, the research hypotheses are:

H1: Subjective norms are positively related to customer empowerment.

H2: Subjective norms are positively related to customer engagement.

3.3.2 Information Seeking

Information Seeking is an activity carried out by a person to satisfy a certain need that would be fulfilled by trustworthy sources. Therefore, the accessibility of information via the internet as one source of information means customers are becoming more informative and knowledgeable, which empowers them to have greater control of their needs/wants (Jayawardhena and Foley, 2000). Thus, information seeking, according to Marchionini (1995), is the “process in which humans purposefully engage in order to change their state of knowledge” (p. 5), and according to Case (2012) “a conscious effort to acquire information in response to a need or gap in your knowledge” (p. 5). This activity as a consequence raises the efficacy of a

person to acquire new knowledge via these newly emerging technologies. As a result, according to Newholm et al. (2006) and Foucault (1972), customers feel powerful with the level of increase in their knowledge. Thus, the information seeking motive greatly predicts internet usage motives via computer mediated communication (Papacharissi and Rubin, 2000) and smartphone devices are considered to be mediators to communicate users' thoughts and feelings. Furthermore, they are capable of accessing the internet to search for information. According to Papacharissi and Rubin (2000) users of the internet were more inclined to use it as a source of information than face-to-face communication. Moreover, information seeking is a highly significant indicator of internet usage. Hence, customer empowerment is ICT-enabled; although the power is not intentionally handed to consumers, the notion of controlling customer choice clearly appears to be beyond any one business (Pires et al., 2006). Customers are currently more empowered than previously and the internet is accelerating the trend towards greater customer empowerment (Chen and Popovich, 2003). The foregoing implies the following research hypotheses:

H3: Information seeking is positively related to customer empowerment.

H4: Information seeking is positively related to customer engagement.

3.3.3 Relationship between Customer Engagement and Empowerment

Customer engagement is defined as the initial interest and further actions taken by the customer in marketing communication, which can be cognitive, emotional or behavioural involvement in a specific brand interaction in a business-to-consumer (B2C) and consumer-to-consumer (C2C) relationship. Meanwhile, empowerment from a neo-liberal perspective is conceptualised as the customer being empowered to exercise choice where there are a variety of products/services to choose from. That notion was highly influenced by Friedman and Friedman's (1980) thoughts on free market and

customer freedom to choose. Freedom of choice is probably best summarised by this statement: “Reliance on the freedom of people to control their own lives in accordance with their own values is the surest way to achieve the full potential of a great society” (Friedman and Friedman, 1980 : 309-310).

Customer engagement process is found to be related to empowerment (Brodie et al., 2013). Furthermore, customer engagement is composed of purchasing behaviour and non-purchasing behaviour which is manifested in communication channels (Verhoef et al., 2010; van Doorn et al., 2010). The level of empowerment is affected by customer engagement behaviour either cognitively, emotionally or behaviourally with a company or another customer and that depends on their ability to distinguish between useful information to assess rivals’ services and products on offer.

Wathieu et al. (2002) stress out that customers control their exposure to advertising and product information, to learn about the experiences and choices of other consumers. Such control leads to customer empowerment, which is increased by information technology development. Along with that notion, Shankar et al. (2006) argue that Foucault (1972) had a different perspective of power, seeing it in knowledge, in the sense that power generates the discourses that limit and define what is knowable. Power creates both producers and consumers within discourses of knowledge in economic, political and managerial circumstances where it circulates (Shankar et al., 2006). According to Füller et al. (2009) empowerment can be conceptualised as “any means strengthening a person’s perception of self-determination and self-efficacy and reducing conditions contributing to feelings of powerlessness” (pp. 74-75). The more strongly customer engagement is encouraged among customers, the more likely it is to have an effect on purchasing behaviour eventually (Gummerus et al., 2012). Hence, in the context of marketing and consumption, this notion enables people to

become well-organised as consumers through the effect of knowledge systems. The research hypothesis is:

H5: Customer engagement is positively related to customer empowerment.

3.3.4 Perceived Usefulness

Perceived usefulness is a user's belief that using a technology would enhance job performance (Davis, 1989). It is the primary prerequisite for mass market technology acceptance, which depends on consumers' expectations about how technology can improve and simplify their lives (Peterson et al., 1997). Given the ubiquity of mobile devices, a customer can easily contribute to the wallet share factor among other customers via social media networks (i.e. Facebook, Twitter, Whatsapp etc). The level of contribution can determine the customer engagement level and the duration of its impact. For instance, a message delivered to a recipient via mobile would initiate the customer's engagement whereby he/she could become interested in the product/service. That would lead to an interest in searching for more information and the enquirer would come across posted comments on social media that either recommended or opposed the product or service in question, as they are actively involved in social media networks, chatting with their friends and expressing their thoughts/feeling/experiences.

Kim et al. (2013) found that the utilitarian element acts as a motivation for mobile engagement. Furthermore, Venkatesh and Davis (2000) found in a system adoption context that perceived usefulness is positively affected by job characteristics and relevance, which implies that mobile technology customers would be engaged in mobile marketing communication if they see the usefulness of the mobile device. Moreover, customers would become empowered as a consequence of mobile usefulness for their day-to-day activities and in mobile marketing communication. Therefore, the limited empirical results suggest the following research hypotheses:

H6: Mobile perceived usefulness is positively related to customer engagement.

H7: Mobile perceived usefulness is positively related to customer empowerment.

3.3.5 Perceived Ease of Use

Perceived ease of use is the effort a user feels when using a technology. Much like challenges, perceived ease of use is an individual difference based on a user's knowledge, ability and previous experiences (Venkatesh, 2000). As a user uses a system and becomes more familiar with the technology the perceived ease of use will adjust, based on increased experience. The TAM proposes that perceived ease of use will determine a person's intention to use or not to use a technology (Venkatesh, 2000; Venkatesh and Davis, 2000). Empirical studies found that customers' adoption of mobiles as a medium to receive advertisements is increasingly becoming accepted in the mobile age as noted by Baure et al. (2005), Choi et al. (2008) and Peters et al. (2007). Furthermore, customers are currently more empowered than previously with these new innovations and the internet is accelerating the trend towards greater customer empowerment (Chen and Popovich, 2003). Also, there is a positive relationship between the internet and the interactive nature of mobile advertising as it empowers users (Gao et al., 2010), which consequently would affect customer engagement. The scenario could be different when there is previous experience of the advertised product/service and according to how positive or negative that type of experience was. Therefore, the limited empirical results suggest the following research hypotheses:

H8: Mobile perceived ease of use is positively related to customer engagement.

H9: Mobile perceived ease of use is positively related to customer empowerment.

3.3.6 Moderating Effects:

The moderating effects (age and gender) were found to have an effect on customer behaviour in the emergence of a new technology or innovation (see Chapter Two sections 2.2.2 and 2.3) hence its examination.

3.3.6.1 Age

Generally, young people are heavy users of mobile services (Scharl et al., 2005). For them mobile devices have become as much a fashion accessory as they are a communication device (Robins, 2003). That notion is supported by Kumar and Lime (2008), who noted a difference between the younger generation and older generation in mobile usage. Moreover, younger consumers show a more favourable attitude towards traditional advertising in a number of dimensions. They like looking at ads and they feel more comfortable when doing so (Shavitt et al., 1998). They also show a very positive attitude towards mobile ads, whereas older consumers are also positive about mobile ads, but more cautious (Kaasinen, 2003). Further, young users are most likely to interact via mobiles (Gao et al., 2010; Ishii, 2006), and they are more tech savvy than seniors. Thus, mobile young users who are empowered with these devices would most probably be engaged in the marketing communication dialogue. Therefore, the research hypothesis is:

H10: Age moderates the relationship between customer engagement and empowerment. Specifically, the relationship will be stronger amongst younger consumers.

3.3.6.2 Gender

Gender is frequently identified as a key moderator in consumer behaviour studies and in studies of technology usage (Moutinho and Goode, 1995; Gefen and Detmar W, 1997; Venkatesh and Morris, 2000; Bendall-

Lyon and Powers, 2002; Dommeyer and Gross, 2003). Male consumers generally show a more favourable attitude towards ads than female consumers (Shavitt et al., 1998). Further, gender has been shown to be relevant in forming overall attitudes on mobile phones. Women and men perceive mobile phones and their usage differently (Ling, 2001; O’Zhan, 2004).

For example, Gefen and Straub’s (1997) study found that women and men differ in their perception of e-mail, while Venkatesh and Morris (2000) find gender differences in the motives for using a new software system in a workplace and that men and women respond differently to marketing communication efforts. In terms of information processes, Krugman (1966) argues that women engage in greater elaboration of advertisements than men, regardless of whether the advertisements focused on content considered of more interest to men or to women. However, Meyer-Levy and Sternthal (1991) noted that men were more likely to be driven by overall message themes or schemas and women were more likely to engage in detailed elaboration of the message content (Kim et al., 2007). That is in line with Nysveen et al. (2005), Okazaki (2007) and Jayawardhena’s (2009) findings, which confirmed the role of gender to moderate mobile use and especially of female users. Hence, mobile usage is likely to be affected by gender differences and as a consequence their engagement behaviour is likely to vary. The following research hypothesis can therefore be stated with regard to the constructs:

H11: Gender moderates the relationship between customer engagement and empowerment. Specifically, the relationship will be stronger amongst women compared to men.

3.3.7 Customer Empowerment and Behavioural Intentions

Customers are empowered to spread their opinions about products through ITC to the virtual world as in blogs, e-forums and social media networks etc.

Customer empowerment derives substantially from the knowledge that consumers appropriate from the internet and from other sources (Pires et al., 2006). As a consequence there is a relationship between empowerment and the likelihood of intention to purchase affected by the engagement level, as anticipated by Kilger and Romer (2007). Hence, stronger customer empowerment would provoke customers' interest and be more likely to affect purchasing behaviour (Alshibly, 2014). Furthermore, the level of customer empowerment in the marketing communication sphere via mobile handset is anticipated to have an impact on customer purchase intention. Hence, this study hypothesises that customer empowerment is likely to have an effect on intention to buy a product and therefore:

H12: Customer empowerment is positively related to behavioural intention.

3.4 Summary Remarks

This chapter explored and discussed in further detail the theoretical underpinning adopted in this research. Then, a conceptual framework was developed. Further, the hypotheses were stated based on the conceptual framework detailing the relationship between the main constructs and other variables. Essentially, this chapter has formulated a conceptual model which can now be empirically tested. The next chapter will focus on the methodology chosen to conduct this research.

CHAPTER FOUR: METHODOLOGY

4.1 Introduction

The previous chapter discussed the conceptual framework and hypothesis development. This chapter explains the methodology adopted in this research. Research philosophies and approaches are compared with justification of the chosen approach in detail with its pros and cons in addressing the research questions. Then, research strategy types are described and further explanation given of what is selected, including the sample size. Moreover, questionnaire design along with the measurement scale is detailed and the development of an engagement scale explained, followed by discussion of the chosen data collection instrument and sample characteristics. Next, the analytical procedure chosen is detailed. Finally, structural equation modelling (SEM) technique employed in this research is discussed, followed by consideration of ethical issues and summary remarks.

4.2 Research Design

4.2.1 Research Philosophy

The research philosophy depends on the way that the researcher thinks about the development of knowledge (Saunders et al., 2007). As a base for the research philosophy, two terms are defined. Firstly, the term 'paradigm' refers to the process of scientific practice based on people's philosophies and assumptions about the world and the nature of knowledge (Collis and Hussey, 2003). The second term is theoretical perspective, which may be used to refer to the rather more specific assumptions made in terms of conducting research (Oliver, 2004).

Burrell and Morgan's (1979) sociological paradigms classified four types; interpretive, functionalist, radical humanist and radical structuralist within subjective and objective framework. The interpretive "approach to the analysis of the social world makes its links with this sociology often implicit rather than explicit ...informed by a concern to understand the world as it is, to understand the fundamental nature of the social world at the level of subjective experience. It seeks explanation within the realm of individual

consciousness and subjectivity, within the frame of reference of the participant as opposed to the observer of action” (p.28). The functionalist approach “represents a perspective which is firmly rooted in the sociology of regulation and approaches its subject matter from an objectivist point of view...It is characterised by a concern for providing explanations of the status quo, social order, consensus, social integration, solidarity, need satisfaction and actuality. It approaches these general sociological concerns from a standpoint which tends to be realist, positivist, determinist and nomothetic” (pp.25-26). The radical humanist is “defined by its concern to develop a sociology of radical change from a subjectivist standpoint. Its approach to social science has much in common with that of the interpretive paradigm, in that it views the social world from a perspective which tends to be nominalist, anti-positivist, voluntarist and ideographic...it places most emphasis upon radical change, modes domination, emancipation, deprivation and potentiality.” (p.32). The radical structuralist “advocate a sociology of radical change from an objectivist standpoint. It is committed to radical change, emancipation, and potentiality, in an analysis which emphasises structural conflict, modes of domination, contradiction and deprivation. It approaches these general concerns from a standpoint which tends to be realist, positivist, determinist and nomothetic” (p.34).

These four paradigms are constructed around the different assumptions of social scientists make about the nature of society and social science which can be seen as either objective or subjective (Jackson, 2000). The interpretive paradigm can see sociology of regulation as subjective and see human beings as creative constructions, while the radical humanist paradigm is subjective and seem to be the creative constructions of human beings in radical change. The functionalist paradigm see sociology of regulation as objective which easily identifiable existence independent of us as observers, while radical structuralist paradigm is objective it seem to have a hard existence external to us. However, there are two concepts which are closely related to `paradigm' and `theoretical perspectives' but are used in different

ways. They are the major assumptions in philosophy: Ontology and Epistemology.

Ontology came from the Greek word “being” and it is concerned with the study of existence or being. It is described as the view of the natural world and the perspective on reality adopted by people. There is an ongoing debate among philosophers in the natural and social sciences about the existence of reality. The debate that takes place in natural science is between realism and relativism. However, there are two aspects of Ontology in business research according to Saunders et al. (2007): objectivism, a view that social entities exist in reality externally, away from actions, and subjectivism, a view which assumes social phenomena are created by social actors in a particular context. On the other hand, Epistemology is about how knowledge can be perceived in the study field and it can be objective and subjective (Robson, 2011). Finally, the term methodology may be used in a number of different ways. It is used most commonly as the title of the chapter in a thesis which describes both the design of the research, the theoretical orientation and the approach to data analysis (Oliver, 2004).

The relationship between philosophy and social research reveals itself in ontology and epistemology as a reference frame where the researcher utilises investigation of an issue or problem existing in the social world (Easterby-Smith et al., 2008). Hence, the researcher’s philosophical assumptions are considered to be about the nature of reality (ontology) and the best ways of enquiring into the nature of this reality (epistemology). However, a paradigm consists of the following components: ontology, epistemology, methodology, and, methods (Oliver, 2004). Every paradigm is based upon its own ontological and epistemological assumptions.

There are two main paradigms by which research can be conducted: positivism and interpretivism (or anti-positivism). Positivism was developed by a French philosopher named Auguste Comte (1798-1857) in his work on positive philosophy (Bryant, 1985). It assumes that knowledge of the world

can be found by paying attention to laws that can be scientifically established to characterise different types of beings and establish stable relationships that exist among different phenomena (Crotty, 2006). In contrast, the premise of interpretivism, often linked to Max Weber (1864-1920), is that the human sciences are concerned with understanding (*Verstehen*). Thus, it is an epistemology that emphasises the importance of understanding different roles of humans in a social context and not considering them as objects (Saunders et al., 2007). However, positivism can be seen as a belief system that emerged from the natural sciences, where various practices took place on the assumption of objectivity. The social world exists externally and should be measured through objective methods – this is the core idea of positivism. In other words, positivist epistemology states that all knowledge comes out of experience as a base and clear division between objects where knowledge does not exist without them (Bryant, 1985). The objectivity of the research inquiry is often reflected in the data gathering and measurement techniques, where the outcome is in the form of natural law.

The positivist paradigm is considered to be value-free, which means the researcher is less involved in the data collection process. It is possible to generalise the results on a large scale due to its adaptability, validity and reliability (Payne and Payne, 2004). On the other hand, positivism has been criticised by anti-positivists (interpretivists) mainly for its lack of attention to the complexity of social contexts and treatment of subjects as objects. Furthermore, Lutz (1989) argues that positivism is variously characterised as inadequate and ignorant of humanness. The social world cannot be understood in terms of a cause and effect relationship because human action is considered to have a purpose (Lutz, 1989). However, to some critics, it seems difficult to disentangle the natural science model from positivism, as to them this is the focal criticism (Bryman and Bell, 2007). Hence, this research undertaken scale development process and to test the conceptual framework which implies positivist point view of the reality.

4.2.2 Research Approach

There are two main approaches: deductive and inductive. There are several characteristics of the deductive process: the need to explain causal relationships between variables and moving from theory to data, the researcher is considered to be independent from the situation in terms of involvement, and the findings can be generalised (Robson, 2011), which more appropriate with positivist philosophy. The inductive approach used to understand better the nature of any giving situation or problem which used to build up theory more often as a appropriate approach for interpretivism philosophy (Saunders et al., 2007).

Thus, in this research the deductive approach underpinned with the positivist paradigm is adopted to test the theoretical framework presented in Chapter Three.

4.2.3 Research Strategy

There are two main methodological choices to conduct a research: qualitative associate with inductive approach while quantitative associate with deductive approach suited to their research purposes. Though, there are three types of research purpose: exploratory, descriptive and explanatory. The exploratory seeks to know what is happening and is considered to be practically useful to clarify understanding. The descriptive examines situations in order to establish what is considered the norm by humans. This can be subjective according to human skills and understanding of phenomena (Walliman, 2005). The explanatory seeks to discover the relationship between different variables through either quantitative or qualitative data, which can help with the understanding of the relationship in terms of depth and breadth (Saunders et al., 2007; Malhotra and Birks, 2007). However, the literature review conducted and reported in Chapter Two represents the exploratory stage for this research, as it forms the basis of the descriptive study detailed in this chapter.

Several strategies of research have been identified, namely experiments, surveys, case study research, grounded theory, ethnography, and archival research (Saunders et al., 2007). Some of these are appropriate for use with a quantitative approach and others with a qualitative approach. In this research, a survey strategy was adopted to obtain the results sought. A survey strategy is usually associated with a deductive approach, and is used for explanatory and descriptive research (Saunders et al., 2007), and often employed in cross-sectional studies (Easterby-Smith et al., 2012).

4.2.3.1 Cross Sectional versus Longitudinal Research

A cross sectional research is a snapshot taken only once at a specific time, which involves collection of information from any given sample of population, while a longitudinal research is a diary of information collected from a fixed sample of the population repeatedly (Churchill, 1999; Saunders et al., 2007; Easterby-Smith et al., 2012). The cross sectional design “entails collection of data on more than one case...and at single point in time in order to collect a body of quantitative or quantifiable data in connection with two or more variables...which are then examined to detect patterns of association” (Bryman, 2012:58).

The main strength of longitudinal research over cross sectional is the capacity it has to study change and development (Saunders et al., 2007). In a cross sectional research it is difficult to establish time order which is considered as a weakness of this approach (Bollen, 1989). However, the main drawbacks of a longitudinal research are cost and time as it is required to be conducted over a long period of time (Churchill, 1999). Hence, due to the financial and time constraints of this research study the longitudinal approach was rejected and the cross sectional approach was adopted.

Hence, this study is cross sectional, where different variables are put under examination to test the relationships among them within a given conceptual

framework presented in Chapter Three. Furthermore, in order to achieve the objectives stated in Chapter One, a measurement scale for customer engagement was developed.

4.2.4 Sampling Process

This section features issues related to the process carried out to gather information in this study. The defining of target population, choice of respondents, sampling frame, sampling technique, sampling and nonsampling error followed by the sample size are discussed in the next sections.

4.2.4.1 Definition of the Target Population

In respect of examining the engagement and empowerment variables, the electronic devices market is targeted. This sort of market is expected to be the most vibrant in terms of rapid evolution in product size, shape and features, with any products constantly being replaced with a new line of products in a short time period, so customers are anticipated to be more engaged in marketing campaigns. Electronic devices (e.g. PCs, printers, mobiles, MP3 players, games, TVs, etc.) are targeted in advertising campaigns received by customers to narrow down the research scope. However, in the electronic category there are high-tech and low-tech products; thus it is expected that customer responses will vary. In this research the focus of attention is directed to high-tech devices and more specifically smartphones. The compound annual growth rate (CAGR) of mobile phones is rising by 9 per cent compared to other consumer electronics categories in constant value at a CAGR of 11 per cent (Eruomonitor, 2013). There could be a crucial risk in specifying one category of market alone and neglecting others. Hence, other goods markets may be included to overcome this risk once anticipated in the pilot stage.

4.2.4.2 Choice of Respondents and Sampling Frame

This study was carried out in Saudi Arabia, where 50 per cent (10 million) of the population is less than 35 years old and mobile penetration reached 191 per cent in the first quarter of 2011 (CITC, 2011). Hence, the sample frame was drawn from mobile users in Saudi Arabia. Furthermore, users of smartphones who have previous experience with mobile advertising were decided to be the most appropriate for this study. Users with no previous experience of mobile advertising were excluded in order to capture the actual responses from targeted respondents.

4.2.4.3 Selection of Sampling Technique

The purpose of sampling is to obtain participants that are representative of the target population. More precisely, it uses a section of a population to represent the whole population (Alreck and Settle, 2004). There are two types of sampling technique: probability and non-probability. Non-probability sampling is based on the researcher's subjective judgement, but is not strong enough for generalisation. Probability sampling is the most commonly used type in research and can be used for generalisation (Walliman, 2005). In this research, the non-probability technique was adopted due to sample size.

4.2.4.4 Sample Size

The size of the sample depends on the basic characteristics of the population, the type of information required from the survey and the cost involved (Chisnall, 1997). It determines how close the sample's data are to those of actual population value it represents. Hence, the larger the size of the sample, the better the results (Robson, 2011).

However, it has been argued that a sample size of larger than 30 and less than 500 is appropriate for most research (Sakaran, 2003). Therefore, the

sample size of this research was 664, with the aim of ensuring confidence in the results and covering both genders, and a broader range of ages and backgrounds to enrich the study.

4.2.4.5 Sampling and Nonsampling Error

According to Churchill (1999) sampling error is the difference between the long-run average of the observed values in repetitions of measurement and the observed values of a variable. In survey research, sampling error is the difference between the population defined by the researcher and population as implied by the sample used in research (Malhotra and Birks, 2007). However, the sampling error decreases as sample size increases because the sample size becomes more representative of the population (Churchill, 1999; Hair et al., 2010). Thus, the current research tried to generate as large a sample of respondents as possible.

Nonsampling error is considered by Churchill (1999) as not related to the sampling method or sample size. It can arise in four main ways: project administration errors, faulty problem definition, respondent errors or measurement/design errors (Hair et al., 2010). In the current study, project administration errors were reduced by keeping records of project stages, such as the name of e-forums posted on and date. Faulty problem definition is reduced by the comprehensiveness of the literature review, which enabled relevant constructs and the relationships between them to be identified (Hair et al., 2010). Respondent errors most often take the form of non-response bias which is encapsulated in potential respondents who do not complete the questionnaire (Malhotra and Birks, 2007).

4.2.4.6 Non-Response Error

Non-response bias is defined as “a type of non sampling error which occurs when some of the respondents included in the sample do not respond” (Malhotra, 1993:106). This was minimised by deleting incomplete

questionnaires from the dataset and only counting the completed ones systematically from Qualtrics online survey. Hence, this research study did not count this type of error to be addressed.

4.2.5 Data Collection Method

Given the positivist foundations of this study, a quantitative approach, was used to collect data. There are three types of data collection for this approach: postal questionnaire, interviews or structured interviews, and online questionnaire (Easterby-Smith et al., 2008). The online survey was adopted as it is the most appropriate method to collect data compared with a postal survey and interview. Although the postal survey is considered to be a cheaper method compared to face to face interviews, the response rates and non-response bias are considered as the major disadvantages (Jobber et al., 2004). The targeted population are smartphone users; hence, the online survey is more suitable to capture their response in a mobile marketing context, given the large sample size sought.

Furthermore, the online survey has the element of attractiveness and advantage of being interactive, so respondents can find it engaging compared to the postal questionnaire (Easterby-Smith et al., 2008). The survey, due to time, money constraints and sample size, was hosted on a web server and the uniform resource locator (URL) was posted on 40 popular electronic forums chosen as convenience sample via Google search engine. These forums were persuaded to have the link for two weeks each and respondents were encouraged to participate.

However, in order to overcome the inherent limitations associated with the online survey technique, the assurance of anonymity and confidentiality was stated on the cover page for each respondent. Furthermore, a filtered questions strategy was employed to target respondents who were not fully

engaged with the survey as they were suggested to be (Zikmund and Babin, 2010).

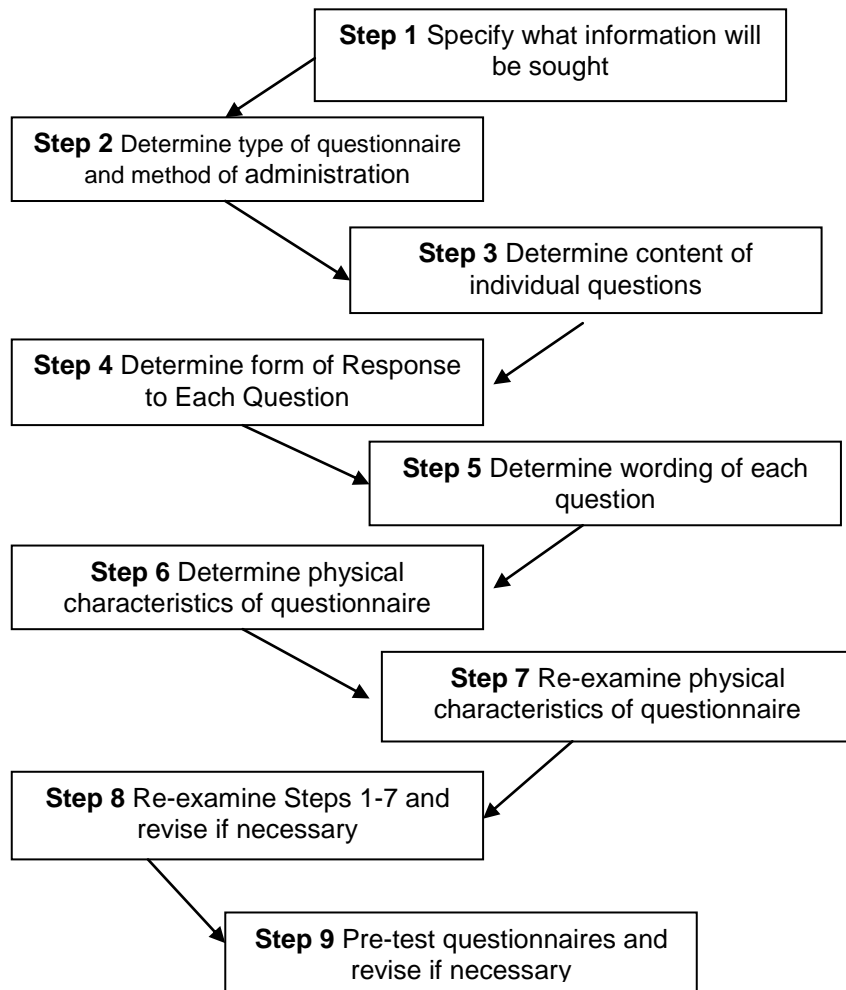
The online questionnaire was left open for a month, from July to August 2013, to provide sufficient time for participants to respond. After that, the results were fed into SPSS and analysed in order to find the relationships between different variables along with structural equation modelling, which would deliver results, to address the key research questions – please refer to chapters five and six for details.

4.2.5.1 Questionnaire Design

In order to avoid any serious error, this research is guided by the procedure recommended by Churchill and Iacobucci (2002) (see figure 4-1), in conjunction with the procedures of scale development suggested by Churchill (1979). The following provides further assistance in obtaining an effective and efficient questionnaire.

Churchill and Iacobucci's (2002) procedure has been applied to this study, because it suggests steps which are constructive for designing a questionnaire. Other authors (e.g. Chisnall, 1986) discussed questionnaire design covering the same aspects that are mentioned by Churchill and Iacobucci (2002). The physical characteristics of the questionnaire can affect the accuracy of the replies that are obtained, as in page layout, logical order. Hence, Hair et al.'s (2002) guidelines in format and layout were followed, as were Brace's (2004) suggestions for screen layout in online questionnaire.

Figure 4-1: Procedures for Developing a Questionnaire



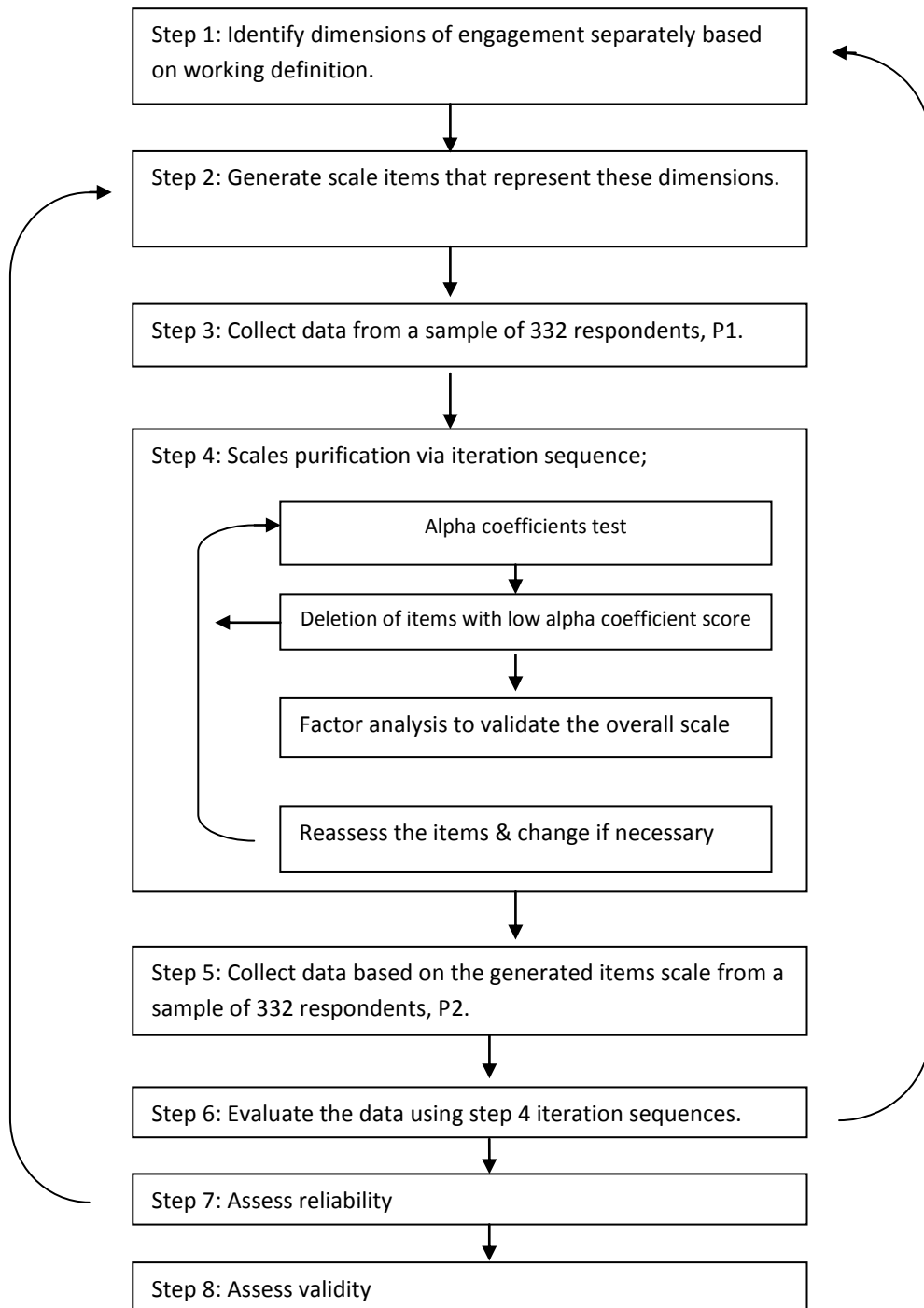
Source: Churchill and Iacobucci (2002)

4.3 Construct Operationalisation and Scale Development

The construct development steps followed Churchill's (1979) suggestions closely. The procedure consists of eight steps to develop a measurement scale, see figure 4-2, starting with a specification to the construct domain. Then there is the generation of a set of items to be tested empirically through the purification stage. Finally, the evaluation process should be carried out

by testing the reliability and validity before proceeding to large scale implementation.

Figure 4-2: Overview of steps employed in developing the engagement scale



There are four constructs added to the TAM model: subjective norms, information seeking, customer engagement and customer empowerment. These constructs are major areas of information to be sought. In this study, because there was no previously developed scale for customer engagement that fitted this research context, a new scale was developed. Thus, the customer engagement scale development took place in two phases, where as the rest were adopted from existing instruments. In the first phase, the initial step was to identify the constructs' domains, which was done by identifying three dimensions to be used in listing items, cognitive, emotional and behavioural. The item generation and scales adoption for other constructs are detailed in the next sections.

4.3.1 Item Generation for Customer Engagement

To begin the process of scale development a large pool of items was generated. The larger the item pool, the better the chances of ending up with a set of good items in scale development (DeVellis, 2012). Following Churchill's (1979) framework for measure development, an initial pool of items was generated after reviewing several candidate items from many tested scales listed for this purpose. The initial pool result with 84 items.

The next step was conducted by deep consideration of elimination of non relevant items under a rigorous process which lasted for almost a year, with the researcher's supervisor. When any concern arose over an item, this item was either removed or rephrased to respond to the cause of concern. Some of these concerns were related to possible misinterpretation of some questions by respondents, while others related to an item that might be related to another construct than the one intended. That result with 65 items, see table 4-1 items generation pool.

Table 4-1: Items Generation Pool

S.N	Items	Items adaptation	Source
1	<p>Cognitive:</p> <ol style="list-style-type: none"> 1. I think the product is good for me. 2. I can understand the features of the product. 3. I believe if I buy the product it will be a good choice. 4. I think I should ask for more information about the product. 5. I believe other opinions will help me decide to buy the product. 6. I think I will use social media to communicate with the company selling the product. 	<ol style="list-style-type: none"> 1. I think the smartphone is good for me. 2. I can understand the features of the smartphone. 3. I believe if I buy the smartphone it will be a good choice. 4. I think I should ask for more information about the smartphone. 5. I believe other opinions will help me decide to buy the smartphone. 6. I think I will use social media to communicate with the company selling the smartphone (e.g. Facebook, Twitter). 	Author
Definition	The intellectual efforts where individual thoughts and beliefs about an object based on available information. (Author)		
2	<p>Behavioural -</p> <ol style="list-style-type: none"> 1- On most purchase decisions the choice I make is of little consequence. 2- Usually reading about products or asking people about them won't really help you make a decision. 3- I have little or no interest in shopping. 4- Consumer Reports is not very relevant to me. 5- I am not interested in bargain seeking. 6- I am not interested in sales. 7- You can't save a lot of money by careful shopping. 8- I often take advantage of coupon offers in the newspapers. 9- Because of my personal values, I feel that "smart purchasing" ought to be important to me. 	<ol style="list-style-type: none"> 1. On most purchase decisions the choice I make is of little consequence. 2. Usually reading about smartphones or asking people about them won't really help you make a decision. 3. I am not interested in bargain seeking. 4. I am not interested in sales campaigns. 5. Because of my personal values, I feel that "smart decision" ought to be important to me. 6. Being a smart shopper is worth the extra time it takes. 7. I am not really committed to getting the most for my money. 8. I view the purchasing of a smartphone as a rather petty activity, not relevant to my main concerns in life. 	Slama and Tashchian (1985)

<p>10- I usually am not annoyed when I find out I could have bought something cheaper than I did.</p> <p>11- Being a smart shopper is worth the extra time it takes.</p> <p>12- Even with inexpensive products like shampoo, I will often evaluate a recent purchase and become annoyed because the product doesn't adequately meet my needs.</p> <p>13- Sales don't excite me.</p> <p>14- I am not really committed to getting the most for my money.</p> <p>15- For expensive items I spend a lot of time and effort making my purchase decision, since it is important to get the best deal.</p> <p>16- Consumerism issues are irrelevant to me.</p> <p>17- I view the purchasing of goods and services as a rather petty activity, not relevant to my main concerns in life.</p> <p>18- It is important to me to be aware of all the alternatives before buying an expensive appliance.</p> <p>19- It is important to me to keep up with special deals being offered by the grocery stores in my area.</p> <p>20- I am too absorbed in more personally relevant matters to worry about making smart purchases.</p> <p>21- It is part of my value system to shop around for the best buy.</p> <p>22- The consumer and business sections of the newspaper are highly relevant to me.</p> <p>23- If I were buying a major appliance it wouldn't make much difference which brand I chose.</p> <p>24- The brands of goods I buy make very little difference to me.</p> <p>25- It is not worth it to read Consumer Reports since most brands are about the same.</p> <p>26- You can save a lot of money by clipping coupons from the newspaper.</p> <p>27- Thinking about what you are going to buy before</p>	<p>9. It is important to me to be aware of all the alternatives before buying an expensive smartphone.</p> <p>10. It is not worth it to read Consumer Reports since most brands are about the same.</p> <p>11. Thinking about what you are going to buy before going shopping won't make much difference in your long run expenditures</p> <p>12. I am willing to spend extra time shopping in order to get the cheapest possible price on a smartphone of like quality.</p> <p>13. I pay attention to advertisements on smartphones I am interested in.</p> <p>14. I don't like to waste a lot of time trying to get good deals.</p>	
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	<p>going shopping won't make much difference in your long run expenditures.</p> <p>28- It doesn't make much sense to get upset over a purchase decision since most brands are about the same.</p> <p>29- I am willing to spend extra time shopping in order to get the cheapest possible price on goods of like quality.</p> <p>30- I pay attention to advertisements for products I am interested in.</p> <p>31- Shopping wisely is a rather petty issue compared to thinking about how to make more money.</p> <p>32- I don't like worrying about getting the best deal when I go shopping; I like to spend money as I please.</p> <p>33- I don't like to waste a lot of time trying to get good deals on groceries.</p>		
Definition	Can be seen in attitude as Individual's favourable or unfavourable inclination towards an attribute of an object. (Hughes, 1971)		
3	<p>Behavioural :</p> <p>Attitude toward an object: Semantic 7 points</p> <p>To what extent you expected the movie to have the listed characteristics?</p> <ol style="list-style-type: none"> 1. Fun/ not fun 2. Appealing/ not appealing 3. Interesting/ boring 4. Exciting/ unexciting 5. Fascinating/ dull 	<p>To what extent you expected the smartphone to have the listed characteristics?</p> <ol style="list-style-type: none"> 1. Fun/ not fun 2. Appealing/ not appealing 3. Interesting/ boring 4. Exciting/ unexciting 5. Fascinating/ dull 	<p>Neelamegham and Jain (1999)</p>

Scale description		The scale is attempting to measure a person's thoughts about some specified object with an emphasis on how fun and exciting it is.	
4	Behavioural : Attitude toward the offer The typical consumer would think the offer: 1. Is positive/ is negative 2. Is good/ is bad 3. Is beneficial/ is harmful 4. Is foolish/ is foolish/ is wise 5. Will make a difference/ won't make a difference	The typical consumer would think the offer: 1. Is positive/ is negative 2. Is good/ is bad 3. Is beneficial/ is harmful 4. Is foolish/ is foolish/ is wise 5. Will make a difference/ won't make a difference	Ellen et al. (2000)
Scale description		The scale is most suited for an offer that has to do with an event or cause which a consumer has been asked to support in some way and has the potential to make a difference to someone or something the consumer cares about	
5	Behavioural Attitude toward the product/brand: 1. This is a bad / a good product 2. I dislike / like the product 3. I feel negative / positive toward the product 4. The product is awful/ nice 5. The product is unpleasant/ pleasant 6. The product is unattractive/ attractive 7. I approve / disapprove of the product	Attitude toward the smartphone: 1. This is a bad / a good product 2. I dislike / like the product 3. I feel negative / positive toward the product 4. The product is awful/ nice 5. The product is unpleasant/ pleasant 6. The product is unattractive/ attractive 7. I approve / disapprove of the product	Leclerc et al. (1994)

Scale description		To assess a person's attitude toward some specific product or brand.	
6	Behavioural Attitude toward the product ; semantic 7 points 1. Like/ dislike 2. Useful/ not useful 3. High-tech/ not high-tech 4. Good/ bad 5. High quality/ low quality 6. Practical/ impractical 7. Worth owning/ not worth owning 8. Impressive/ not impressive 9. Valuable/ not valuable 10. Advance/ not advanced	Attitude toward the smartphone ; 1. Like/ dislike 2. Useful/ not useful 3. High-tech/ not high-tech 4. Good/ bad 5. High quality/ low quality 6. Practical/ impractical 7. Worth owning/ not worth owning 8. Impressive/ not impressive 9. Valuable/ not valuable 10. Advance/ not advanced	Roehm and Sternthal (2001)
Scale description		Used to measure a persons' general evaluation of a high tech good or service	
7	Emotional How you feel about... on 18 semantic items scale Pleasure: 1- Happy _ unhappy 2- Please _ annoyed 3- Satisfied _ unsatisfied 4- Contented _ melancholic 5- Hopeful _ despairing 6- Relaxed _ bored	How do you feel about ad messages promoting smartphone devices received on your mobile phone? I feel ... 1. Happy, unhappy 2. Please, annoyed 3. Satisfied, unsatisfied 4. Contented, melancholic 5. Hopeful, despairing 6. Relaxed, bored	Mehrabian and Russell (1974)

	<p>Arousal:</p> <p>7- Stimulated _ relaxed 8- Excited _ calm 9- Frenzied _ sluggish 10- Jittery _ dull 11- Wide awake _ sleep 12- Aroused _ unaroused</p> <p>Dominance:</p> <p>13- Controlling _ controlled 14- Influential _ influenced 15- In control _ cared for 16- Important _ awed 17- Dominant _ submissive 18- Autonomous _ guided</p>	<p>7. Stimulated, relaxed 8. Excited, calm 9. Frenzied, sluggish</p> <p>10. Jittery, dull 11. Wide awake, sleep 12. Aroused, unaroused 13. Controlling, controlled 14. Influential, influenced 15. In control, cared for 16. Important, awed 17. Dominant, submissive 18. Autonomous, guided</p>	
<p>Definition</p>	<p>Emotion is a universal set of largely prewired internal processes of self-maintenance and self-regulation. ([Buck, 1988; Darwin, 1896; Ekman, 1972; Le-Doux, 1987] cited in Markus and Kitayama, 1991: 235)</p>		

The engagement scale was developed after clearly defining the construct definition and content domain. It was conceptualised as a multidimensional and a higher-order construct with reflective items following steps 1 and 2 in figure 4.2 of defining dimensions and working definition to generate items. The engagement construct consisted of cognitive items written following the item writing steps of Netemeyer et al. (2003) and Devellis (2012) as in improving clarity, avoiding double-barrelled items and negative wording items, while behavioural items were adapted from Slama and Tashchian (1985).

After items had been agreed upon, the researcher requested opinions from five PhD students, who were involved in marketing research, for the 20 items in the first round. The judging panel was asked to identify each item belonging to its dimension and confirmed these items were relevant to each dimension, see table 4-2 for feedback form for the first round. This step took one week to collect the responses, which were discussed with the author's supervisor in order to start the next step of checking for item redundancy as suggested by Devellis (2012), and carefully choosing items that reflect the engagement scale's purpose from the item pool.

Table 4-2: Experts' opinion for customer engagement measurement form 1ST round

Customer Engagement Scale Development – Experts Survey

I am developing a measurement scale to capture customer engagement via mobile as a part of my research on mobile marketing and I have listed down a set of items that I believe they could encapsulate such behaviour.

The **customer engagement** is defined as "the initial interest and further actions taken by the customer in marketing communication, which it can be cognitive, emotional and behavioural involvement in a specific brand interaction in B2C and C2C relationship". I would appreciate your kind assistance in this stage by selecting which items that you think are more related to cognitive or behaviour based on your understanding to definitions below.

Cognitive: is the intellectual effort where individual think and believe about an object based on available information.

Behaviour: can be seen in attitude as Individual's favourable or unfavourable inclination towards an attribute of an object.

So, please choose the most appropriate one:

Item	Cognitive	Behaviour
I think the product is good for me.	<input type="radio"/>	<input type="radio"/>
I can understand the features of the product.	<input type="radio"/>	<input type="radio"/>
On most decisions the choice I make is of little consequence.	<input type="radio"/>	<input type="radio"/>
Usually reading about products or asking people about them won't really help you make a decision.	<input type="radio"/>	<input type="radio"/>
I am not interested in bargain seeking.	<input type="radio"/>	<input type="radio"/>
I am not interested in sales campaigns.	<input type="radio"/>	<input type="radio"/>
I believe that other opinions will help me decide to buy the product.	<input type="radio"/>	<input type="radio"/>
Because of my personal values, I feel that "smart decision" ought to be important to me.	<input type="radio"/>	<input type="radio"/>
I think I should ask for more information about the product.	<input type="radio"/>	<input type="radio"/>
Being a smart shopper is worth the extra time it takes.	<input type="radio"/>	<input type="radio"/>
I am not really committed to getting the most for my money.	<input type="radio"/>	<input type="radio"/>
I view the purchasing of goods as a rather petty activity, not relevant to my main concerns in life.	<input type="radio"/>	<input type="radio"/>
It is important to me to be aware of all the alternatives before buying expensive electronic goods.	<input type="radio"/>	<input type="radio"/>

I believe if I buy the product it will be a good choice.	<input type="radio"/>	<input type="radio"/>
It is not worth it to read Consumer Reports since most brands are about the same.	<input type="radio"/>	<input type="radio"/>
I shall use social media to communicate with company.	<input type="radio"/>	<input type="radio"/>
Thinking about what you are going to buy before going shopping won't make much difference in your long run expenditures.	<input type="radio"/>	<input type="radio"/>
I am willing to spend extra time shopping in order to get the cheapest possible price on goods of like quality.	<input type="radio"/>	<input type="radio"/>
I pay attention to advertisements for products I am interested in.	<input type="radio"/>	<input type="radio"/>
I don't like to waste a lot of time trying to get a good deal.	<input type="radio"/>	<input type="radio"/>

Any comments or suggestions, please write in the box.

The final 34 items consisted of the following: six items for the cognitive element developed by the author and sent to 7 PhD students in the marketing field, as a judging panel, along with 10 items for behaviour and 18 items for emotion adopted from Mehrabian and Russell (1974) and Roehm and Sternthal (2001). Referees were asked to identify whether each item belonged to its dimension and give their feedback on the relevance of these items to the construct domain.

They confirmed these items were relevant to the engagement construct and validated them; see table 4-3, experts' opinion for customer engagement measurement form for the second round. The items were then slightly amended to reflect the chosen sample frame characteristic. Hence, the engagement construct based on the working definition is considered to be multidimensional with the first order as reflective and the second order as reflective as well, which is supported by Petter et al. (2007).

The cognitive items were scaled as a seven-point Likert scale, where 1= strongly disagree, 7= strongly agree to minimise response biases as recommended by Hinkin (1995), while emotion and behavioural items were in the form of a semantics scale rated from 1 to 7.

Table 4-3: Experts' opinion for customer engagement measurement form 2nd round

Customer Engagement Dimensions	Items	Comments
<p>❖ Cognitive: the intellectual efforts where individual think and belief about an object based on available information. (Author)</p>	<p>a : Your thoughts towards the messages received on a smartphone (Likert Scale)</p> <ol style="list-style-type: none"> 1. I think that such communication messages on the smartphone are good for me. 2. I can understand the features of the communication messages received on the smartphone. 3. I believe if I act on the communication messages it will be a good choice. 4. I think I should seek more information about the content of such messages before I act on them. 5. I believe other opinions will help me decide to act on such communication messages. 6. I think I will use social media (e.g. Facebook, Twitter) to communicate with firms sending such communication messages 	
<p>❖ Behavioural: can be seen in attitude as Individual's favourable or unfavourable inclination towards an attribute of an</p>	<p>Your feelings towards the messages received on a smartphone : (Semantic Scale)</p>	

object (Hughes, 1971).	<ol style="list-style-type: none">1. Like/ dislike2. Useful/ not useful3. High-tech/ not high-tech4. Good/ bad5. High quality/ low quality6. Practical/ impractical7. Worth owning/ not worth owning8. Impressive/ not impressive9. Valuable/ not valuable10. Advance/ not advanced	
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<p>❖ Emotion: is a universal set of largely prewired internal processes of self-maintenance and self-regulation. (Markus and Kitayama, 1991)</p>	<p>How do you feel about ad messages promoting smartphone devices received on your mobile phone? (Semantic Scale)</p> <p>I feel ...</p> <ol style="list-style-type: none"> 1. Happy, unhappy 2. Please, annoyed 3. Satisfied, unsatisfied 4. Contented, melancholic 5. Hopeful, despairing 6. Relaxed, bored 7. Stimulated, relaxed 8. Excited, calm 9. Frenzied, sluggish 10. Jittery, dull 11. Wide awake, sleep 12. Aroused, unaroused 13. Controlling, controlled 14. Influential, influenced 15. In control, cared for 16. Important, awed 17. Dominant, submissive 18. Autonomous, guided 	
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The final 34 items were tested for reliability and validity in a second phase, where data collected from 332 respondents were tested in accordance with Peter (1981) and Churchill (1979) (see Table 4-4 for final items).

Table 4-4: Customer Engagement Items

Cognitive dimension Items		Scale
1	I think the smartphone is good for me.	Likert 1-7 points
2	I can understand the features of the smartphone.	
3	I believe if I buy the smartphone it will be a good choice.	
4	I think I should ask for more information about the smartphone.	
5	I believe other opinions will help me decide to buy the smartphone.	
6	I think I will use social media to communicate with the company selling the smartphone (e.g. Facebook, Twitter).	
Emotion dimension Items		Scale
1	Happy / unhappy	Semantic 7 points
2	Please / annoyed	
3	Satisfied / unsatisfied	
4	Contented / melancholic	
5	Hopeful / despairing	

6	Relaxed / bored		
7	Stimulated, relaxed		
8	Excited / calm		
9	Frenzied / sluggish		
10	Jittery / dull		
11	Wide awake / sleep		
12	Aroused / unaroused		
13	Controlling / controlled		
14	Influential / influenced		
15	In control / cared for		
16	Important / awed		
17	Dominant / submissive		
18	Autonomous / guided		
Behavioural dimension Items			Scale
1	Like / dislike		Semantic 7 points
2	Useful / not useful		
3	High-tech / not high-tech		
4	Good / bad		
5	High quality / low quality		
6	Practical / impractical		

7	Worth owning / not worth owning	
8	Impressive / not impressive	
9	Valuable / not valuable	
10	Advance / not advanced	

4.3.2 Items Adaptation for Customer Empowerment

The empowerment scale used in this study was adapted from Füller et al. (2009). The scale was developed to test employee participation in a virtual co-creation environment in NPD. The two-item scale returned good reliability with 0.71 with a 5-point Likert scale. Hence, the scale was adjusted on 7-points to match the other scales in the questionnaire (see figure 4-3 for items).

Figure 4-3: Scale items for Customer Empowerment

<ol style="list-style-type: none"> 1. I had the feeling of an active participant in the conversation with the company selling the smartphone. 2. Communication via the smartphone gave me the feeling that I am taken seriously.
--

4.3.3 Items Adaptation for Perceived Ease of Use and Perceived Usefulness

The other constructs of the conceptual framework were operationalised using the validated measurement scale of Venkatesh and Davis (2000) for perceived ease of use and perceived usefulness. The scales adapted from Davis (1989) and Davis et al. (1989) were developed to predict user acceptance of computers. Both scales consist of four items and returned good reliability above 0.85. They were adjusted on a 7-point Likert scale in this study (see figures 4-4 and 4-5 for scale items).

Figure 4-4: Scale Items for Perceived Ease of Use

1. My interaction with smartphone is clear and understandable.
2. Interaction with smartphone does not require a lot of my mental effort.
3. I find smartphone easy to use.
4. I find it easy to get smartphone to do what I want it to do.

Source: Adapted from Venkatesh and Davis (2000)

Figure 4-5: Scale Items for Perceive Usefulness

1. Using smartphone improves my performance in day to day activities.
2. Using smartphone in my day to day activities increase my productivity.
3. Using smartphone enhances my effectiveness on day to day life.
4. I find smartphone useful in my day to day activates.

Source: Adapted from Venkatesh and Davis (2000).

4.3.4 Items Adaptation for Subjective Norms

The subjective norms scale was developed by Fishbein and Ajzen (1975). However, the scale was adapted from Taylor and Todd (1995) and Venkatesh and Davis (2002). The scale returned no less than 0.80 on the reliability test in both these studies. Hence, their items were combined in one scale consisting of four items to suit this study (see figure 4-6 for scale items).

Figure 4-6: Scale Items for Subjective Norms

1. People who influence my behaviour think that I should use the smartphone.
2. People who are important to me think that I should use smartphone.
3. People who influence my behaviour would think that I should use the

smartphone.

4. People who are important to me think that I should use smartphone to communicate with them via instant messaging application (e.g. Whatsapp, BlackBerry chat).

Source: Adapted from Taylor and Todd (1995) and Venkatesh and Davis (2000).

4.3.5 Items Adaptation for Information Seeking

The information seeking scale was adapted from Papacharissi and Rubin (2000) to predict internet use. The scale consists of five items and returned 0.87 on the reliability test. The scale was developed by Rubin et al. (1988) to investigate motives of interpersonal communication. Hence, it is suitable for this research context to test information seeking behaviour via mobile devices. The scale was adjusted to a 7-point Likert scale (see figure 4-7 for scale items).

Figure 4-7: Scale items for Information Seeking

1. I use the smartphone because it is a new way to do research on internet.
2. I use the smartphone because it is easier to seek information.
3. I use the smartphone to information for free wherever and whenever I needed it.
4. I use the smartphone to look for information.
5. I use the smartphone to see what is out there.

Source: Adapted from Papacharissi and Rubin (2000).

4.3.6 Items Adaptation for Behavioural Intention

The behavioural intention scale was adapted from Cronin et al. (2000). The scale items were developed to test customer retention in the service

marketing context based on services' marketing literature. The three-item scale returned 0.87 on the reliability test, which was very good. Hence, the scale was adapted to suit this research context and adjusted on a 7-point Likert scale (see figure 4-8 for scale items).

Figure 4-8: Scale items for Behavioural Intention

1. Assuming I have internet access on my smartphone, I intend to proceed with the purchase.
2. When I have my smartphone with me, I predict that I would use it to proceed with the purchase.
3. If I had to do it over again, I would make the same choice.

Source: Adapted from Cronin et al. (2000).

All scales were put together alongside other questions in a survey. Then, the questionnaire was piloted on a small scale to test its effectiveness and to avoid any ambiguity in the questions before the rolling-out stage (see section 4.4 for details). Table 4.5 gives a summary of the variables and their sources.

Table 4-5: Summary of the main variables

Variable	Scale Source	Items	Scale points (current study)
Subjective Norms	Taylor and Todd (1995), Venkatesh and Davis (2000)	4	7
Information Seeking	Papacharissi and Rubin (2000)	5	7
Perceive Usefulness	Venkatesh and Davis (2000)	4	7
Perceive Ease of Use	Venkatesh and Davis (2000)	4	7

Customer Engagement	Mehrabian and Russell (1974), Roehm and Sternthal (2001), Author	34	7
Customer Empowerment	Füller et al (2009)	2	7
Behavioural Intention	Cronin et al (2000)	3	7

4.3.7 Other Information Collected

The questionnaire contains other variables which were collected for the interest of the research context. This is to enable comparison of demographic characteristics of the sample in association with the targeted population to confirm that the sample is representative. The additional variables collected in this study were age, gender, current position, smartphone types, how long been owned, how many, and daily usage of a smartphone. These variables can be used in subsequent analysis, if so desired.

4.3.8 Response Form

A self-administered and closed-ended questionnaire was used to examine the variables. The questionnaire was in a simple format to avoiding ambiguity and complexity, as recommended by Groves et al. (2009). A self-selection criterion with an option to withdraw was included. Closed-ended answers are easier to compare across multiple respondents and minimise misinterpretation of questions by respondents (Churchill, 1999). Also, this form reduces the time taken by respondents to complete the questionnaire and makes it a less expensive data collection technique over open-ended responses (Malhotra and Birks, 2007). All scales used in the current study were on a 7-point rating scale while some profile questions were categorised to simplify respondents' responses.

4.3.8.1 Back translation of Saudi Measurement Instrument

All the scale items used in this study were translated into Arabic using the translation and back-translation procedures recommended by Brislin (1986). Also, the demographic questions were translated along with the rest of the questionnaire. The translation from English to Arabic was made by two Arabic native speakers who are doing PhD research in marketing and the back translation from Arabic to English was made by one Arabic native speaker who holds a Master degree in Human Resource Management and a Bachelor's degree in English linguistics. See Appendix A for the questionnaire.

4.4 Data Collection

This section briefly describes the procedure for data collecting used in this study. It describes two stages of data collection: the pilot study and the main survey followed by sample characteristics.

4.4.1 Pilot Test

According to Saunders et al. (2007) the purpose of a pilot test is "to refine the questionnaire so that respondents will have no problems in answering the questions and there will be no problems in recording the data" (Saunders et al., 2007:386). It also helps carry out face validity where respondents can check if the questions are making any sense for them and if they face any problem in completing the survey. A sample size of 30 is considered to be adequate for a pilot test (Johanson and Brooks, 2009). The questionnaire was piloted on 30 respondents among Saudi students in the University of Hull. It was developed and hosted on Qualtrics online survey and was open for a week in early July 2013. The web link was sent via email to the Saudi students' club e-group. Responses were received from 20 male and 10 female respondents, which on the whole is very positive and only minor were reported: a typing mistake in one of the items was rectified, and the semantic scales of behaviour and emotion dimensions were positioned incorrectly and fixed.

4.4.2 Main Survey

The main survey was conducted between July and August 2013. The URL link was posted on 40 different e-forums in Saudi Arabia in a smartphones thread or similar interest thread. The post was revisited on a daily basis to collect responses for any comments from e-forums users. In terms of visitors to the post, some e-forums generated very good traffic, whereas others were modest. The steps followed for the main survey were as follows:

- 1) 25 July 2013: Introduction letter made to each e-forum.
- 2) 25 July 2013: URL posted on 18 e-forums.
- 3) 26 July 2013: URL posted on 10 different e-forums.
- 4) 27 July 2013: URL posted on 12 more different e-forums.

The survey link expired by the end of 25 August 2013 with more than 2,500 visits, and generated 906 responses in total. The next section gives a brief profile of the sample.

4.4.3 Missing Data

There was no missing data uncovered in the dataset due to the requirement that respondents answer all questions to complete the survey. Therefore, no data missing technique is required in this dataset and all non-completed surveys were eliminated systemically (see Appendix A-B for frequencies table).

4.4.4 Sample Characteristics

Overall, the sample consists of 60 per cent male and 40 per cent female. It reflects the age of respondents, with more than 80 per cent being below the age of 36. Previous research in a mobile marketing context has generally reported a higher proportion of male respondents and youth generation (e.g. Turel et al., 2007; Okazaki et al., 2007; Choi et al., 2008; Zhang and Mao, 2008). In terms of geographical distribution of the sample, it shows a big proportion concentrated in two counties (Riyadh and Makkah) as they are inhabited by a large population according to the recent national census of

Saudi Arabia (CDSI, 2010) (see tables 4-6, 4-7 and 4-8). Further details of the sample are presented in Chapter Five.

Table 4-6: Gender

		Freq.	Percent	Valid Percent
Valid	Male	401	60.4	60.4
	Female	263	39.6	39.6
	Total	664	100.0	100.0

Table 4-7: Age

		Freq.	Percent	Valid Percent
Valid	18 - 25	239	36.0	36.0
	26 - 35	302	45.5	45.5
	36 - 45	98	14.8	14.8
	46 - 55	20	3.0	3.0
	< 55	5	.8	.8
	Total	664	100.0	100.0

Table 4-8: Location

		Freq.	Percent	Valid Percent
Valid	Al Riyadh	259	39.0	39.0
	Makkah	181	27.3	27.3
	Al Madinah	28	4.2	4.2
	Al Qasim	30	4.5	4.5
	Eastern Province	85	12.8	12.8
	Ha'il	9	1.4	1.4
	Jizan	4	.6	.6
	Asir	27	4.1	4.1
	Al Bahah	7	1.1	1.1
	Tabuk	12	1.8	1.8
	Najran	5	.8	.8
	Al Jouf	7	1.1	1.1
	Northern Borders	10	1.5	1.5
	Total	664	100.0	100.0

4.4.4.1 Demographic Data

The online survey generated 906 responses, and respondents who agreed to take part in it 856, after discounting 50 who refused. Further, 192 respondents were eliminated due to their weaker engagement with the answering process based on the filter questions. The remaining 664 represented all 13 counties of Saudi Arabia. According to the collected data, 60 per cent were male and 40 per cent were female. In terms of age distribution 36 per cent were between 18-25 years old, 45.5 per cent were between 26-35 years old, 14.8 per cent between 36-45 years old, 3 per cent between 46-55 years old and only 0.8 per cent over 55 years old.

In terms of the geographical distribution, 39 per cent were located in Al Riyadh, 27.3 per cent were located in Makkah, 12.8 per cent in Eastern Province, 4.5 per cent in Al Qasim, 4.2 per cent in Al Madinah, 4.1 per cent in Asir, 1.8 per cent in Tabuk, 1.5 per cent in North Borders, 1.4 per cent in Ha'il, 1.1 per cent in Al Jouf, 1.1 per cent in Al Bahah, 0.8 per cent in Najran and 0.6 per cent in Jizan.

4.4.4.2 Smartphone Usage

According to the collected data 53 per cent owned two or more handsets while 47 per cent owned only one. Also, the brand data show 55 per cent of these handsets were iPhone, 48.7 were Samsung Galaxy S and Note, 27.9 per cent were Blackberry, 3.9 per cent were HTC, 2.7 per cent were Nokia Lumia and 14.5 per cent were other brands. When respondents were asked for how long they had the device, 77 per cent said for more than a year while 28 per cent said less than a year.

In terms of the smartphone function use ability, data show 92.5 per cent used it for calls, 91.9 per cent for browsing the internet, 90.5 per cent for social media network applications, 78.9 for checking emails, 76.8 per cent for texting, 58 per cent for other smartphone applications and 7 per cent for

others. Further, respondents were asked if they were interested in smartphones and their news, 68 per cent said yes and 32 per cent said no. When asked if they had experience of receiving advertising messages on their handset, 91 per cent said yes while 9 per cent said no.

4.5 Analytical Procedures

Given that the conceptual model represents relationships between constructs, data analysis based upon some form of correlation is appropriate. However since chronological constraints make causal determination impossible, theoretical reasoning served as the basis for anticipating relationships among constructs. The following section discusses the analytical technique chosen.

4.5.1 Chosen Analytical Technique

In early years researchers used to rely on uni-variate and bi-variate analysis to understand data and relationships. However, the need for more sophisticated techniques paves the way for multivariate analysis. It involves the application of statistical methods that simultaneously analyse multiple variables. According to Hair et al. (2014) first generation techniques used in the multivariate method were cluster analysis, exploratory factor analysis and multidimensional scaling for exploratory with analysis of variance, logistic regression and multiple regression for confirmatory research. The second generation techniques dominated in academic researches for two decades; they are both considered as forms of structural equation modelling (SEM), namely the Partial Least Squares approach (PLS) for exploratory research and covariance-based structural equation modelling and confirmatory factor analysis for confirmatory research (e.g. EQS, CALIS, AMOS and SEPATH).

Structural equation modelling is more suitable for this research than other statistical techniques (e.g. regression for testing complex relationships or simple correlation). This is because regression and correlation typically deal

with one relationship at a time, while structural equation modelling incorporates a range of statistical models to concurrently assess a number of relationships within a conceptual model ((Fornell, 1987); Chin, 1998; Hair et al., 2010).

PLS is a components-based structural equations modelling technique similar to regression, but models the measurement paths while simultaneously modelling the structural paths (Chin, 1998). Instead of assuming equal weights for all indicators of a measurement scale, the PLS algorithm allows each indicator to vary in how much it contributes to the composite score of the latent construct. Hence, it is primarily used to develop theories in exploratory research (Hair et al., 2014), and can be used in confirmatory research with relation to small sample size. PLS is rooted in the data set, as opposed to the covariance-based approach, which adheres to the theoretical model and makes no assumptions about the data distributions, which is desirable. Furthermore, PLS handles formative measurement better compared to covariance-based. However, it is relatively new and employed when theoretical models are not well formed (Jöreskog and Wold, 1982).

The covariance-based structural equation modelling technique was considered as the most suitable technique for analysing the data collected in this research for a number of reasons. First, covariance-based SEM is suitable for testing theoretical models that contain multiple interrelated dependence relationships (Hair et al., 2010). Covariance-based SEM enables researchers to estimate these relationships through separate equations for the endogenous constructs and to specify multiple dependence relationships that capture the effect of mediating constructs (Chin, 1998). Second, covariance-based SEM allows for the estimation of both marked variables and latent constructs (Bollen, 1989), and estimates that model parameters can be minimised compared to PLS, where they can be maximised (Hair et al., 2014). Third, covariance-based SEM enables

researchers to capture the effects of measurement error (Hair et al., 2010). This ability to screen error variance and structural prediction errors is a key function of SEM. Parameter estimates can be severely biased when measurement error is not accounted for as measures are not deemed to be perfect (Bollen, 1989). Finally, covariance-based SEM is driven by theory, not data (Diamantopoulos and Siguaaw, 2000). Hence, the research was undertaken with prior knowledge of the subject area, and further development of the current literature-based conceptualisation of the customer engagement and customer empowerment via mobile handset. For these reasons, covariance-based SEM was thought to be more suitable than PLS.

4.5.2 Sample Size for SEM

The sample size is considered to be crucial in SEM analysis. The larger the sample size, the less the sampling error and the more likely that the results will be statistically significant (DeVellis, 2012). However, there is little united theoretical guidance as to what constitutes an adequate sample size. Netemeyer et al. (2003) suggest that a range from 100 to 300 is adequate, while others suggest a rule of thumb that the ratio of sample size should equal at least 5:1 to free parameters (Bentler and Chou, 1987). Hence, to improve the trustworthiness of a model this ratio should be increased to 5-10 respondents per item (Clark and Watson, 1995; Comrey, 1988; Floyd and Widaman, 1995). Hair et al. (2010) recommend this ratio method, stating that as model complexity increases so also should sample size. Previous sample size classifies a sample of 100 as poor, 200 as fair, 300 as good, 500 as very good and 1,000 as excellent (Comrey and Lee, 1992). However, in situations where fewer than 200 cases are analysed, relaxing the limitation imposed on the number of iterations run by the statistical software can help the software to provide an adequate solution (Jöreskog and Sörbom, 1996).

4.5.3 Data Screening

According to Baumgartner and Homburg (1996) data screening is a very important stage in SEM. Data screening should be performed prior to statistical analysis (Baumgartner and Homburg, 1996). Data screening in this research was carried out by SPSS following guidelines suggested by Baumgartner and Homburg (1996) and Pallant (2007). The first step was to ensure that there were no errors in coding and that the responses were recorded correctly. The data was then screened for potential outliers and atypical cases. Out of range responses as well as cross contingency tables were used to identify unusual patterns in the data and to check for the distribution of the variables. The variables were also examined for skewness and kurtosis (see Chapter Five for in-depth details).

4.5.4 Structural Equation Modelling

Researchers generally follow the process of structural equation model evaluation as a two-step approach since introduced by Anderson and Gerbing in 1988. It involves assessing a measurement model and then assessing a structural model. A measurement model, or a confirmatory factor analysis (CFA) model, specifies the relationships between observed (i.e. items) variables and the latent variables they are associated with (Schumacker and Lomax, 2010). In the first step most of the modifications for the measurement model are made to obtain an acceptable goodness of fit to the data, followed by a full structural model in order to specify theoretical relationships among the latent variables (Anderson and Gerbing, 1988). Further, these two steps can carry out between one to eight stages to reach acceptable fit (Diamantopoulos and Siguaw, 2000; Schumacker and Lomax, 2010; Hair et al., 2010).

However, there is some criticism toward the two-stage approach to SEM. Hulland et al. (1996) favoured the one-stage approach as they believe that the analysis of data and theory jointly is the real advantage of SEM over

other multivariate techniques. They believe that theory and data are independent using a two-stage approach, unlike a one-stage approach (Hulland et al., 1996). It is often not possible to separate measurement and theory, as constructs draw meaning from other constructs in a theory and from the corresponding measures (Bagozzi and Phillips, 1982; Bagozzi and Yi, 1988; Fornell and Yi, 1992).

Regardless of this criticism, many researchers favour the two-stage approach in SEM compared to the one-stage approach. Hence, this study adopts the two-stage approach to model estimation where a measurement model is developed and then assessed for its validity before specifying the structural model and then assessing the structural model validity (see table 4-9 below).

Table 4-9: Two Stages of SEM

Stage One - Measurement Model	Stage Two - Structural Model
First	First
Developing the overall measurement model	Specifying the structural model
Second	Second
Assessing the measurement model validity	Assessing the structural model validity

4.5.5 Stage One – The Measurement Model

4.5.5.1 Developing the Overall Measurement Model

The measurement model is defined in the “relations between the observed and unobserved variables...it provides the link between scores on a

measuring instrument” (Byrne, 2010:12). Hence, the first stage involves developing the overall measurement model (Hair et al., 2010), which involves constructing a path diagram, as a visual representation of the relationships among the model constructs including observed and latent variables, disturbances, and errors. A path diagram makes it easier than relying on mathematical equations for the researcher to comprehend the hypotheses (Bollen, 1989) and it also helps to reduce the chances of specification error by highlighting omitted links and possible overlooked variables (Diamantopoulos and Siguaw, 2000). It works to describe the extent to which observed indicators (items) reflect the latent constructs (Bagozzi and Yi, 1988; Hair et al., 2010). Moreover, the measurement model alongside the structural model provide a confirmatory assessment of the construct validity (Anderson and Gerbing, 1988).

4.5.5.2 Exploratory versus Confirmatory Factor Analysis

Factor analysis (FA) was originally developed to explain students’ performance in various courses (Sharma, 1996 : 90). FA is an interdependence technique or data reduction technique which generally involves the study of relationships amongst items to attempt to determine a new set of variables, fewer in number than those in the original set (Hair et al., 2010; Stewart, 1981). Furthermore, “its goal is to explain the covariances and correlations between many observed variables by means of relatively few underlying latent variables” (Bollen, 1989:206). There are two types of factor analysis: exploratory and confirmatory factor analysis.

Typically, in cases where the underlying factor structure of a set of data is unknown, exploratory factor analysis (EFA) is employed; in cases where relationships between observed variables and latent variables are hypothesised a priori, then confirmatory, factor analysis (CFA) is employed to ascertain if the factor structure is present in the data matches that are hypothesised (Netemeyer et al., 2003; Stewart, 1981; DeVellis, 2012). Hence, for CFA a researcher must have a strong underlying theory

governing expected relationships among the data, whereas EFA needs no such theoretical basis (Hurley et al., 1997; Tabachnick and Fidell, 2007).

The EFA is employed to gain insights in initial stage of scale development to assess the potential dimensionality of items and scales via SPSS, while CFA is used to test or confirm dimensionality as in the number of factors and their times relationship within a factor. Furthermore, EFA is more useful for scale development purposes to reduce the number of items and to identify potential underlying dimensions in a scale, whereas CFA is preferred to confirm pre-existing structures in data (Hurley et al., 1997; Netemeyer et al., 2003; Sharma, 1996). EFA has an important advantage in comparison to CFA as it shows the cross loading items (Hair et al., 2010). Hence, EFA should be used prior to CFA to reveal items that are poorly loaded on a factor or load highly on more than one factor.

4.5.5.3 Factor Extraction Techniques

There are seven well known techniques used in factor analysis, and “all of them calculate a set of orthogonal components or factors that in combination reproduce R which is criteria used to establish the solution” (Tabachnick and Fidell, 2007: 633). The first one and the most commonly used is Principal Components Analysis (PCA) to extract maximum variance from the dataset with each component and it assumes that the communalities are one and consequently no prior estimates of communalities are needed. Second, Principal Axis Factor (PAF) differs from PCA in the communality estimation but its goal remains the same as PCA, to extract maximum orthogonal variance from the dataset. Furthermore, it implicitly assumes that “a variable is composed of a common part and a unique part where the common part is due to the presence of the common factors. The objectives are to first estimate the communalities and then identify the common factors responsible for the communalities and the correlation among the variables...the PAF technique assumes an implicit underlying factor model...For this reason many researchers choose to use PAF” (Sharma, 1996 :108). Third, Maximum Likelihood extraction (ML) estimates “population

values for factor loadings by calculating loadings that maximise the probability of sampling the observed correlation matrix from a population” (Tabachnick and Fidell, 2007: 636). The other four techniques are: Image Factor extraction (IF), Unweighted Least Squares (ULS), Generalized Weighted Least Squares (GWLS), Alpha Factoring (AF) (Sharma, 1996; Tabachnick and Fidell, 2007). However, PCA technique is employed in the EFA.

4.5.5.4 Rotation Techniques

According to Hair et al. (2010) the object of rotation is to simplify the interpretation of the output. There are two main methods of rotation: orthogonal and oblique. The former assumes factors are uncorrelated with each other while the latter assumes factors themselves are correlated (Tabachnick and Fidell, 2007). For the orthogonal the most used type is Varimax as it minimises the complexity of factors by maximising variance of loading on each factor. For the oblique the most used type is Promax where orthogonal factors are rotated to oblique positions. Hence, Promax is deemed to be appropriate for the dataset at the EFA stage.

4.5.5.5 Assessing the Measurement Model

Tests of model acceptability are necessary because there is normally assumed to be some form of measurement error present (Hunter and Gerbing, 1982). When considering measurement model fit, it has been suggested that the best guide to assessing model fit is strong substantive theory (Diamantopolous and Sigauw, 2000). Furthermore authors recommend using a variety of fit indices as this helps to avoid incidences of Type I and Type II errors when reporting results (Kelloway, 1998; Hair et al., 2010). Furthermore it is considered best practice to compare the relative fit of several competing models (Kelloway, 1998).

Sharm (1996) recommends researchers keep an eye on factor loadings when assessing the measurement model to see if they are high and

significant and if reliabilities of constructs and indicators are acceptable. Measurement model validity is also assessed through the evaluation of three major types of fit indices: stand-alone or absolute fit indices, comparative or incremental fit indices, and parsimonious fit indices (Netemeyer et al., 2003). Absolute fit is concerned with the ability of the model to reproduce the actual covariance matrix; comparative fit is concerned with comparing two or more competing models to assess which provides the better fit to the data; and parsimonious fit recognises that one can always obtain a better fitting model by estimating more parameters (Kelloway, 1998). The more commonly reported fit measures in each of the three categories as well as their advantages and disadvantages of the various measures are discussed in the next sections.

4.5.5.5.1 Stand-alone or Absolute Fit indices

These assess the overall fit of a SEM to a set of empirical observations. The key advantage of these overall fit measures is that they evaluate the whole model without any adjustment for overfunding and can reveal inadequacies not shown by the fit of the model components (Bollen, 1989). Limitations of absolute fit measures include their inability to apply to exactly identified models and that they can differ from the fit of the components of the model. In other words, the overall fit of the model may be good, but if any of the absolute fit measures do not fit the data well they do not identify what is wrong with the model or which part of the model is wrong (Bollen, 1986; Diamantopoulos and Siguaw, 2000). It is for these reasons that absolute fit measures should not be used in isolation but should be reported with the incremental fit measures as well (Hoyle, 1995). Examples of the absolute fit measures include the standardised residuals, chi-square test statistic, the standardised root mean square residual (SRMR), the root mean square error of approximation (RMSEA), the goodness-of-fit index (GFI), and adjusted goodness-of-fit (AGFI).

The residual matrix is the simplest absolute fit measure to report (Bollen, 1989). The fitted residuals describe the difference between the sample covariance matrix and the covariance matrix calculated from the model (Diamantopoulos and Siguaw, 2000). A positive residual indicates that the model under-predicts the covariance between two observed variables. A negative residual indicates that the predicted covariance is too high between the observed variables. When the covariance matrix of fitted residuals is a zero matrix, the estimated model can be described as fitting the sample data (Bollen, 1989).

However, there are three important factors that influence the interpretation of the fitted residuals. These are the difference between the population covariance matrix and the model implied matrix, the scales of the observed variables, and sampling fluctuations (Bollen, 1989). Because of these, the fitted residual matrix is seldom used. Instead, the standardised fitted residuals matrix is inspected (Jöreskog and Sörbom, 1996). Standardised residuals overcome problems due to sample size effects and those associated with the interpretation of the scales of the observed variables.

Standardised residuals are estimates of the number of standard deviations away from zero (perfectly fitting) that observed residuals lie. Therefore, if only random errors are present in a model, most of the standardised residuals should have an absolute value of less than 2.58 (Joreskog and Sorbom, 1996). Standardised residuals were employed in this research to identify possible misspecification in the measurement model and to assess overall fit of the structural model.

The most popular fit index for assessing absolute goodness of fit of a model is the chi-square statistic (Baumgartner and Homburg, 1996; Diamantopoulos and Siguaw, 2000). The chi-square statistics provide a test of perfect fit in which the null hypothesis is that the model fits the population data perfectly. Smaller chi-square values indicate better model fit, and a non-

significant chi-square value indicates that the model's predicted and observed sample matrices are sufficiently close that differences are assumed to be the result of sampling fluctuations (Baumgartner and Homburg, 1996; Diamantopoulos and Siguaw, 2000). A statistically significant chi-square causes rejection of the null hypothesis, implying imperfect model fit and possible rejection of the model (Diamantopoulos and Siguaw, 2000). However, Marsh and Hocevar (1985) were concerned that in large and complex problems with many variables and large degrees of freedom, the observed chi-square will nearly always be statistically significant, even when there is a reasonably good fit to the data.

However, a normed chi-square is often used to overcome this issue of increased model complexity. The normed chi-square is the chi-square value divided by the degrees of freedom for the model. The normed chi-square statistic is also seen as a measure of model parsimony. Generally, a normed chi-square value in the region of 3:1 or less indicates better model fit, although this can be influenced by sample size and model complexity (Hair et al., 2010). For a reasonable fit, Marsh and Hocevar (1985) recommend that the ratio of the chi-square to the degree of freedom be as low as 2 or as high as 5 to indicate a reasonable model fit.

The chi-square is tied to its limitations, and researchers usually analyse other absolute fit measures in addition to the chi-square statistic. One measure often reported is the standardised root mean square residual (SRMR). The SRMR is a standardised summary of the average covariance residuals (Kline, 2011). It therefore represents the average amount of covariance not accounted for by the model (Diamantopoulos and Siguaw, 2000). The SRMR is used to analyse the fit of competing models and is best suited to the analysis of standardised observed variables as it must be interpreted in relation to the sizes of the observed variances and covariances (Joreskog and Sorbom, 1996). Because the SRMR, like the chi-square statistic, is an absolute fit measurement, it does not indicate problem areas of the model (Diamantopoulos and Siguaw, 2000). There is no absolute threshold

established for SRMR values, however values less than 0.10 indicate a good fit to the data (Kline, 2011), while values less than 0.05 suggest that the model fit is considered acceptable (Schumacker and Lomax, 2010). The SRMR is reported in this research for each of the models estimated in the data analysis.

The root mean square error of approximation (RMSEA) is another measure that attempts to correct for the propensity to reject any specified model with a sufficiently large sample (Netemeyer et al., 2003). The RMSEA is based on non-centrality, resulting in an estimation of how well the model approximates the population covariance matrix per degree of freedom (Baumgartner and Homburg, 1996). An RMSEA equal to zero indicates that the model fits perfectly with the population. However, values less than 0.05 are indicative of good fit, while values between 0.08 and 0.10 indicate mediocre fit (Kelloway, 1998). MacCallum and Austin (2000) have strongly recommended reporting RMSEA for three reasons; first, it would appear to be adequately sensitive to model misspecification. Second, commonly used interpretative guidelines would appear to yield an appropriate conclusion regarding model quality. Third, it is possible to build confidence intervals around RMSEA values (Hu and Bentler, 1998, 1999; MacCallum and Austin, 2000). The RMSEA values are reported for each of the models estimated in this research.

Another absolute fit measure that is commonly reported is the goodness-of-fit index (GFI). The GFI is similar to a squared multiple correlation, as it indicates the proportion of the sample-implied co-variances explained by the model-implied co-variances (Kline, 2011). Unlike the RMSEA, the GFI is not adjusted for degrees of freedom which results in sample size limitations and the GFI value can be inflated by increasing the number of estimated model parameters (Gerbing and Anderson, 1992). Despite sample size constraints, research has shown that the GFI is generally less influenced by sample size than other measures of fit, such as the adjusted goodness-of-fit (AGFI) or the chi-square statistic (Marsh et al., 1988). GFI values range from zero to one with smaller values suggesting poor fit and larger values close to one

suggesting good fit (Schumacker and Lomax, 2010). Although no absolute threshold levels have been established, Hulland et al. (1996) and Kline (2011) propose that values equal to or greater than 0.90 indicate that the model fits the sample data well. Regardless of its limitations, the GFI is the second most commonly reported fit measure (Baumgartner and Homburg, 1996), and so is reported for all models in this research.

4.5.5.5.2 Incremental Fit Indices

Incremental fit measures compare the proposed model to a baseline model, often termed the “null” model (Netemeyer et al., 2003). Bollen (1989) describes a baseline model as “the simplest, most restrictive model that is a reasonable standard to which to compare the less restrictive maintained model” (pp. 269-270). In the baseline model the observed variables are assumed to be uncorrelated with each other (Kelloway, 1998; Netemeyer et al., 2003; Kline, 2011). There are three measures of incremental fit reported in this research. They are the comparative-fit-index (CFI), the incremental-fit-index (IFI) and the non-normed fit index (NNFI).

The IFI tests the relative improvement in fit of the proposed model over the baseline model (Byrne, 1998). Like the CFI, it is scaled so that values fall between zero and one. It takes into account model parsimony, so that degrees of freedom in the model are factored into its calculation (Byrne, 2010). CFI assesses the relative reduction in lack of fit as estimated by the non-central chi-square of a target model versus a baseline model (Hu and Bentler, 1999). Among the incremental fit indices, the CFI seems to hold the greatest potential for assessment of overall model fit as the CFI measure has been designed to take sample size into account (Byrne, 1998; Kline, 2011).

The Non-normed fit index (NNFI) or Tucker Lewis fit index (TLI) compares the lack of fit of a target model to the lack of fit of a baseline model with values ranging from zero to 1.00 and with a value close to 0.95 indicating good fit (Hu and Bentler, 1999). The value estimates the relative

improvement per degree of freedom of the target model over a base model. Some limitations of the NNFI are: it is possible that when using small samples the NNFI value can be much lower than the value of other fit indices; it is not restricted to fall between 0 and 1; its sampling variability is greater than that of the CFI; and it may produce inaccurate results when the null model is approximately true, representing an underestimate of model fit (Byrne, 1998; Kline, 1998). However, the NNFI appears to be more resistant to sample size restrictions than the GFI (Gerbing and Anderson, 1992) and appears more stable when evaluating more complex models (Netemeyer et al., 2003). The IFI, NNFI and CFI generally increase as model fit improves, and values over 0.9 are considered to indicate good model fit (Kelloway, 1998). It is generally recommended in the literature that the CFI and NNFI ought to be relied upon for model fit assessment (Diamantopoulos and Siguaw, 2000).

4.5.5.3 Parsimonious Fit Indices

Parsimonious fit measures allow for the comparison of “competing models with differing number of parameters to determine the improvement in fit of one model over another” (Netemeyer et al., 2003: 152). Parsimonious fit measures take into account not only the fit of the model but also the parsimony of the model (Schumacker and Lomax, 2010). The basic objective of parsimonious fit measures is to assess whether the fit of the model has been achieved by overestimating the number of parameters of the model (Hair et al., 2010). The use of parsimonious fit measures is mainly restricted to the comparison of competing models as no statistical tests are associated with these measures (Hair et al., 2010). The normed chi-square test, discussed earlier as an absolute fit measure, is also deemed an evaluation of model parsimony and is a commonly reported measure (Hair et al., 20010). In terms of model parsimony, the normed chi-square can help to identify “two kinds of inappropriate models: (a) a model that is over identified and capitalises on chance and (b) a model that does not fit the observed data and needs improvement” (Schumacker and Lomax, 2004:105).

The parsimonious normed fit index (PNFI) is another measure of model parsimony. The PNFI takes into account the number of degrees of freedom used to achieve a level of fit (Schumacker and Lomax, 2004). Parsimony is achieved with a high degree of fit for fewer degrees of freedom per estimated parameter in specifying coefficients to be estimated. Although no absolute threshold levels exist for the PNFI, parsimonious fit statistics of greater than or equal to 0.5 could be adequate, while zero is considered as no fit and one as perfect fit (Byrne, 1998; Schumacker and Lomax, 2004).

Another two parsimonious fit measures are the parsimonious goodness-of-fit index (PGFI) and Akaike information criterion (AIC). The PGFI adjusts the GFI based on the parsimony of the estimated model (Hair et al., 2010). The PGFI attempts to perform the job of two separate indices as it takes goodness-of-fit and model parsimony into account (Byrne, 1998). However, more significance may be attached to one of these dimensions given that low parsimony implies evidence of goodness-of-fit. Alternatively, the AIC is a comparative measure between models with differing numbers of constructs (Hair et al., 2010). It is generally held that smaller AIC values indicate better fit to the data, although no guidelines currently exist as to what small actually means (Kelloway, 1998). However, the PGFI is not likely to return a result of 0.9 or greater; rather values of 0.5 or greater are adequate (Byrne, 1998). The PNFI and PGFI should instead be used to compare one or more competing models, and the model that returns higher PNFI and PGFI figures demonstrates better fit to the data (Kelloway, 1998).

As mentioned earlier parsimonious fit measures are used to compare the fit of two or more models that differ substantially in terms of the number of free and fixed parameters. Hence, the absolute and incremental fit indices are reported in this research while parsimonious fit measures will not be reported as the former are considered to be the most common indices to report compared to the latter.

4.5.5.6 Reliability

Reliability can be thought of as the correlation between one measure of a variable, and another, equivalent measure of the same variable (Peter, 1981; Cohen et al., 2003). Thus, a number of different ways exist for assessing reliability: test-retest reliability, alternative-form method and internal consistency (Carmines and Zeller, 1979). Test-retest reliability involves administering a test at two different points in time and comparing responses (Carmines and Zeller, 1979). Using alternative-forms tests, two different tests are administered and their results are compared for consistency (Nunnally and Bernstein, 1994). However, these two approaches require longitudinal work or extend questionnaire length; hence, they were eliminated from this research.

In terms of the internal consistency, items measuring a construct are correlated with one another to calculate an index of reliability (Carmines and Zeller, 1979). The purpose of reliability analysis is to check the scale's internal consistency. Pallant (2010) defines internal consistency as "the degree to which the items that make up the scale are homogeneous or hang together" (p. 90).

Hair et al. (2010) presented some diagnostic measures to assess the scales' internal consistency. The first measures relate to each separate item including the item-to-total correlation (the correlation of the item to the overall scale score) and the inter-item-correlation (the correlation among items).

Internal consistency investigates the degree of inter-relatedness among the items in a scale (Cortina, 1993). The calculation of the coefficient alpha (Cronbach's alpha) of a scale has been suggested as a way to assess its internal consistency. Nunnally (1978) recommends a value of 0.70 as the threshold for the lowest acceptable level for alpha although there is no universal agreement on the acceptable level (Shevlin et al., 2000). However, DeVellis (2010) suggests that, where possible, scales be shortened if alpha values exceed 0.90. Another way by which the reliability of a scale can be

examined is through composite reliability (CR). A calculation of composite reliability is possible if scales are assessed through confirmatory factor analysis (CFA).

Coefficient alpha is not free from disadvantages; some of them are that it underestimates reliability for congeneric measures (Jöreskog and Sörbom, 1996), and the more items a scale has the larger the coefficient alpha, all other things being equal (Bollen, 1989; Hair et al., 2010). Some researchers suggest that a high Cronbach's alpha for a construct is one of two rules for determining if a construct is unidimensional (Hunter and Gerbing, 1982; Peter, 1981). The second rule is the criterion of external consistency, whereby items related to a construct should also correlate with a related construct, though to a lesser degree than that to which they correlate with their hypothesised construct (Bollen and Lennox, 1991). However, Gerbing and Anderson (1988) argue that reliability does not imply unidimensionality. For multicollinearity, constructs variance inflation factor (VIF) is more favourable for formative constructs than for reflective constructs as in this study where Cronbach's alpha is adopted (Petter et al., 2007).

There are some limitations of traditional methods of assessing reliability. These methods are based on correlations between observed variables and do not account for the possible effects of the latent constructs, and for measurement error (Bollen, 1989). As such, estimates of, for example, internal consistency reliability, should not be solely relied upon as a form of measure assessment, especially unidimensionality. However, structural equation modelling overcomes many of the limitations of these traditional methods (Baumgartner and Homburg, 1996). In addition to assessing item reliability, methods exist for assessing scale reliability in SEM. These methods for establishing scale reliability are based on parameter estimates. Construct reliability, also known as composite reliability, captures the size of the relationship between a latent construct and the indicators that relate to the construct (Steenkamp and Van Trijp, 1991). The advantage of this

method is that a structural equations framework corrects for random error (Bagozzi, 1981). Baumgartner and Homburg (1996) state that researchers should report an estimation of construct reliability that is based on the parameters of the model. Construct reliability measures the internal consistency of a set of indicators rather than the reliability of a single indicator. Construct reliability estimates of 0.7 or greater are recommended (Hair et al., 2010).

Scale reliability in SEM can also be assessed by analysis of the average variance extracted (AVE) for each construct, where an AVE greater than 0.5 supports the reliability of the measure (Fornell and Larcker, 1981). The AVE demonstrates the amount of variance in indicators that is accounted for by its associated construct, as opposed to the amount of variance accounted for by measurement error (Fornell and Larcker, 1981). Hence, AVE of 0.5 or greater indicates that more than 50% of the variance in each individual item is explained by its associated construct, indicating good reliability (Fornell and Larcker, 1981). In this research, internal consistency reliability (Cronbach's alpha), and construct (composite) reliability for each construct are reported when appropriate.

4.5.5.7 Validity

According to Netemeyer et al. (2003) there is a set of validity measurements that should demonstrate the construct validity, which are content validity, criterion-related validity, convergent validity and discriminant validity. Content validity refers to the adequacy with which a measure assesses the domain of interest. Content validity is most easily assured through employment of a well-defined research plan and adoption of necessary procedures for test construction. Content validity is best determined prior to the administration of a test, rather than afterwards (Nunnally and Bernstein, 1994). All scales used in this research are considered to have content validity because all the items were developed based on the literature and some were adapted from scales in the literature. Furthermore, all developed items used in the questionnaire

were assessed by knowledgeable academics for content validity (Gerbing et al., 1994).

Criterion-related validity pertains to the relationship between a measure and another independent measure (Hair et al., 2010). Criterion-validity is most easily assessed by examining the correlation matrix between constructs after they have been purified, where constructs that are expected to correlate should do so. In this regard, criterion-related validity is similar to the notion of nomological validity (Peter, 1981) and predictive validity (Nunnally and Bernstein, 1994). Nomological validity is defined as “the extent to which measure fits ‘lawfully’ into a network of relationships” or (in other words) “a nomological network that is the extent to which a measure operates within a set of theoretical constructs and their respective measures” (Netemeyer et al., 2003:86) and predictive validity refers to a construct’s ability to forecast a subsequent criterion (Malhotra et al., 2012).

Criterion-related validity is “established when the measure differentiates individuals on a criterion it is expected to predict” (Sekaran and Bougie, 2010: 159). There are two aspects of criterion validity: concurrent validity and predictive validity. Concurrent validity is where an assumption of validity is made if the findings are supported by already existing empirical evidence (Sarantakos, 1998). Predictive validity reflects the ability of the measuring instrument to differentiate among individuals with references to a future criterion (Sekaran and Bougie, 2010). However, this type of validity is not appropriate to use in this research.

Convergent validity refers to “the extent to which independent measures of the same construct converge or are highly correlated” (Netemeyer et al., 2003:86). Discriminant validity refers to “the extent to which measures diverge from other operationalisations from which the construct is conceptually distinct” (Netemeyer et al., 2003:86). In other work it is the extent to which a latent variable discriminates from other latent variables

(Farrell, 2010). Construct validity can be assumed when all measures of interest (the tested and target measures) show reasonable correlations (i.e. their significance, direction, and magnitude). Construct validity is performed as a three-stage process (Carmines and Zeller, 1979). Firstly, theoretical relationships between the concepts themselves are specified, as the conceptual framework in chapter three. Second, the empirical relationships between the constructs must be examined and, finally, the empirical evidence must be interpreted as it relates to confirming the validity of the particular construct (Carmines and Zeller, 1979). In other words, a “social scientist can assess the construct validity of an empirical measurement if the measure can be placed in theoretical context” (Carmines and Zeller, 1979: 27).

However, the correlation among the observed variables may not be a good indicator of whether the observed variable measures the latent construct. The observed variable correlation can also be influenced by the correlation of the latent constructs, the reliability of the measures for the other constructs, measurement error for each variable, and the effect of other latent constructs (Bollen, 1989).

The most frequent method of investigating convergent and discriminant validity is the multitrait-multimethod matrix (MTMM) by Campbell and Fiske (1959). The MTMM method uses more than one measure of constructs (i.e. multitrait) and more than one method to measure them (i.e. multimethod) in order to assess both convergent and discriminant validity (Bollen, 1989). Data was collected on constructs using no less than two separate traits and methods to identify discriminant validity problems. However, the major drawbacks of this method for researchers are that it requires more data collection, and may suffer from interpretation issues (Bollen, 1989).

Alternatively, Average Variance Extracted (AVE) can be used to establish discriminant validity. In an AVE analysis, the square root of every AVE value belonging to each latent construct should be much larger than any

correlation among any pair of latent constructs. Thus, AVE measures the explained variance of the construct. The value of AVE for each construct should be at least 0.50 (Fornell and Larcker, 1981). The AVE estimate is the average amount of variation that a latent construct is able to explain in the observed variables to which it is theoretically related (Farrell and Rudd, 2009). However, Netemeyer et al. (2003) argue that a newly developed scale value near 0.50 thresholds (> 0.45) is reasonable.

Another method that can be used to assess discriminant validity is to do a chi-square difference test which allows the researcher to compare two models, one in which the constructs are correlated, and one in which they are not. When the difference between them is significant the constructs present discriminant validity. In order to do that the constructs are analysed using Confirmatory Factor Analysis (CFA). If a factor analysis is misinterpreted, and discriminant validity is not established, then measurement scales used in research may not function correctly, and conclusions made regarding relationships between constructs under investigation may be incorrect (Farrell, 2010). According to Farrell and Rudd (2009) researchers should not only evaluate a CFA based upon model fit statistics but should also pay close attention to factor loadings, and CFA should not be used standalone to assess convergent and discriminant validity. It is not the most stringent test for discriminant validity (Farrell and Rudd, 2009). However, the measures of reliability and validity based on parameter estimates are reported in Chapter Five. Furthermore, estimates of convergent and discriminant validity based on CFA are also reported in Chapter Five.

4.5.5.8 Unidimensionality of Measures

Each scale measure should reflect one concept only as a basic assumption of measurement theory (Hattie, 1985; Gerbing and Anderson, 1988; Steenkamp and Van Trijp, 1991). Furthermore, a scale “is meaningful only if...the [measure] is acceptably unidimensional” and hence “the scale

development process must include an assessment of whether the multiple measures that define a scale can be acceptably regarded as alternative indicators of the same construct” (Gerbing and Anderson, 1988:186). Hence, to achieve unidimensionality a set of indicators should represent only one construct and the measurement error terms should be independent (Kline, 2011). Unidimensional models are useful in the interpretation of latent constructs as these models allow for more precise tests of reliability and validity of the indicators than multidimensional models, where indicators load on more than one construct or where measurement error terms co-vary (Kline, 1998). The term “congeneric measurement model” refers to a unidimensional measurement model with one or more latent constructs, multiple indicators each related to only a single construct; and no correlated error variance (Joreskog and Sorbom, 1996).

4.5.5.9 Measure Purification

According to Churchill (1979), a desirable outcome when developing measures is when scales produce a satisfactory alpha coefficient and the items load on their respective constructs. However, in most research instances, this is rarely the case. Therefore, researchers tend to perform measure purification. This is where items that do not contribute to the reliability of a scale, or do not load satisfactorily on their hypothesised construct are removed from further analysis. Such iterative procedures continue until the measures have been developed to such a standard as to render them useful for subsequent analysis (Churchill, 1979).

The customer engagement items along with other constructs items were reflective according to Jarvis et al. (2003), hence, structural equation modelling is the appropriate test method according to Gerbing and Anderson (1988) and Neuberg et al (1997) (Netemeyer et al., 2003). Multidimensional constructs contain multiple dimensions and are grouped because there is some theoretical relationship between the various dimensions. These multiple dimensions are “usually moderately correlated and are imperfect

representations of the latent construct of interest. They are grouped under the same multidimensional construct because each dimension represents some portion of the overall latent construct” (Law and Wong, 1999:144).

According to MacKenzie et al. (2005) there is a potential in a multidimensional construct to have some sub-constructs measured using reflective items with others using formative items, and/or a combination of both between the construct and sub-constructs. However, they stated that the choice of whether to model and analyse a construct as formative, reflective, or multidimensional depends mainly on the construct under study and “the generality or specificity of one’s theoretical interest” (MacKenzie et al., 2005: 713). Furthermore, Petter et al. (2007) have strongly argued that not all multidimensional constructs are formative, as in the case of this research’s engagement construct. In multidimensional constructs, the measurement items are intended to tap into the different sub-constructs, and are protected by ensuring that the items do not tap into similar aspects. Further details of the measure purification process used in this study are presented and discussed in Chapter Five.

4.5.5.10 Common Method Variance

According to Podsakoff et al. (2003) common method variance is “variance that is attributable to the measurement method rather than to the constructs the measures represent” (p. 879). Hence, it creates a false internal consistency, that is, an apparent correlation among variables generated by their common source. The common method bias was first identified by Campbell and Fiske (1959) and drew attention to mitigate its impact.

It is widely agreed that common method variance, which is attributable to the measurement method rather than to the constructs the measures represent, is a potential problem in behavioural research (Podsakoff et al., 2003). Common method biases arise from having a common rater, a common measurement context, a common item context, or from the characteristics of

the items themselves (Podsakoff et al., 2003). The key to controlling method variance through procedural remedies is to identify what the measures of the predictor and criterion variables have in common and eliminate or minimise it through the design of the study (Podsakoff et al., 2012). The connection between the predictor and criterion variables may come from (a) the respondent, (b) contextual cues present in the measurement environment or within the questionnaire itself, and/or (c) the specific wording and format of the questions (Podsakoff et al., 2003). All data on the questionnaire of this research are self-reported and collected through the same instrument during the same period of time, hence, that might cause systematic measurement error and further bias the estimates of the true relationship among theoretical constructs. However, these impacts have long been associated with behavioural research and several strategies put forward to minimise method bias.

Harman's single factor combines all items from all of the constructs in the study into a factor analysis to decide whether the majority of the variances can be accounted for by one general factor. Then, the results of the un-rotated factor solution are examined to determine the number of factors that are necessary to account for the variance in variables (Podsakoff and Organ, 1986). In other words, all items from each of the constructs should be loaded into exploratory factor analysis to see if one general factor does account for a majority of the covariances between the measures and if there is not CMV it does not represent an issue (Chang et al., 2010). Although this method was widely adapted to test CMV, it has limitations and is mainly deemed to be insensitive to detecting CMV and cannot stand alone.

However, Lindell and Whitney (2001) proposed a new approach to address the problems related to Harman's test in a single-method research design. In particular, their marker-variable technique takes advantage of a special variable that is deliberately prepared and incorporated into a study along with the research variables. In this approach, a marker variable is implemented in the study such that the marker variable is theoretically unrelated to at least

one variable in the study. Because the marker variable is assumed to have no relationship with one or more variables in the study, CMV can be assessed based on the correlation between the marker variable and the theoretically unrelated variable.

Hence, in order to reduce common method bias in this research the marker variable (MV) technique will be adopted as proposed by Lindell and Whitney (2001). Thus, a scale consisting of six items adopted from Kraft and Goodell (1993) for “health conscious” is considered to be unrelated to the research context. The construct’s scale has a coefficient alpha of 0.74 and matches the second condition of the MV technique. Also, it takes on board Podsakoff et al.’s (2003) consideration to control common method variance. The HC construct’s items were placed at the end of the questionnaire to stimulate respondents’ maximum cognition effort throughout the questionnaire. Furthermore, Harman’s single factor approach was employed as well.

4.5.6 Stage Two – The Structural Model

4.5.6.1 Specifying the Structural Model

The measurement model is defined in the “relations among the unobserved variables” (Byrne, 2010:12). This step involves the specification of relationships among the constructs under investigation (Hair et al., 2010). The structural model models the expected relationships among the constructs themselves while the measurement model deals with the relationships between questionnaire items and their respective constructs. In the previous chapter, the theoretical reasoning for the relationships between constructs in the form of the hypotheses was demonstrated. These hypotheses are relied upon when specifying the relationships between constructs in the structural model.

This step of the SEM process is primarily concerned with what is termed model identification; “It is concerned with whether the parameters of the

model are uniquely determined. If a model is not identified, it is impossible to uniquely determine the parameters even if the values for each observed variable are known for the entire population. In the confirmatory factor model this means that even if the entire population covariance matrix were known...it would be impossible to uniquely solve the covariance equation” (Long, 1983:35). An identification problem occurs when the proposed model is unable to generate unique estimates (Hair et al., 2010). A basic requirement for identification is that there must be at least as many distinct elements in the variance-covariance matrix of the observed variables (data points) as there are model parameters (Baumgartner and Homburg, 1996). The one necessary rule for assessing model identification is the order condition (the t-rule) (Bollen, 1989). The order condition states that the degrees of freedom of the model must be greater than or equal to zero (Hair et al., 2010). The degrees of freedom in SEM refer to the differences between the number of distinct covariance or correlation elements in the relevant matrix and the number of parameters to be estimated in the proposed model. Unlike other multivariate techniques, sample size has no effect on the degrees of freedom in SEM (Hair et al., 2010).

However, a model may be just-identified, under-identified, or over-identified (Diamantopoulos and Siguaw, 2000). The just-identified or saturated model has zero degrees of freedom and has equal numbers of parameters and observations (Schumacker and Lomax, 2010). As this kind of model has no degrees of freedom it can never be rejected (Byrne, 1998), but results from this model cannot be generalised to any other context except that of the specific case in which the model is tested. Hence, it is not useful in the practical sense. The under-identified model has negative degrees of freedom where the number of parameters to be estimated in the model exceeds the number of data points that are available (Byrne, 1998; Kline, 1998). Thus, this model does not contain enough information to be able to obtain a solution for parameter estimates; or an infinite number of solutions are obtainable (Byrne, 1998). This model can only be estimated if some of the

parameters are constrained or fixed, so that the number of parameters to be estimated is less than the number of data points available (Bentler and Chou, 1987; Diamantopoulos and Siguaw, 2000; Hair et al., 2010).

The chance of having an under-identified model increases if latent constructs are measured by fewer than three indicators (Bentler and Chou, 1987). The last type is over-identification, which is usually considered a positive outcome and occurs where there are fewer parameters to be estimated in the model than there are data points (Bentler and Chou, 1987; Byrne, 1998). This model has positive degrees of freedom (Hair et al., 2010). When a model has positive degrees of freedom it means that it is open to rejection, thus rendering it scientifically useful (Byrne, 1998). A greater number of degrees of freedom, when combined with acceptable model fit, means that the model is as generalisable as possible (Hair et al., 2010). Therefore, it is the goal of SEM research to specify a model such that it has positive degrees of freedom, thus meeting the criterion of over-identification (Byrne, 1998).

The order conditions above, although necessary, do not alone establish model identification (Byrne, 1998). Alternative rules exist to determine whether a model is identified. These rules are sufficient but not necessary as in the case of the order conditions (Bollen, 1989). Firstly, is the recursive model rule, which states that recursive models with identified constructs (the three indicator rule mentioned above) will always be identified (Hayduk, 1987). Secondly, that there are no co-variances between the measurement error terms and that each item relates to only one construct (Hair et al., 2010). Furthermore, certain other activities can help a researcher to present an identified model. It is helpful for identification purposes for each construct to have its measurement scale determined (Byrne, 1998). This means that for each construct in the model, one of the indicators that makes up that construct should have its loading set to equal one (Byrne, 2010). This helps to determine the measurement scale of a construct and helps to reduce the

number of parameters to be estimated in the model, aiding identification (Hayduk, 1987).

However, the two-step rule introduced by Anderson and Gerbing (1988) can be used to establish that the structural models are identified. It involves the estimation and re-specification of a measurement model containing all of the latent constructs and their indicators prior to the estimation of the structural model. One of the advantages of this approach is that it enables the researcher to explicitly assess the theoretical meaning of the latent constructs and prevents a situation where observed variables are related to latent constructs other than those they were intended to relate to (Anderson and Gerbing, 1988).

4.5.6.2 Assessing Structural Model Validity

The structural model assessment follows the same procedures discussed earlier for the assessment of the measurement model. However, the validity of structural models should also be compared on the basis of competitive fit, and via the assessment of structural relationship parameters (Hair et al., 2010). Further assessment should be made of hypothesised structural paths to determine if they are significant (Byrne, 2010). Thought should also be given to the variance explained by the structural equations to assess whether it is sufficient (Sharma, 1996). Typically, an estimate of a structural path coefficient is accompanied by the following: an unstandardised parameter estimate, a standard error, a t-value, an error variance term, and a squared multiple correlation (R^2) which indicates variance explained (Diamantopoulos and Siguaw, 2000).

The unstandardised parameter estimate is interpreted in a similar fashion to a regression coefficient (Kline, 2011). The significance of this parameter estimate is determined by two things: its standard error and its t-value. The standard error shows how precisely the parameter coefficient has been estimated; as such it is desirable to have relatively small standard errors

(Diamantopoulos and Siguaw, 2000). The t-value determines the statistical significance of the structural coefficient, and is obtained by dividing the value of the parameter by its standard error (Joreskog and Sorbom, 1996). However, if the standard error is too small, it can lead to difficulties in obtaining the t-value (Diamantopoulos and Siguaw, 2000). Thus, t-value provides the number of sampling distribution standard deviations that the parameter estimate is away from zero, and hence gives an indication of the likelihood of the estimate having been generated by chance (Hayduk, 1987). A higher t-value means that there is a lower chance of the parameter estimate having been generated by chance.

Therefore, if a t-value is greater than a certain value, the structural path coefficient is considered to be significant at a particular level of significance. For a one-tailed directional hypothesis, a t-value greater than or equal to the following is necessary for significance at the these levels: 1.28 (10% level), 1.645 (5% level), 2.326 (1% level) and 3.090 (0.1% level) (Diamantopoulos and Schlegelmilch, 1997; Sharma, 1996). For a two-tailed exploratory hypothesis, a t-value greater than or equal to the following is necessary for significance at the listed levels: 1.645 (10% level), 1.96 (5% level), 2.58 (1% level) and 3.291 (0.1% level) (Cohen et al., 2003; Hair et al., 2010). The t-value is a useful statistic when interpreting a structural model, as it indicates the significance (or non-significance) of a range of values, such as error terms and structural path coefficients. As such, it is generally desirable to have significant t-values for error terms and for structural path coefficients. However, it is worth mentioning that a non-significant coefficient with large magnitude could indicate that the sample size is not large enough to recognise important relationships (Hayduk, 1987).

The error variance associated with the structural path reflects errors in the residual terms (Diamantopoulos and Siguaw, 2000). As endogenous variables in a structural model are rarely measured perfectly, each will be accompanied by an error term (or residual). This error variance term is also accompanied by a t-value. A significant t-value associated with a residual in

effect demonstrates that the error associated with the measurement has been taken into consideration. A non-significant t-value associated with an error term indicates that the researcher does not have a reasonable understanding of the error associated with the measurement. However, variance explained is an indicator of how much of the variance in a dependent variable is explained by the independent variables in the structural model (Diamantopoulos and Siguaw, 2000). Hence, it is desirable to obtain large R^2 values for each endogenous variable. An R^2 value of 1.0 would indicate that it is possible to explain 100 per cent of the variance in a dependent variable using the independent variables in the structural model, which is extremely unlikely and to some extent a suspicious scenario. However, an R^2 range from 0.10 – 0.29 values can be interpreted as a reasonable prediction of endogenous variables, while 0.30 – 0.49 is a good prediction of endogenous variable, 0.50 – 0.69 is a very good prediction of endogenous variables or 0.7 and above is a superior prediction of the endogenous variable. Generally, a variance explained value will be reported for each endogenous construct in a structural model.

4.5.6.3 Model Interpretation and Modification

Interpretation of the structural model involves the assessment of each of the structural coefficients presented to see if they make theoretical sense. Model respecification or modification is mostly undertaken when the tested model shows evidence of misspecification. A model is assumed to be misspecified when there is poor model fit or lack of unidimensionality (Schumacker and Lomax, 2010). AMOS provides key inputs for model modification and this can be undertaken in several ways. The goal of model respecification is to improve either the parsimony or the fit of a model (Kelloway, 1998).

One way to respecify a model is by deleting non-significant paths from the model (Diamantopoulos and Siguaw, 2000). However, it is suggested that any modifications made must be substantially meaningful and theoretically justified (Kelloway, 1998). The objective of respecification is to define a set of

nested models. Two models can be nested as one model is a subset of the other (Hayduk, 1996; Kline, 2011). Therefore, a series of nested models should all have in common one particular model of which they are a subset. In this manner the selection of models is investigated in terms of their levels of parsimony for the same underlying theory (Hair et al., 2010).

According to Diamantopoulos and Siguaw (2000) non significant t-values can also be used to help respecify the model. Having a parameter that contributes little in terms of explanatory power to the model reduces model parsimony as the aim of model development is parsimony. Restricting such non-significant parameters to zero will influence the estimation of the remaining parameters and may improve model fit (Diamantopoulos and Siguaw, 2000). However, if the underlying theory states that a parameter should be included, even if it is non-significant in the particular case, it is better to retain the parameter (Joreskog and Sorbom, 1996).

There are other ways undertaken to reach model modification. The residual matrix can be assessed, where large values suggest that the model is unable to adequately explain the relationships hypothesised in the model (Sharma, 1996). A standardised residual of equal or greater than 2.58 indicates a substantial prediction error for a pair of indicators in the covariance or correlation matrix (Byrne, 1998). To overcome this problem, the researcher may choose to delete the most troublesome indicators. After the deletion of an indicator, the standardised residuals must be reassessed before any further adjustments are made. Modification indices in CFA outputs provide the approximate decrease in chi-square when a given fixed parameter is freed (Sharma, 1996). Any modification index larger than 3.84 is considered to be large since this value is the critical value of the chi-square statistic with one degree of freedom at the 5% significance level.

A model can also be modified by freeing one or more of the error terms. However, freeing one or more errors (due to high modification indices), means that errors are allowed to correlate thus violating the

unidimensionality assumption of measurement theory. Thus, to ensure unidimensionality, it is necessary that observed scale items with correlated errors are deleted (Gerbing and Anderson, 1988).

The squared multiple correlation (R^2) values for the model demonstrate how much variance is explained in each endogenous variable (Schumacker and Lomax, 2010). Hence, a low R^2 value may be indicative of a poorly measured latent variable, and a model may be improved by leaving the variable out of subsequent analysis. A final area that may aid in model fit improvement is the expected parameter change statistics (Hair et al., 2010). An expected parameter change signifies the level and direction of each fixed parameter were it to become freed (Schumacker and Lomax, 2010). This does not indicate changes in absolute model fit, but rather indicates the change in the actual parameter value (Hair et al., 2010). Hence, it provides guidelines for structural parameters that could be estimated (freed) in an attempt to improve model fit.

Following each model modification carried out, the researcher must repeat the assessment of the structural model's fit (Hair et al., 2010). Thus, any modifications in the model through respecification must have theoretical, rather than solely empirical, justification (Hu and Bentler, 1995). Furthermore, if a change to a model makes little or no theoretical sense, it should not be made solely in the interests of improving model fit (Hayduk, 1987).

Hence, the analysis reported in chapters five and six, following the above mentioned guidelines, will detail structural relationship parameters in the conceptual model and will also provide information on the amount of variance explained in each of the endogenous constructs under investigation and R^2 values.

4.5.7 Testing Moderator Hypotheses

Moderators' factors (age and gender) were hypothesised to have a moderating effect on the relationship between customer engagement and customer empowerment. The moderator always functions as an independent variable (Baron and Kenny, 1986). The moderator is defined as "a variable [Z] that affects the direction and/or strength of the relationship between an independent or predictor variable [X] and a dependent or criterion variable [Y]" (Baron and Kenny, 1986:1174). Applied researchers often estimate interaction terms to infer how the effect of one independent variable on the dependent variable depends on the magnitude of another independent variable. To evaluate the moderating effect there are various methods and in this study the multi-group comparison method of AMOS version 19 was used following the suggested steps of Gaskin (2012).

4.5.7.1 Multi-group Comparison

In order to assess differences between X and Y, two competing models were run via multi-group analysis in AMOS. According to Byrne et al. (1989) "constraints are imposed on particular parameters, and thus the data from all groups must be analyzed simultaneously to obtain efficient estimates...with the pattern of fixed and free parameters remaining consistent with that specified in the baseline model for each group" (p.457). The difference in χ^2 ($\Delta \chi^2$) "for competing models is itself χ^2 distributed, with degrees of freedom equal to the corresponding difference in degrees of freedom, and indicates whether the re-estimated model represents a statistically significant improvement in fit" (p.457).

However, the multi-group analysis consists of creating groups representing age and gender categories as the moderators via AMOS to produce critical ratio and regression weight tables. The tables of regression weights of gender (Male/Female) along with critical ration for differences between parameters were entered in Excel sheet (StatTools) downloaded from www.statwiki.kolobkreations.com, to be compared systematically. The same

procedure was followed for age different groups, see Appendix C and D for results.

4.5.8 Limitations of Structural Equation Modelling

Despite the advantages of SEM over other multivariate techniques, the technique has its own limitations. Although the predicted model may fit the sample data very well, there might be alternative models that fit the data equally well. SEM can be considered as equivalent when they yield the same predicted correlations or co-variances as other models, but do so with different configurations of the paths of the model parameters (Kline, 2011). There may be any number of equivalent variations of the model and it is the researcher's responsibility to state why one model is chosen over another one. Hence, considerable theoretical support is needed as well as the ability to interpret the parameter estimates and the meaningfulness of the model to support the chosen model (MacCallum, 2000).

Another limitation associated with the use of SEM is the term "causation". SEM has often been termed causal modelling (e.g. Hulland et al., 1996). However, the use of SEM does not necessarily imply causation (Schumacker and Lomax, 2010; Williams, 2005). Rather, to imply causation substantive theoretical support as well as the design of the data collection procedure is fundamental, as it is in any other statistical technique (Kelloway, 1998). However, there is strong theoretical reasoning behind the hypotheses in this study, the use of cross-sectional data somehow restricts the ability to specify the temporal ordering of the variables in the model, hence, limiting the strength of inferences of causation.

4.6 Ethical Issues

Ethics, as defined by the Oxford English Dictionary, is the branch of study that is concerned with human responsibility. In the field of research, ethics relates to the processes the researcher uses to formulate questions, clarify the research topic, analyse the findings and conclude the results of the

research (Homan, 1991). There are two philosophical standpoints on ethics: deontological, wherein the outcome of the research cannot justify the means if it is unethical, and teleological, wherein the outcome can justify the means (Saunders et al., 2007). There are several key issues that should be considered whilst conducting research in a social context, and Homan (1991) argues that the privacy of participants is among the most crucial aspects that the researcher needs to recognise and maintain.

As stated above, a self-administered questionnaire was used as a tool to gather data. The purpose of the research was stated clearly on the first page of the questionnaire. Moreover, the participants were notified of their right to withdraw from completing the survey at any time, and that its return would be considered as conveying their formal consent. The anonymity of the respondents was assured and no names were asked for as part of the questionnaire. As this research adopted a quantitative method, the analysis phase was conducted objectively by feeding data into SPSS and discussing the output. Confidentiality of the data is considered an ethical issue for a researcher. According to Homan (1991), the researcher is considered to be the gatekeeper of the participants' data and any intervention beyond the researcher should be justifiable to the participants. Furthermore, the respondents may be offered a copy of the end results if requested, to assure them of the objectivity of the research (see appendix A-A for HUBS research ethical committee approval).

4.7 Summary Remarks

This chapter explained the methodology adopted in this research. Research philosophies and approaches were compared with justification to the chosen approach in detail with its pros and cons in addressing the research questions. Then, research strategy types were discussed and further explanation given to selected strategy, including the sampling size. Moreover, development of engagement scale was explained followed by discussion of the chosen data collection instrument and sample

characteristics. Then, the analytical procedure chosen is detailed alongside. Finally, the structural equation modelling (SEM) technique employed in this research was discussed, followed by the ethical issues. The next chapter discusses the findings in detail in relation to the scale development process undertaken.

**CHAPTER FIVE: DATA ANALYSIS I -
ENGAGEMENT SCALE DEVELOPMENT**

5.1 Introduction

The previous chapter discussed the methodology adopted in detail. This chapter discusses the normality test and outliers. Next, it explores the purification process for the developed scale. Then, it explains the findings of exploratory factor analysis (EFA) of the customer engagement scale with the first dataset. Further, confirmatory factor analysis (CFA) was carried out to purify the engagement scale is reported, followed by reliability and validity testing. Finally, summary remarks conclude the chapter's work.

5.1.1 Normality Test

The normality refers to verify whether scores are normally distributed by looking at the results of Sig. value in the Kolmogorov-Smirnov statistic. A non-significant result indicates normality; this is where the Sig. value is more than 0.05. On the contrary, the distribution is non-normally when the value is less than 0.05 (Pallant, 2010).

According to Pallant (2010) and Hair et al. (2014) the skewness value provides an indication of the symmetry of the distribution; when the variable stretches toward the left of the right tail of the distribution then it is characterised as skewed. Positive skewness values indicate positive skew and negative skewness values indicate a clustering of scores at the high end (right-hand side of a graph). Kurtosis, on the other hand, provides information about the 'peakedness' of the distribution, in other words, whether the distribution is too peaked, forming a very peaked shape with most of the responses in the centre (Hair et al., 2014; Hair et al., 2010). The distribution is perfectly normal if skewness and kurtosis value of 0 which is very unlikely as expressed by Hair et al. (2014). Skewness of more than (+1) or less than (-1) is an indication of skewed distribution (Pallant, 2010), while kurtosis more than (+1) is considered to show the distribution is too peaked and less than (-1) is considered being too flat (Hair et al., 2014).

However, given the large size of sample (664) skewness will not “*deviate enough from normality to make a substantive difference in the analysis*” (Tabachnick and Fidell, 2007). Kurtosis can result in an underestimate of the variance, but this risk is also reduced with a large sample of 200 cases or more as “the impact of departure from zero kurtosis also diminishes” (Tabachnick & Fidell 2007: 80; Hair et al., 2010). Furthermore, the range of skewness and kurtosis values based on Kline's (2011) recommendation consider data is not normal if skewness a greater than (+/- 3.0) and kurtosis greater than (+/- 10.0) (Kline, 2011).

Hence, the variables were examined for skewness and kurtosis. The finding here was that the data were approximately univariate and multivariate normal. However, the Kolmogorov-Smirnov Sig. value is (0.000), which violates the assumption of normal distribution of the dataset (see Appendix B).

5.1.2 Detecting Outliers

An outlier is “a case with such an extreme value on one variable (a univariate outlier) or such a strange combination of scores on two or more variables (multivariate outlier)” (Tabachnick & Fidell 2007: 72), and there are four reasons for such extreme values. They are incorrect data entry, misspecification due to missing-value codes in computer syntax, case not a member of the population and case is a member of the population but has extreme value. Hair et al. (2010) argue that four reasons explain why outliers occur; procedural error, extraordinary event, extraordinary observation and observation uniqueness in their combination values.

Outliers can be checked by the Boxplot test via SPSS (Pallant, 2010). Hence, the dataset was examined by the test and revealed 43 cases as potential outliers across four variables; empowerment, information seeking,

perceived ease of use and information seeking. According to Tabachnick and Fidell (2007) there are two ways to deal with them; either to delete or retain them. According to Pallant (2010) 5 per cent trimmed mean produced a new mean after removing 5 per cent from the top and bottom of the dataset, if the new values are not very different between the original mean and the trimmed mean the recommendation is to retain them. The 5 per cent trimmed mean results showed no big difference between the original and new set of values. Further, all of the potential outliers identified were not extreme (due to the Likert response format), so these cases would have had a marginal effect on model fit. Moreover, all responses were confined to a defined range of (1-7) through the use of the Likert scale response format, the chances of there being many potential outliers had already been minimised. Thus, after carefully examining each case individually, the decision was taken to retain them as they were members of the population.

5.2 Measure Purification

According to Churchill (1979), a desirable outcome when developing measures is when scales produce a satisfactory alpha coefficient and the items load on their respective constructs. However, in most research instances, this is not the case. Therefore, researchers tend to perform what is termed “measure purification”. This is where items which do not contribute to the reliability of a scale, or do not load satisfactorily on their hypothesised construct are removed from further analysis. Such iterative procedures continue until the measures have been developed to such a standard as to make them useful for subsequent analysis (Churchill, 1979). According to Devellis (2012) an alpha score below 0.60 is unacceptable, between 0.60 to 0.65 undesirable, between 0.65 to 0.70 minimally acceptable, between 0.70 to 0.80 respectable, between 0.80 to 0.90 very good and above .90 it is recommended to reduce the number of items in the scale. However, a value of 0.70 is the suggested by Nunnally (1978) and hence was used as a cut-off point.

5.2.1 Split Samples

As the generated number of responses was 664, it was sufficiently large to split it into two subsamples. The first one was used primarily for development purification stage and the other one used to cross-check the findings, as suggested by Devellis (2012). The splitting technique was carried out via SPSS by splitting the whole dataset randomly into two equal different set. The first 332 cases were used to purify the engagement scale and the remaining 332 used to test the model.

5.3 Customer Engagement Scale

5.3.1 Data Adequacy for Factor Analysis

The Kaiser-MeyerOlkin (KMO) measure of sampling adequacy (Kaiser, 1970), is a popular diagnostic measure. It measures the overall sampling adequacy and a measure of the sampling adequacy for each indicator. KMO provides a means to assess the extent to which the indicators of a construct belong together. That is, it is a measure of the homogeneity of variables. Categories are rated as shown in table 5-1 as suggested by Kaiser and Rice (1974). The overall KMO measure should be greater than 0.80; however, a measure of above 0.60 is tolerable. The overall KMO measure can sometimes be increased by deleting the offending variables whose KMO value is low (Kaiser and Rice, 1974).

Table 5-1: KMO categories

Recommendation	KMO Measure
Marvelous	.90+
Meritorious	.80+
Middling	.70+
Mediocre	.60+
Miserable	.50+
Unacceptable	below .50

Cited in Sharma (1996:116)

The KMO result is (0.938) which is considered “Marvelous” in terms of factor analysis suitability, and the Chi-Square (9400.996) is inflated due to the large sample size, which affects the significance level, as shows in table 5-2 below. Moreover, the Bartlett’s test is less than .05 which indicates sufficient correlations exist among variables (Hair, 2010).

Table 5-2: KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.938
Bartlett's Test of Sphericity	Approx. Chi-Square	9400.996
	df	561
	Sig.	.000

5.3.1.1 Exploratory Factor Analysis (EFA) for Engagement - First Iteration

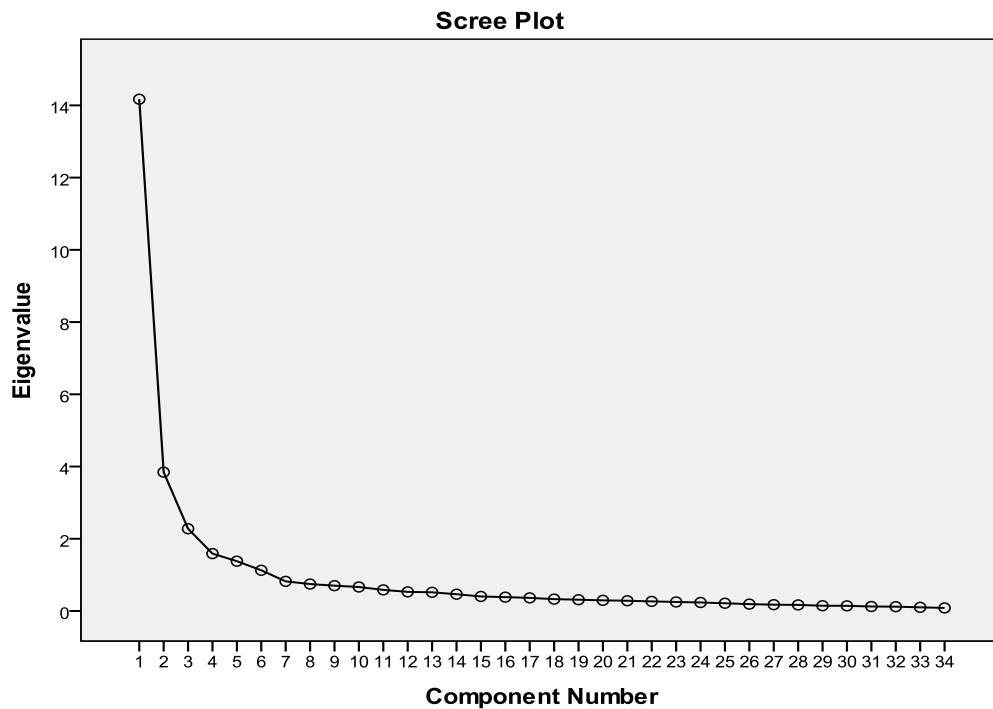
As discussed in Chapter Four section 4.5.5.2, the EFA employed to gain insights in initial stage of scale development to assess the potential dimensionality of items and scales. The initial EFA was run by SPSS 19 and results show the Eigenvalues extract 6 factors with values no less than 1, which represent 71.24 per cent (see table 5-3). In the rotated factor matrix items ENEM14, ENEM16, ENCO5 and ENCO6 are cross loading with other factors and according to Hurley (1997) the deference between should be more than 0.20; if not, they should be eliminated. Furthermore, loading score between variables and factors are recommended no less than 0.35 and above (Tabachnick and Fidell 2007; Hair et al., 2010). Hence, items with loading of 0.50 or greater on items were accepted in order to get a practically significant outcome (see table 5-4).

Table 5-3: Total Variance Explained

Comp.	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums.
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total
1	14.170	41.677	41.677	14.170	41.677	41.677	10.794
2	3.844	11.306	52.983	3.844	11.306	52.983	11.995
3	2.277	6.698	59.681	2.277	6.698	59.681	8.509
4	1.589	4.674	64.355	1.589	4.674	64.355	4.674
5	1.379	4.055	68.409	1.379	4.055	68.409	2.966
6	1.127	3.315	71.724	1.127	3.315	71.724	2.676
7	.821	2.413	74.137				
8	.746	2.194	76.331				
9	.701	2.062	78.393				
10	.665	1.955	80.348				
11	.584	1.718	82.066				
12	.530	1.557	83.623				
13	.517	1.522	85.145				
14	.464	1.365	86.510				
15	.402	1.183	87.694				
16	.384	1.128	88.822				
17	.363	1.068	89.890				
18	.328	.966	90.856				
19	.313	.920	91.776				
20	.295	.867	92.643				
21	.284	.834	93.477				
22	.266	.782	94.259				
23	.250	.735	94.993				
24	.235	.692	95.686				
25	.214	.630	96.316				
26	.190	.560	96.875				
27	.175	.514	97.389				
28	.168	.496	97.885				
29	.146	.429	98.313				
30	.143	.420	98.734				
31	.125	.366	99.100				
32	.120	.352	99.452				
33	.101	.298	99.750				
34	.085	.250	100.000				

Extraction Method: Principal Component Analysis.

Figure 5-1: Scree Plot



Each factor in the EFA returned an Eigenvalue greater than 1.0 indicating that it should be retained in future analysis (Netemeyer et al., 2003; Hair, 2010). Further, the scree plot can be used to determine the number of eigenvalues against the number of factors by looking for an elbow which indicates a sharp drop in variance accounted by a given factor (Cattell, 1966). This can be noticed in figure 5.1, where the elbow is seen on number 6.

Table 5-4: Pattern Matrix

	Component					
	1	2	3	4	5	6
ENBE9_9	.955					
ENBE7_7	.930					
ENBE8_8	.924					
ENBE10_10	.904					
ENBE6_6	.844					
ENBE5_5	.820					
ENBE3_3	.809					
ENBE4_4	.756					
ENBE2_2	.656					
ENBE1_1	.551					
ENEM2_2		.974				
ENEM3_3		.954				
ENEM1_1		.947				
ENEM6_6		.837				
ENEM5_5		.749				
ENEM4_4		.744				
ENEM12_12		.740				
ENEM8_8		.719				
ENEM7_7		.650				
ENEM11_11		.468				
ENEM15_15			.930			
ENEM18_18			.900			
ENEM17_17			.871			
ENEM14_14		.318	.667			
ENEM13_13			.629			
ENEM16_16		.368	.558			
ENCO1				.804		
EMCO3				.782		
EMCO6				.691	.333	
EMCO4					.823	
EMCO5				.334	.711	
ENCO2					.651	
ENEM10_10						.837
ENEM9_9						.772

5.3.1.2 EFA for Engagement Second Iteration

A second round of EFA was conducted by deleting items loading less than 0.50, which resulted with a good Pattern Matrix, but with a few more items loading less than 0.50 as shown in table 5-5 below.

Table 5-5: Pattern Matrix

	Component					
	1	2	3	4	5	6
ENBE9_9	.954					
ENBE7_7	.929					
ENBE8_8	.924					
ENBE10_10	.903					
ENBE6_6	.845					
ENBE5_5	.821					
ENBE3_3	.809					
ENBE4_4	.754					
ENBE2_2	.658					
ENBE1_1	.552					
ENEM2_2		.971				
ENEM3_3		.953				
ENEM1_1		.945				
ENEM6_6		.832				
ENEM5_5		.741				
ENEM4_4		.740				
ENEM12_12		.736				
ENEM8_8		.722				
ENEM7_7		.652				
ENEM15_15			.929			
ENEM18_18			.900			
ENEM17_17			.867			
ENEM14_14		.316	.667			
ENEM13_13			.636			
ENEM16_16		.368	.562			
ENCO1				.810		
EMCO3				.786		
EMCO6				.676	.339	
EMCO4					.828	
EMCO5				.314	.714	
ENCO2					.640	
ENEM10_10						.833
ENEM9_9						.769

5.3.1.3 EFA for Engagement Third Iteration

A third round of EFA was conducted with forced extraction to 3 factors, which resulted in a good Pattern Matrix, as shown in table 5-6 below.

Table 5-6: Pattern Matrix

	Component		
	1	2	3
ENEM14_14	.849		
ENEM16_16	.847		
ENEM15_15	.836		
ENEM17_17	.824		
ENEM13_13	.817		
ENEM5_5	.784		
ENEM4_4	.766		
ENEM6_6	.763		
ENEM18_18	.759		
ENEM7_7	.750		
ENEM12_12	.711		
ENEM3_3	.663		
ENEM8_8	.640		
ENEM1_1	.637		
ENEM2_2	.614	.306	
ENEM9_9	.457		
ENEM10_10	.315		
ENBE8_8		.923	
ENBE9_9		.917	
ENBE6_6		.883	
ENBE10_10		.881	
ENBE7_7		.868	
ENBE3_3		.845	
ENBE5_5		.839	
ENBE4_4		.807	
ENBE2_2		.792	
ENBE1_1		.729	
EMCO5			.789
EMCO6			.740
EMCO4			.693
ENCO1			.657
ENCO2			.593
EMCO3			.569

5.3.2 Initial Data Preparation using AMOS

The AMOS 19 software was provided within the SPSS 19 package from the University of Hull. Hence, the AMOS was used to perform the CFA after

preparing the data set. Data from the 332 cases was entered into an SPSS spreadsheet. In total, data for 34 items was entered into the spreadsheet. Negatively worded items in the questionnaire were then recoded so that their values corresponded to the remainder of the items (DeVellis, 2012). Since items were measured on a 7 point item likert-type scale, they were recoded so that a1 became a7, a2 became a6, a3 became a5 and so on through to a7 becoming a 1. In total, there were 28 items that needed to be recoded.

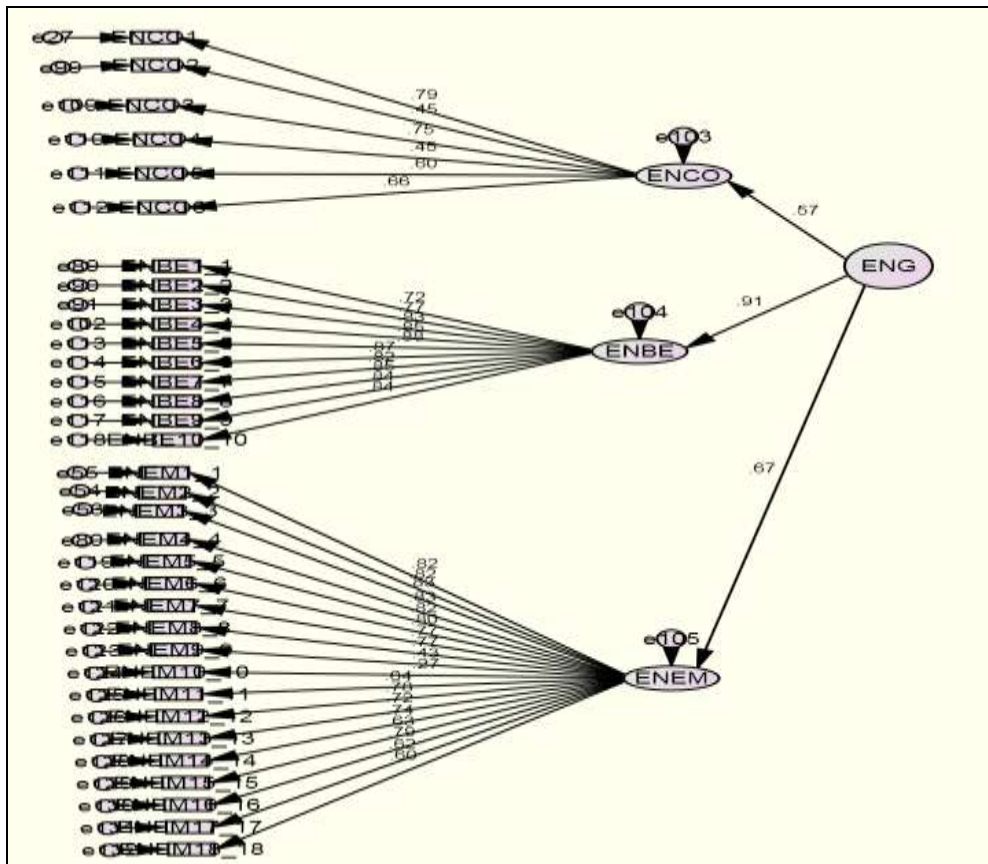
5.3.2.1 Confirmatory Factor Analysis for Engagement

Following the EFA stage the dataset was entered in AMOS 19 to perform the CFA stage, which is used to test or confirm dimensionality as in the number of factors and their times relationship within a factor. According to Hair et al. (2010) goodness of fit results that should be reported are the following; Chi-square and degree of freedom (df), one absolute fit index (i.e., GFI, RMSEA or SRMR), one incremental fit index (i.e., CFI, or TLI), one goodness-of-fit index (GFI, CFI, TLI, etc) and one badness-of-fit index (RMSEA, SRMR, etc).

5.3.2.1.1 CFA for Engagement First Iteration

The first round produced a very poor fitting, Chi-square was (2518.191), DF (524), P-value (0.000) and CMIN/DF (4.806). The Goodness of fit results were also very poor: GFI (0.633), CFI (0.783), NFI (0.742), RMSEA (0.107), SRMR (0.0663) and PCLOSE (0.000), see figure 5.2.

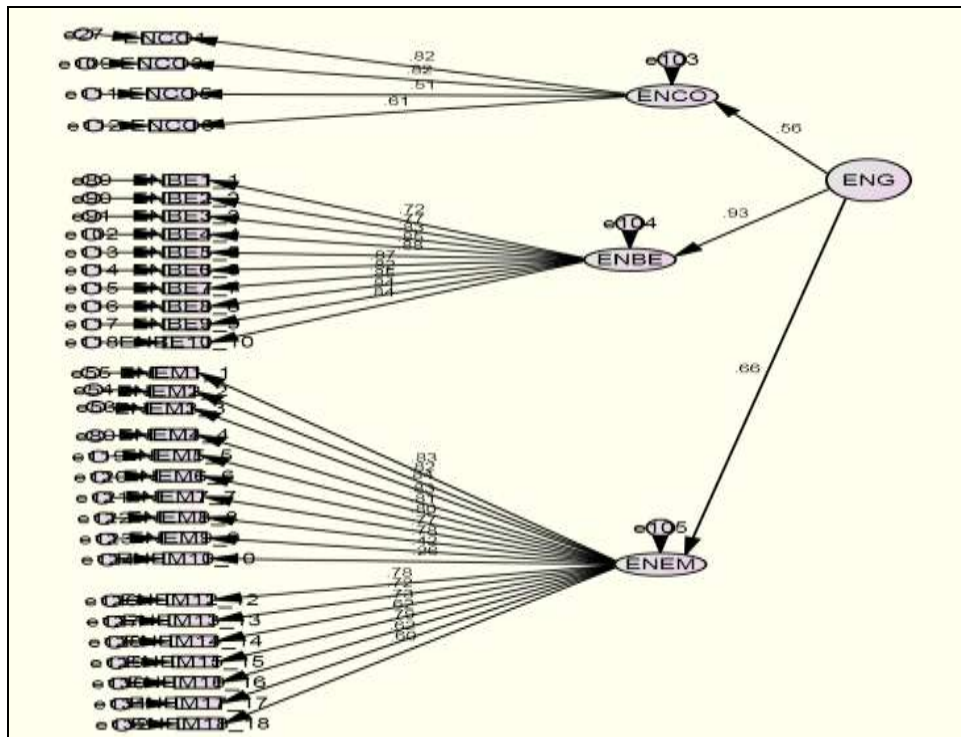
Figure 5-2: Engagement Scale 1st iteration CFA



5.3.2.1.2 CFA for Engagement Second Iteration

A second round was produced and the results were slightly improved after deleting low loading items guided by EFA stage and CFA first iteration. Chi-square was (2242.693), DF (431), P-value (0.000) and CMIN/DF (5.203). The Goodness of fit results were still very poor: GFI (0.636), CFI (0.793), NFI (0.757), RMSEA (0.113), SRMR (0.0660) and PCLOSE (0.000), see figure 5-3.

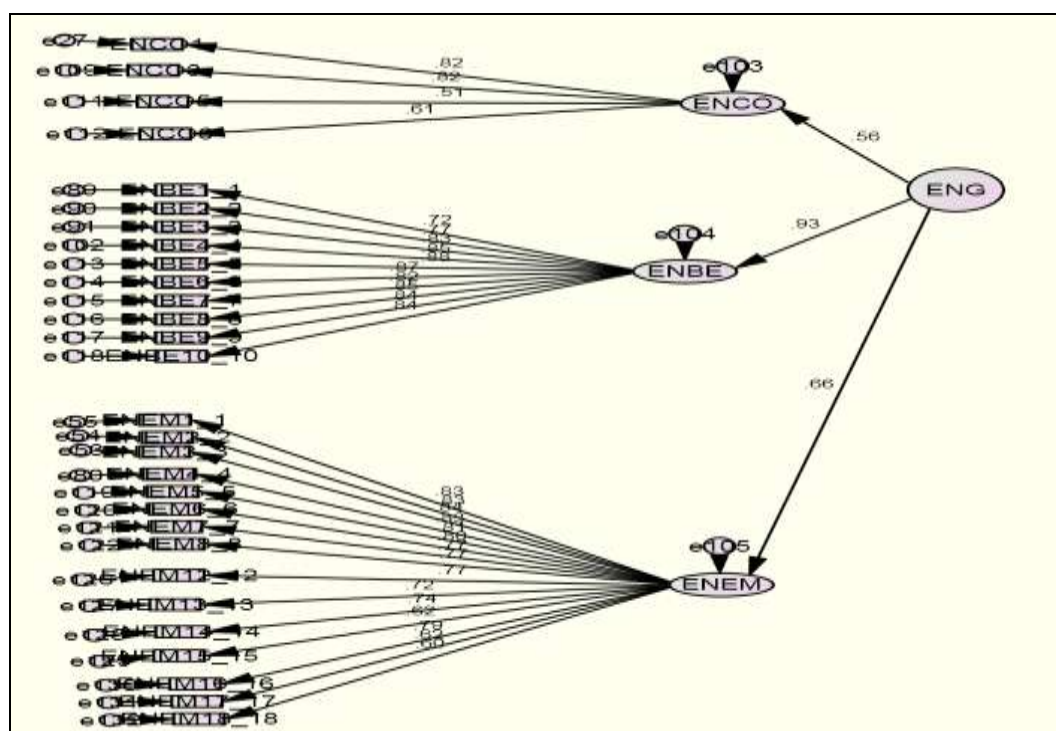
Figure 5-3: Engagement Scale 2nd iteration CFA



5.3.2.1.3 CFA for Engagement Third Iteration

A third round of CFA carried out and the results were slightly improved but still a poor fit. Chi-square was (2068.295), DF (374), P-value (0.000) and CMIN/DF (5.530). The goodness of fit results were very poor: GFI (0.636), CFI (0.802), NFI (0.769), RMSEA (0.117), SRMR (0.0655) and PCLOSE (0.000), see figure 5.4.

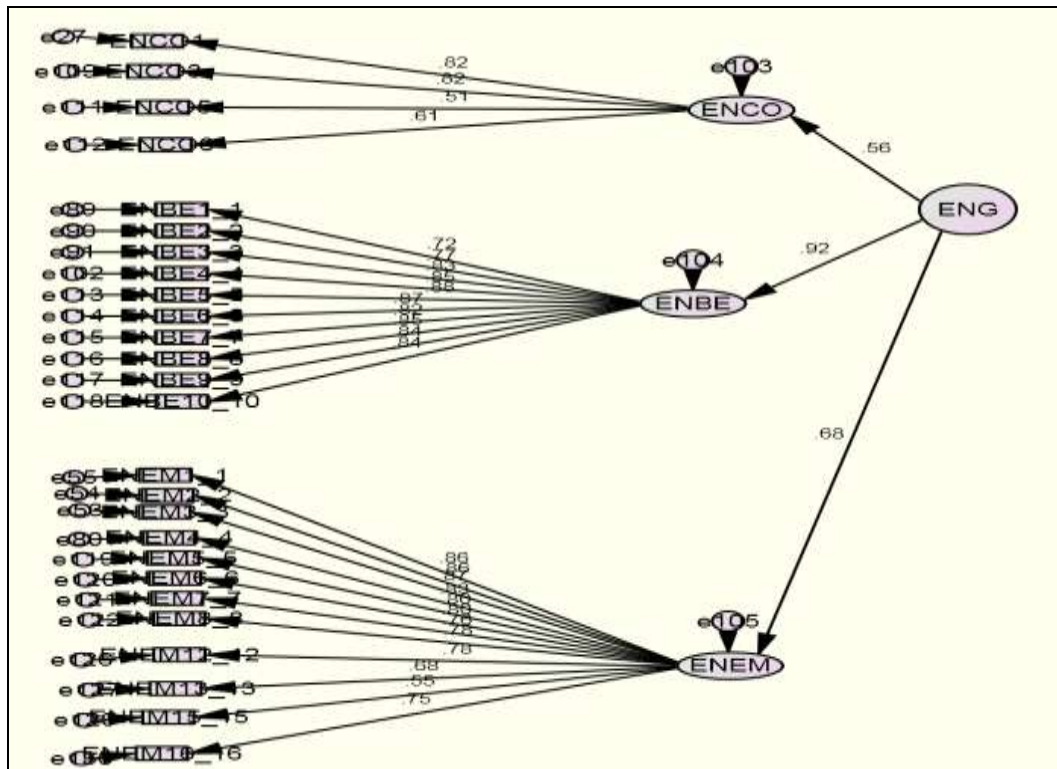
Figure 5-4: Engagement Scale 3rd iteration CFA



5.3.2.1.4 CFA for Engagement Fourth Iteration

According to Churchill's (1979) framework the iteration process should be continued until the new scale reaches a good result of validity and reliability. Hence, a fourth round of CFA carried out and the results were still very poor. Chi-square was χ^2 (1563.721), DF (296) P-value (0.000) and CMIN/DF (5.283). The goodness of fit results were not good: GFI (0.682), CFI (0.834), NFI (0.804), RMSEA (0.114), SRMR (0.0544) and PCLOSE (0.000), see figure 5.5.

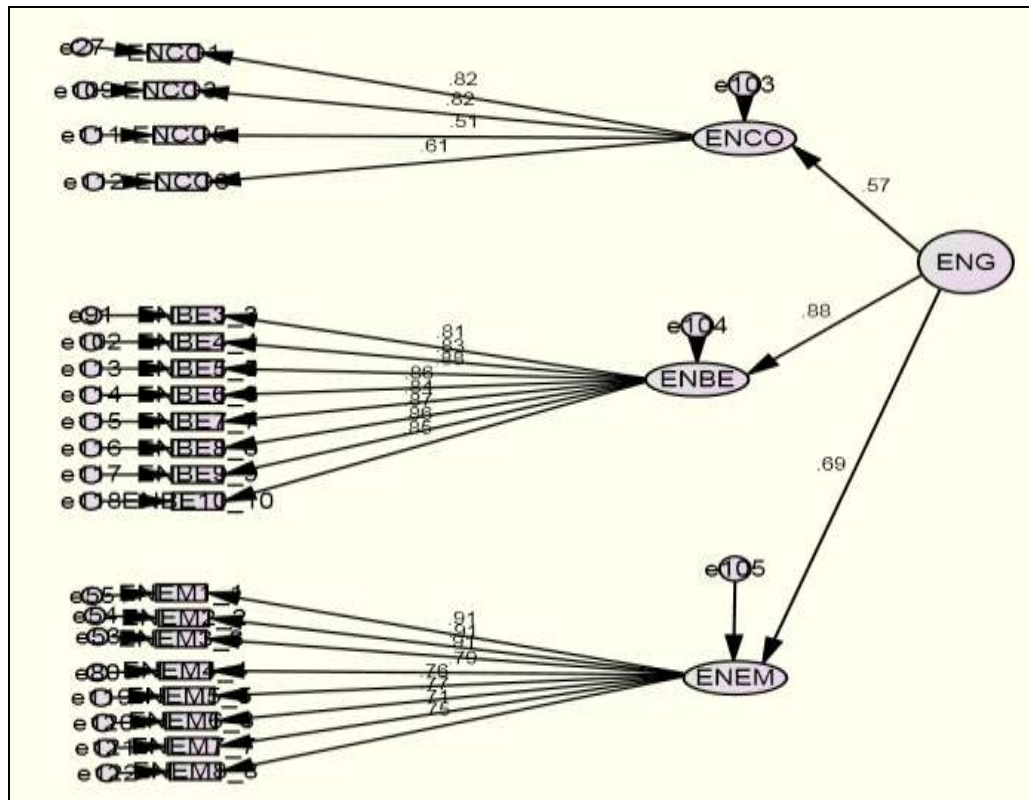
Figure 5-5: Engagement Scale 4th iteration CFA



5.3.2.1.5 CFA for Engagement Fifth Iteration

A fifth round of CFA carried out and the results were slightly improved but still poor. Chi-square was χ^2 (1022.636), DF (167) P-value (0.000) and CMIN/DF (6.124). The goodness of fit results were enhanced: GFI (0.720), CFI (0.857), NFI (0.834), RMSEA (0.124), SRMR (0.0531) and PCLOSE (0.000), see figure 5.6.

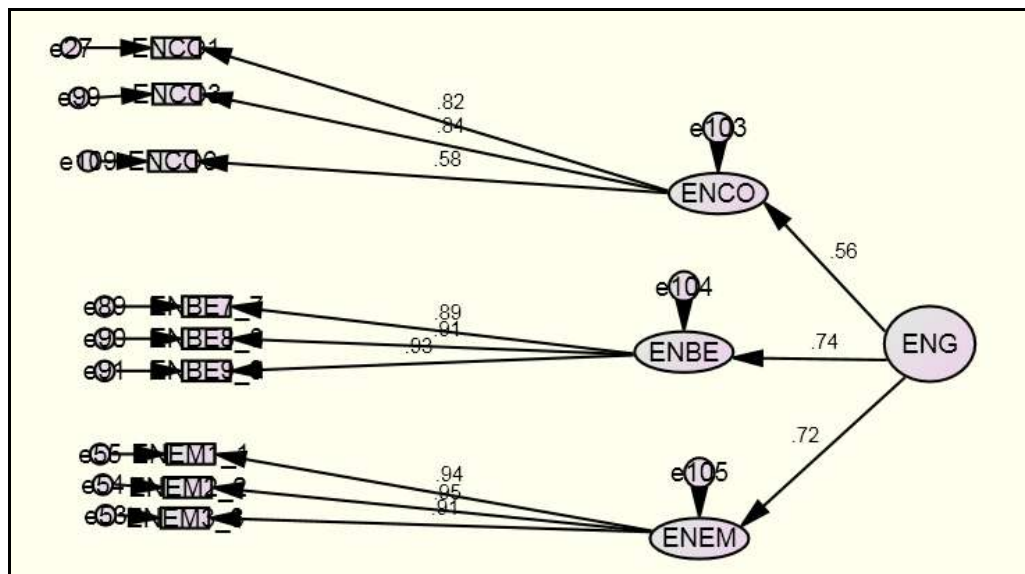
Figure 5-6: Engagement Scale 5th iteration CFA



5.3.2.1.6 CFA for Engagement Sixth Iteration

A sixth round of CFA carried out and the results were improved after deleting further low loading items from ENCO, ENBE and ENEM, Chi-square was χ^2 (29.67), DF (24), P-value (0.196) and CMIN/DF (1.2). The goodness of fit results were very improved: GFI (0.981), CFI (0.998), NFI (0.988), RMSEA (0.027), SRMR (0.023) and PCLOSE (0.907), see figure 5.7.

Figure 5-7: Engagement Scale 7th iteration CFA



It is important to note that even though items have been removed from certain constructs, examination of their remaining items indicates that their substantive meaning has not changed (Nunnally and Bernstein, 1994). Hence, the constructs still retain face validity, although it is acknowledged that this assessment is subjective (Churchill, 1999; Malhotra and Birks, 2003).

5.3.2.2 Reliability Test

Reliability concerns to what extent a variable or set of variables is consistently measuring what it is actually intended to measure. The Cronbach's alpha is the degree of interrelatedness among a set of items designed to measure a single construct or, in other words, the internal consistency of a construct. Following Churchill's (1979) framework, the reliability of scale needs to be established. Since, the engagement scale is a second order construct; the first order dimensions were tested. The alpha for the cognitive dimension (ENCO) is 0.77, for behavioural dimension 0.94 and for the emotional dimension 0.95, which respectively establish the reliability

of the engagement construct as a newly developed scale, as suggested by Devellis (2012), see table 5-7 for retained items.

Table 5-7: Retained items of Engagement Scale

Construct Dimensions	Retained Items
Customer Engagement Cognitive (ENCO)	ENCO1_ I think that such communication messages on the smartphone are good for me. EMCO3_ I believe if I act on the communication messages it will be a good choice. EMCO6_ I think I will use social media (e.g. Facebook, Twitter) to communicate with firms sending such communication messages
Customer Engagement Behavioural (ENBH)	ENBE7_ Worth owning :not worth owning* ENBE8_ Impressive: not impressive* ENBE9_ Valuable: not valuable*
Customer Engagement Emotional (ENEM)	ENEM1_ Happy:unhappy* ENEM2_ Please:annoyed* ENEM3_ Satisfied:unsatisfied*

*Reversed Score

5.3.2.3 Validity Test

Validity refers to the extent to which an operational measure truly reflects the concept under investigation or the extent to which a set of measures accurately represents the concept of interest (Hair et al., 2010; Devellis, 2012). According to Devellis (2012) there are three essential types of validity; content validity which refers to the extent of which a specific set of items reflects a specific content domain, criterion-related validity refers to the relationship between a measure and another independent measure,

construct validity which is concerned with the theoretical relationship of one variable to another.

According to Netemeyer et al. (2003) there are various types of evidence of validity, but grouped into three main types; translation validity, which consists of content and face validity; Criterion-related validity, which consist of predictive and post-dictive validity, concurrent validity, convergent validity, discriminant validity and know-gourp validity and the last type is nomological validity. However, Hair et al. (2010) suggest the essential validity tests are the following: convergent validity which refers to the assessment of whether two measures of the same concept are highly correlated, discriminant validity refers to whether two conceptually similar concepts are distinct with low correlation, and nomological validity refers to the extent to which a measure operated within a set of theoretical constructs and their respective measures.

5.3.2.3.1 Discriminant and Convergent Validity

To establish the validity test for the engagement scale, convergent and discriminant validity were carried out via CFA following Fornell and Larker's (1981) suggested steps. In order to assess the discriminant validity the average variance extracted (AVE) score should be no less than 0.50 and for convergent validity loading score should be no less than 0.70. Moreover, composite reliability (CR) should be no less than 0.70 for items. As shown in table 5-8, the AVE for the behavioural dimension (ENBE) was 0.831, for the cognitive dimension (ENCO) it was 0.569 and for the emotional dimension (ENEM) it was 0.869. In terms of CR, ENBE was 0.936, ENCO was 0.794 and ENEM was 0.952; hence, there is no concern in this regard.

Table 5-8: Convergent and Discriminant Validity

	CR	AVE	ENEM	ENCO	ENBE
ENEM	0.952	0.869	0.932		
ENCO	0.794	0.569	0.405	0.754	
ENBE	0.936	0.831	0.537	0.418	0.912

Notes: Composite reliability (CR) = (square of the summation of the factor loadings) / [(square of the summation of the factor loadings) + (square of the summation of the error variances)]; AVE= (summation of the square of the factor loadings) / {(summation of the square of the factor loadings) + (summation of the error variances)}

Thus, the output results established the convergent and discriminant validity, which paved the way to test the theoretical framework based on the second data set, but before leaving this phase, it is necessary to examine any misspecification of the engagement scale as a prerequisite for the theoretical framework test.

5.3.2.4 Misspecification of the Engagement Scale

The engagement model was compared between four different structured models to see if the baseline model has any misspecification issue. Therefore, goodness-of-fit index (GFI), comparative fit index (CFI), standardized root-mean-square residual (SRMR), and root-mean-square error of approximation (RMSEA) as the indices of model fit were used to compare these models, as these are considered to be most sensitive to detect misspecification of the measurement models (Hu and Bentler, 1998).

The baseline model was compared to the four models and the best fit was for the baseline model where GFI (0.977), CFI (0.995), NFI (0.984), RMSEA (0.039), SRMR (0.023) and PCLOSE (0.744). Thus, models 1, 2 and 3 were

rejected due to their poor fitting scores, while model 4 was not representing the construct as second order, so it was rejected (see table 5-9, figures 5-8, 5-9, 5-10, 5-11 and 5-12). Hence, the baseline model was accepted and carried forward to the next chapter, measurement and structural model, for further testing.

Table 5-9: Misspecification of Engagement Scale

	GFI	CFI	RMSEA	SRMR
Baseline Model	0.981	0.998	0.027	0.023
Model 1	0.820	0.882	0.179	0.1300
Model 2	0.681	0.706	0.283	0.1510
Model 3	0.603	0.598	0.325	0.1879
Model 4	0.981	0.998	0.027	0.023

Figure 5-8: Engagement Scale, Baseline Model

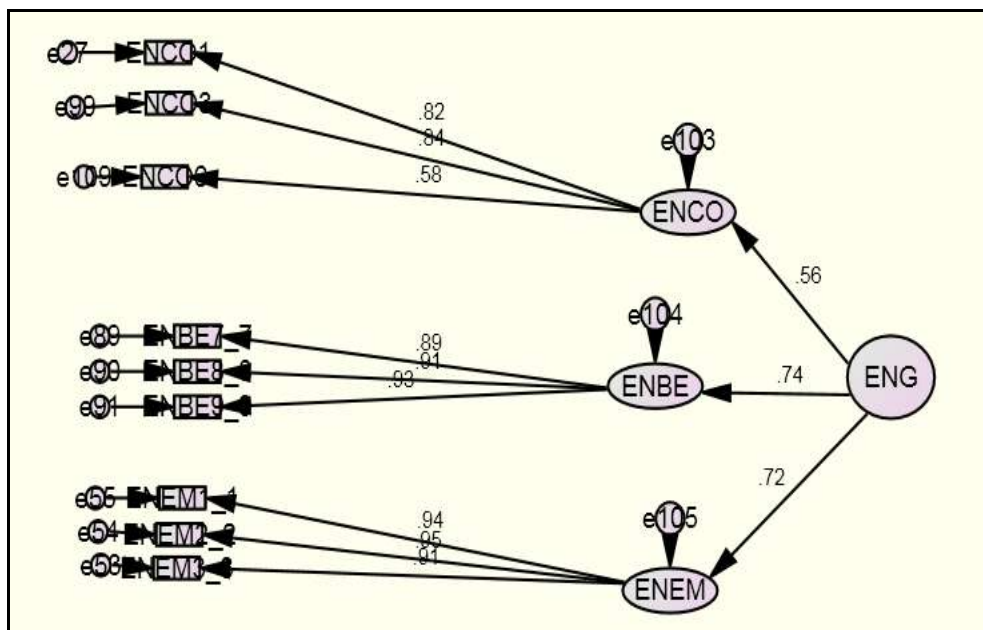


Figure 5-9: Engagement Scale, Model #1

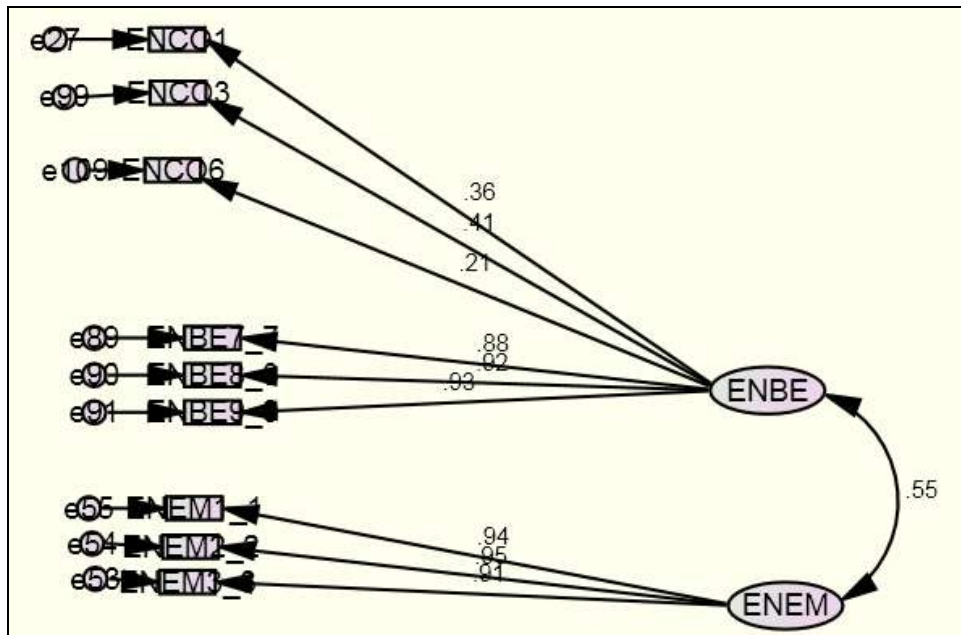


Figure 5-10: Engagement Scale, Model #2

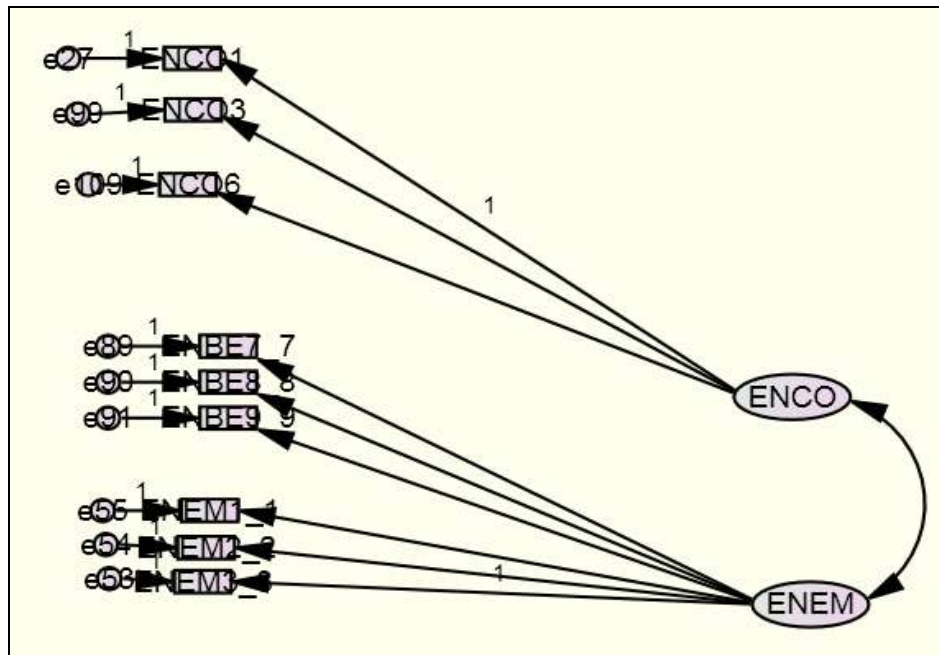


Figure 5-11: Engagement Scale, Model #3

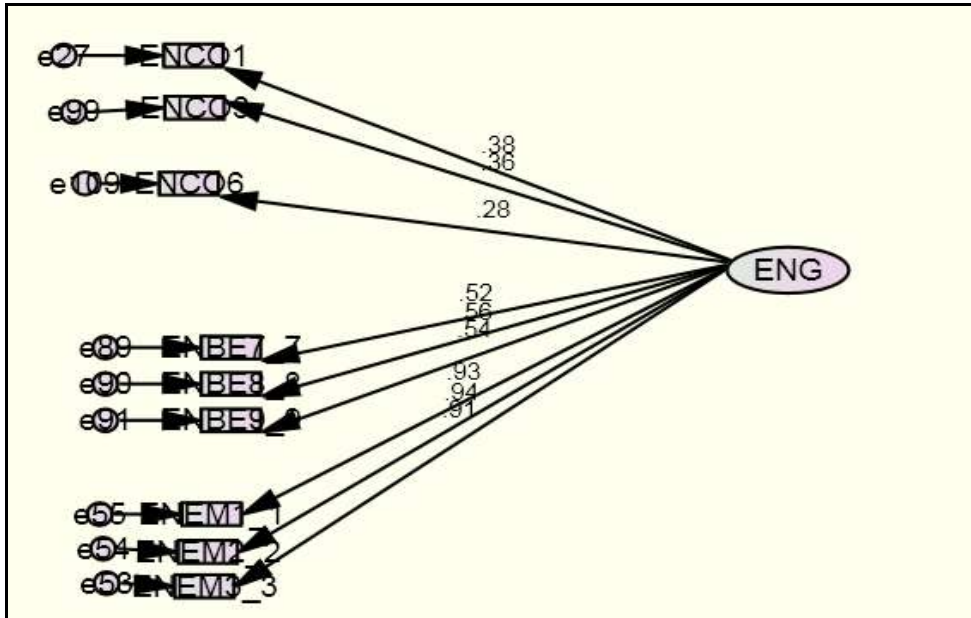
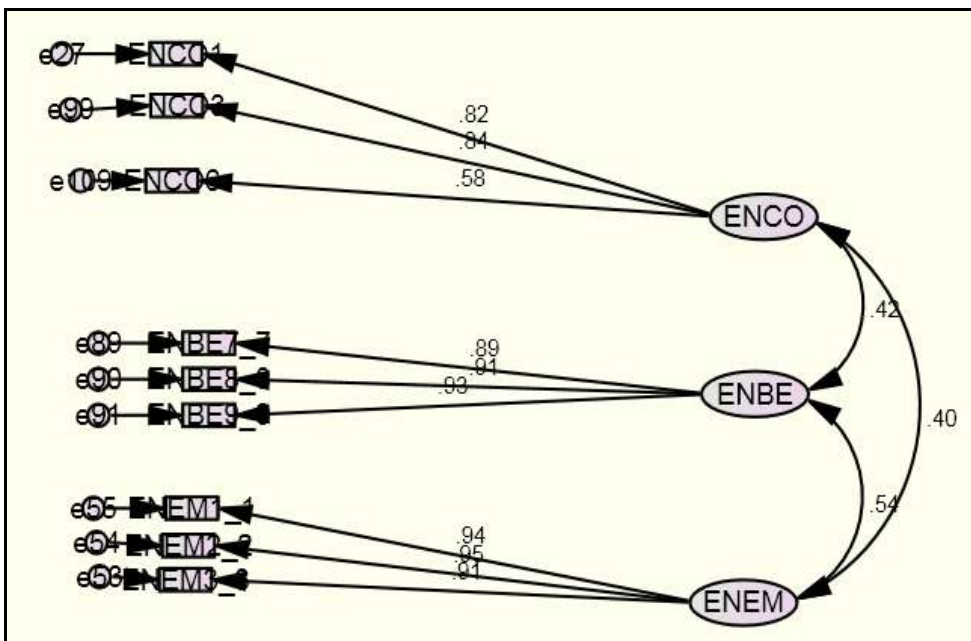


Figure 5-12: Engagement Scale, Model #4



5.4 Summary Remarks

This chapter explained the findings of the study and explored various methods employed to analyse the data set. Furthermore, it discussed the normality test and outliers. Then, it explored the purification process for the developed scale. Further, it explained in details the findings of EFA analysis of the customer engagement scale with the first dataset. Also, CFA was carried out to purify the engagement scale followed by reliability and validity test. The next chapter will discuss the measurement and structural model with the second dataset. The findings will be discussed in further details in the light of the proposed theoretical framework. Then, reliability and validity will be examined along with the marker variable and Harman's single factor.

**CHAPTER SIX: DATA ANALYSIS II -
MEASUREMENT AND STRUCTURAL MODELS**

6.1 Introduction

Having discussed customer engagement scale development earlier, this chapter discusses the measurement model and examines its findings based on the second dataset. Then, the structural models along with the findings are discussed in further details in the light of the proposed theoretical framework. Then, reliability and validity are examined along with the marker variable. Finally, summary remarks are offered.

The study contains 7 main constructs and 3 sub-constructs as listed in table 6-1. The abbreviations will feature in this chapter where necessary in order to save space (e.g. tables of results).

Table 6-1: Constructs in the Study

Construct/Sub-Construct	Abbreviation
Subjective Norms	SN
Information Seeking	IS
Perceived Ease of Use	PE
Perceived Usefulness	PU
Customer Engagement	EN
– Cognitive	ENCO
– Behavioural	ENBE
– Emotional	ENEM
Customer Empowerment	EM
Behavioural Intention	BI

6.2 Data Adequacy for Factor Analysis

Following the splitting of the database, as described in section 5.2.1, the second data set consisted of 332 respondents generated from the whole data set in order to examine the conceptual framework. Exploratory factor

analysis and confirmatory factor analysis are reported in the following sections.

6.2.1 Exploratory Factor Analysis (EFA) for Measurement Model - Stage One

The KMO result is (.868), which considered “Meritorious” in terms of factor analysis suitability, and the Chi-Square is (7498.719) inflated due to the large sample size which affects the significance level as shown in the table 6-2 below. Moreover, the Bartlett’s test was less than .05, which indicates sufficient correlations exist among variables (Hair, 2010); hence the data set is adequate for factor analysis.

Table 6-2: KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.868
Bartlett's Test of Sphericity	Approx. Chi-Square	7498.719
	df	465
	Sig.	.000

The initial EFA was run by SPSS 19 and the results show 8 factors were extracted with Eigenvalues with no less than 1, which represents 75.9 per cent as in table 6-3. The Pattern matrix table shows one item cross loaded (see table 6-4). Hence, a second round of EFA was conducted with forced extraction eigenvalues of nine results with 78.3 per cent and one cross loaded item (see table 6-5), for the Pattern matrix, see table 6-6.

Table 6-3: Total Variance Explained

Comp.	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums.
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total
1	8.284	26.721	26.721	8.284	26.721	26.721	6.412
2	4.445	14.340	41.061	4.445	14.340	41.061	4.990
3	2.951	9.518	50.579	2.951	9.518	50.579	4.065
4	2.227	7.183	57.763	2.227	7.183	57.763	5.100
5	1.690	5.452	63.215	1.690	5.452	63.215	3.420
6	1.461	4.713	67.928	1.461	4.713	67.928	3.557
7	1.365	4.403	72.331	1.365	4.403	72.331	4.618
8	1.096	3.536	75.867	1.096	3.536	75.867	3.908
9	.789	2.544	78.411				
10	.652	2.104	80.516				
11	.618	1.993	82.508				
12	.583	1.882	84.390				
13	.511	1.648	86.039				
14	.473	1.526	87.565				
15	.454	1.465	89.030				
16	.394	1.272	90.303				
17	.383	1.236	91.539				
18	.314	1.014	92.553				
19	.281	.908	93.461				
20	.267	.860	94.321				
21	.251	.810	95.130				
22	.224	.721	95.852				
23	.205	.662	96.514				
24	.176	.568	97.082				
25	.165	.531	97.613				
26	.162	.523	98.136				
27	.144	.466	98.602				
28	.130	.419	99.021				
29	.120	.388	99.409				
30	.102	.328	99.737				
31	.081	.263	100.000				

Table 6-4: Pattern Matrix

	Component							
	1	2	3	4	5	6	7	8
IS2	.994							
IS1	.929							
IS4	.874							
IS3	.736							
IS5	.568			.320				
PU3		.949						
PU2		.899						
PU1		.865						
PU4		.796						
SN2			.923					
SN3			.915					
SN1			.905					
SN4			.556					
PE2				.856				
PE3				.846				
PE1				.796				
PE4				.653				
ENEM2_2					.975			
ENEM1_1					.951			
ENEM3_3					.945			
ENBE8_8						.955		
ENBE7_7						.945		
ENBE9_9						.913		
B11							.967	
B12							.952	
B13							.802	
EMCO3								.811
ENCO1								.759
EM1								.723
EMCO6								.630
EM2								.387

Table 6-5: Total Variance Explained

Compo.	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums.
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total
1	8.284	26.721	26.721	8.284	26.721	26.721	6.306
2	4.445	14.340	41.061	4.445	14.340	41.061	4.894
3	2.951	9.518	50.579	2.951	9.518	50.579	5.393
4	2.227	7.183	57.763	2.227	7.183	57.763	4.035
5	1.690	5.452	63.215	1.690	5.452	63.215	3.436
6	1.461	4.713	67.928	1.461	4.713	67.928	3.599
7	1.365	4.403	72.331	1.365	4.403	72.331	4.417
8	1.096	3.536	75.867	1.096	3.536	75.867	4.099
9	.789	2.544	78.411	.789	2.544	78.411	2.552
10	.652	2.104	80.516				
11	.618	1.993	82.508				
12	.583	1.882	84.390				
13	.511	1.648	86.039				
14	.473	1.526	87.565				
15	.454	1.465	89.030				
16	.394	1.272	90.303				
17	.383	1.236	91.539				
18	.314	1.014	92.553				
19	.281	.908	93.461				
20	.267	.860	94.321				
21	.251	.810	95.130				
22	.224	.721	95.852				
23	.205	.662	96.514				
24	.176	.568	97.082				
25	.165	.531	97.613				
26	.162	.523	98.136				
27	.144	.466	98.602				
28	.130	.419	99.021				
29	.120	.388	99.409				
30	.102	.328	99.737				
31	.081	.263	100.000				

Table 6-6: Pattern Matrix

	Component								
	1	2	3	4	5	6	7	8	9
IS2	.999								
IS1	.943								
IS4	.865								
IS3	.738								
IS5	.535		.336						
PU3		.940							
PU2		.883							
PU1		.871							
PU4		.781							
PE2			.888						
PE3			.884						
PE1			.825						
PE4			.682						
SN2				.920					
SN3				.911					
SN1				.901					
SN4				.553					
ENEM2_2					.970				
ENEM1_1					.957				
ENEM3_3					.944				
ENBE8_8						.959			
ENBE7_7						.948			
ENBE9_9						.916			
BI1							.954		
BI2							.950		
BI3							.800		
EM1								.898	
EM2								.700	
EMCO6								.694	
EMCO3									.884
ENCO1									.806

6.2.2 Confirmatory Factor Analysis

Following the EFA stage the dataset was entered in AMOS 19 to perform the CFA stage. The results show poor model fit (see figure 6-1); chi-square was X^2 (766.607), DF (410) and CMIN/DF (1.87). GFI was 0.873, CFI was 0.951, NFI was 0.901 while RMSEA was 0.051, SRMR was 0.0653 and PCLOSE 0.349. Therefore, a second round of CFA was carried out after deleting low loading items from perceived ease of use (PE2) and information seeking (IS3), see figure 6-2.

Figure 6-1: CFA 1st iteration

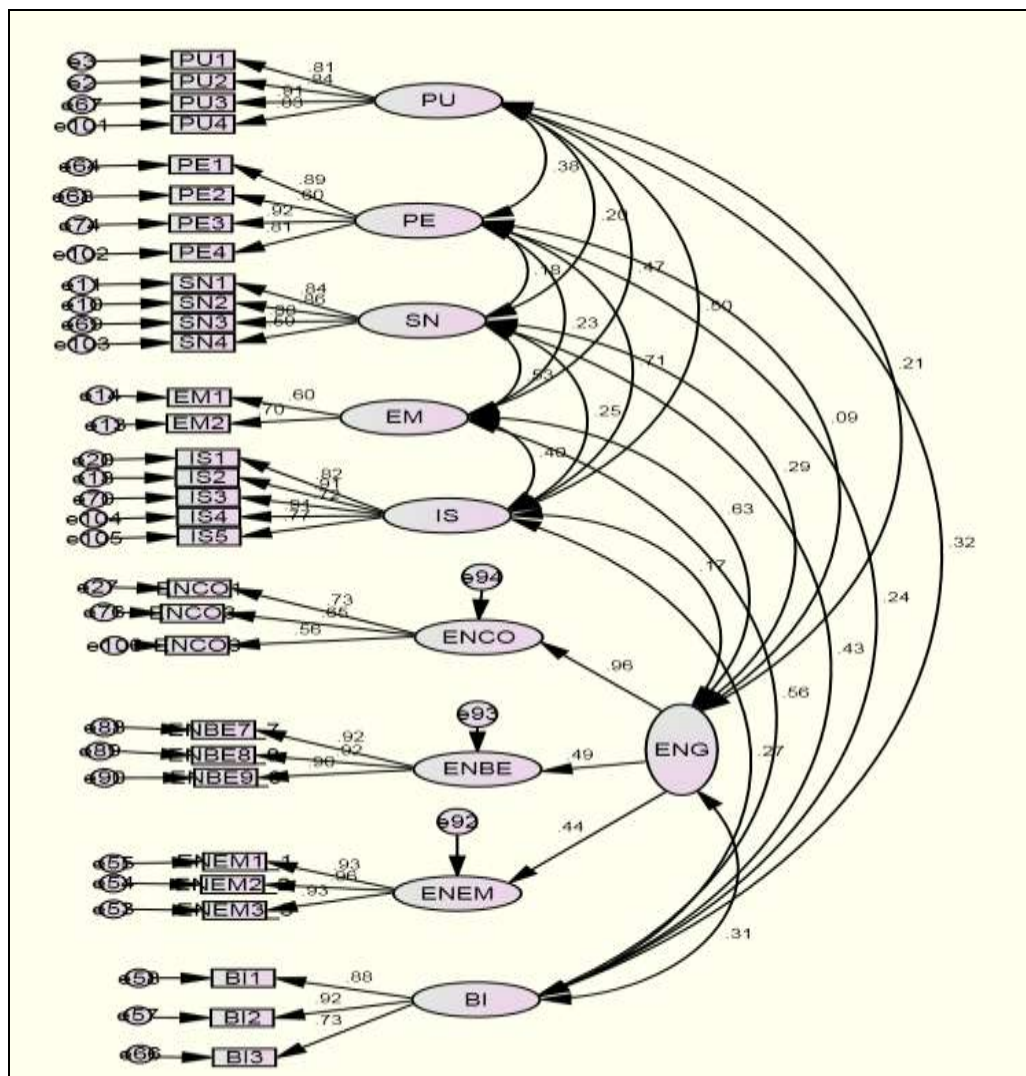
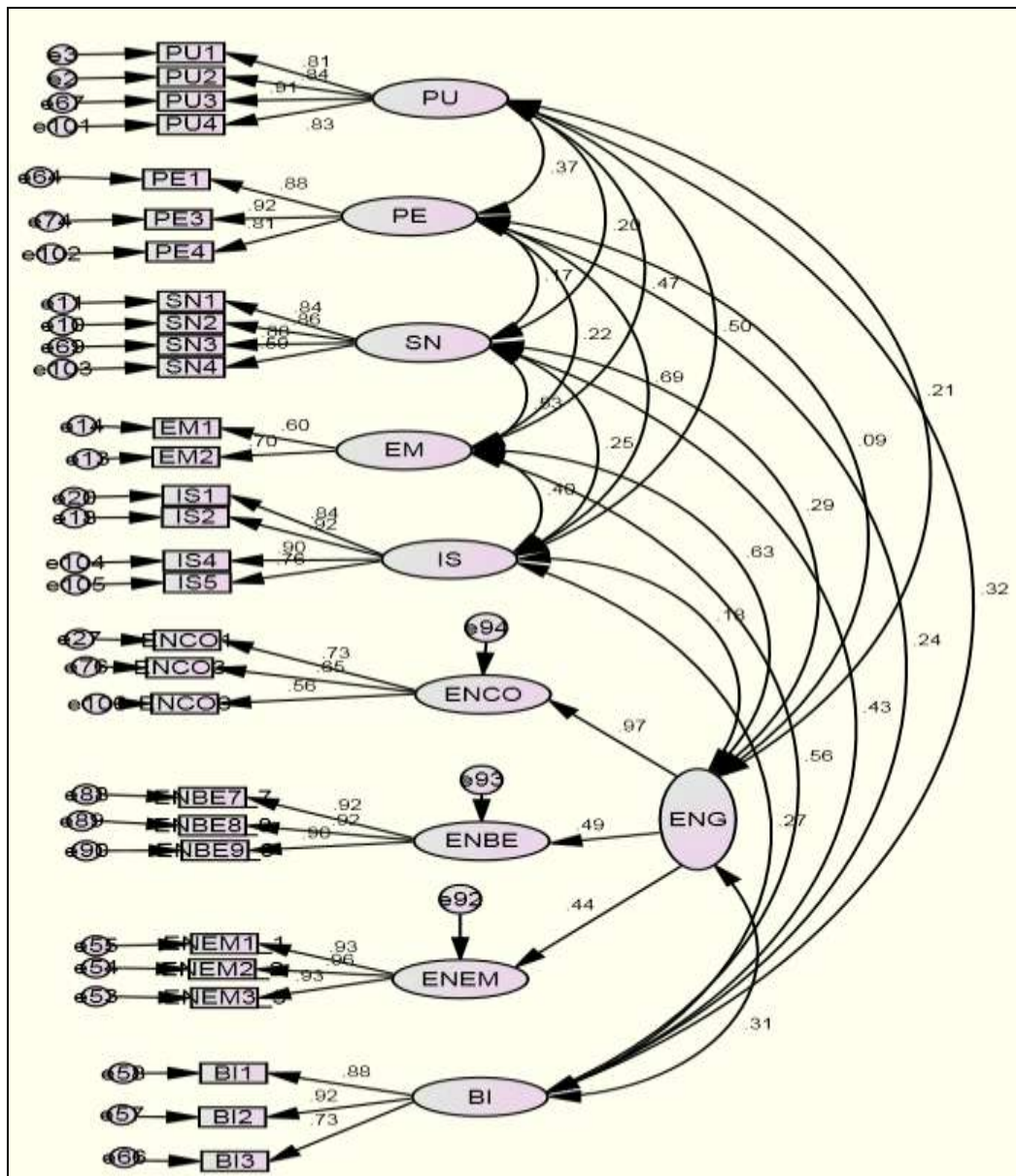


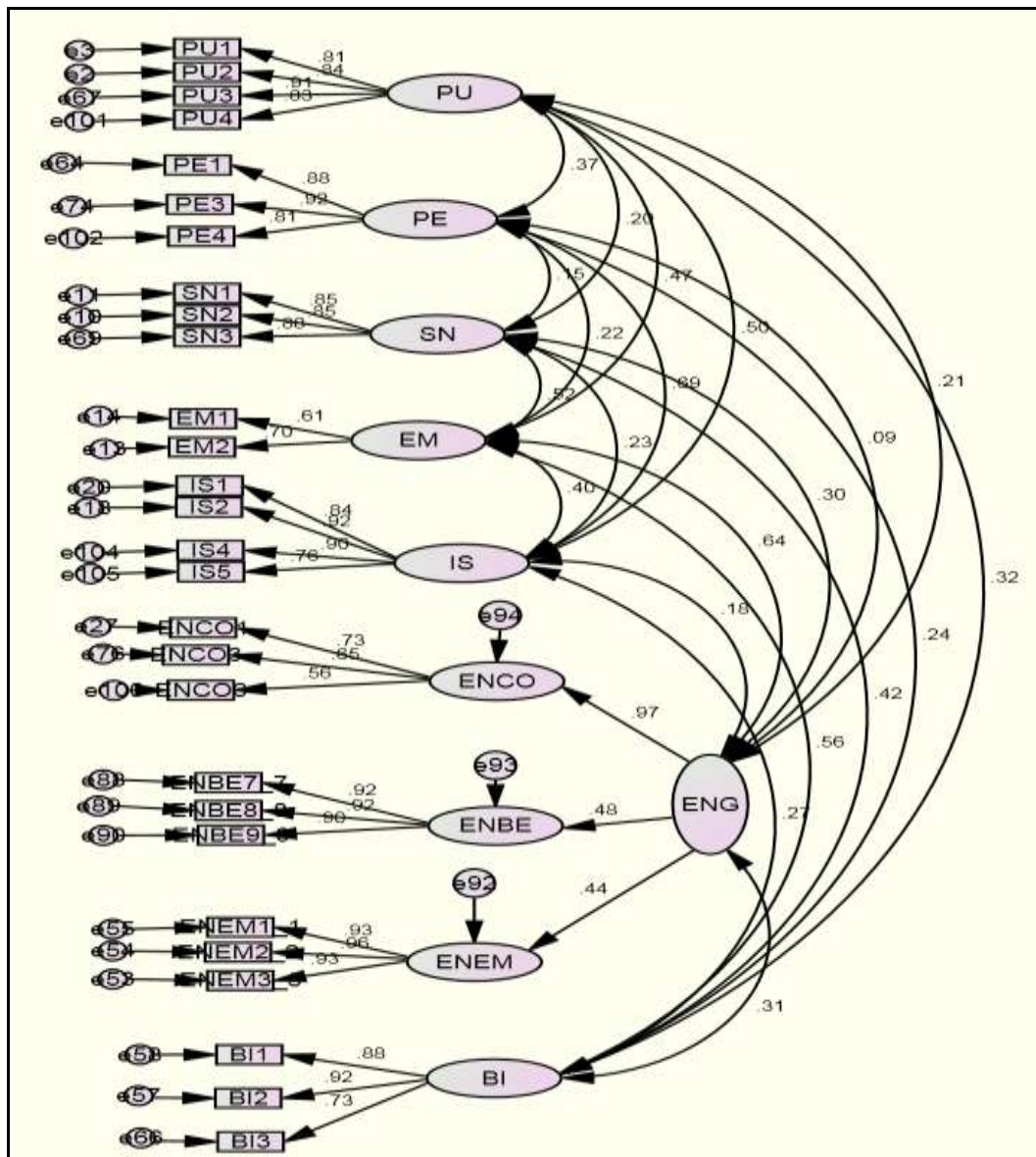
Figure 6-2: CFA 2nd iteration



The results were slightly improved; chi-square was X^2 (691.002), DF (353) and CMIN/DF (1.958). GFI was 0.876, CFI was 0.951, NFI was 0.906 while RMSEA was 0.054, SRMR was 0.0671 and PCLOSE 0.145, after removing perceived ease of use (PE1) and information seeking (IS3).

Furthermore, a third CFA carried out after deleting one more low loading item from subjective norms (SN4) to improve the model fit (see figure 6-3). The results show very good fit, with the following outcomes: chi-square was X^2 (617.74), DF (326) and CMIN/DF (1.895), GFI (0.885), CFI (0.957), NFI (0.913), RMSEA (0.052), SRMR (0.0633) and PCLOSE (0.293).

Figure 6-3: CFA 3rd iteration



Moreover, a fourth CFA was carried out after deleting one more low loading item from perceived usefulness (PU1), information seeking (IS5) to improve the model fit (see figure 6-4). The results show very good fit as the follows: chi-square was X^2 (483.477), DF (275) and CMIN/DF (1.758), GFI (0.904), CFI (0.966), NFI (0.925), RMSEA (0.048), SRMR (0.0629) and PCLOSE (0.658). As a rule of thumb, the SRMR should be less than 0.10 for a good fit (Kline, 2011), and PCLOSE should be greater than 0.5, see table 6-7 for retained items.

Figure 6-4: CFA 4th iteration

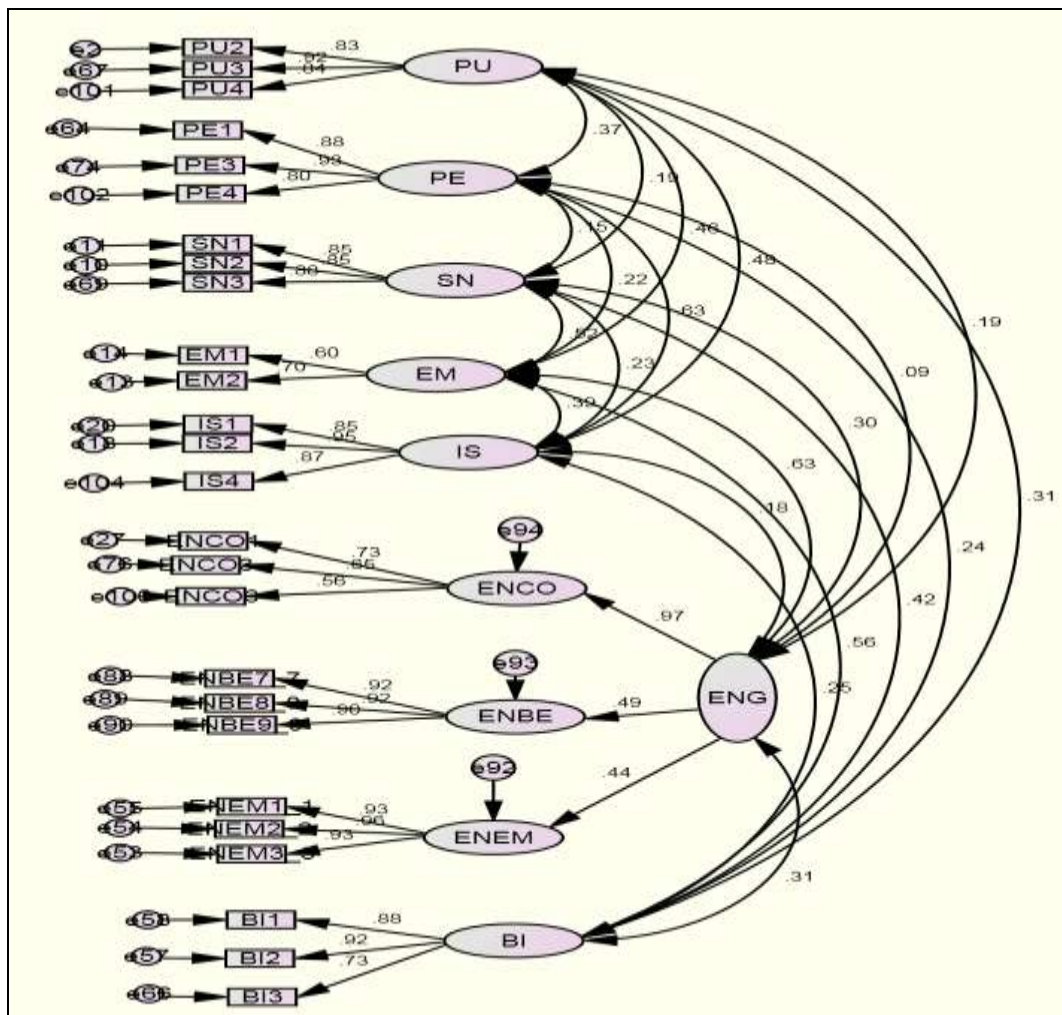


Table 6-7: Retained items used in structural model

Construct	Retained Items
Information Seeking (IS)	<p>IS1_I use the smartphone because it is a new way to do research on internet</p> <p>IS2_I use the smartphone because it is easier to seek information.</p> <p>IS4_I use the smartphone to look for information.</p>
Subjective Norms (SN)	<p>SN1_People who influence my behaviour think that I should use the smartphone.</p> <p>SN2_People who are important to me think that I should use smartphone.</p> <p>SN3_People who influence my behaviour would think that I should use the smartphone.</p>
Perceived Ease of Use (PE)	<p>PE1_My interaction with the smartphone is clear and understandable.</p> <p>PE3_I find the smartphone easy to use.</p> <p>PE4_I find it easy to get smartphone to do what I want it to do.</p>
Perceived Usefulness (PU)	<p>PU2_Using smartphone in my day to day activities increase my productivity.</p> <p>PU3_Using smartphone enhances my effectiveness on day to day life.</p> <p>PU4_I find smartphone useful in my day to day activities.</p>
Customer Empowerment (EM)	<p>EM1_I had the feeling of an active participant in the conversation with the firm.</p> <p>EM2_Communication via the smartphone gave me the feeling that I am taken seriously.</p>
Customer Engagement Cognitive (ENCO)	<p>ENCO1_I think that such communication messages on the smartphone are good for me.</p> <p>EMCO3_I believe if I act on the communication messages it will be a good choice.</p> <p>EMCO6_I think I will use social media (e.g. Facebook, Twitter) to communicate with firms sending such communication messages.</p>
Customer Engagement Behavioural (ENBH)	<p>ENBE7_Worth owning: not worth owning*</p> <p>ENBE8_Impressive: not impressive*</p> <p>ENBE9_Valuable: not valuable*</p>

Customer Engagement Emotional (ENEM)	ENEM1_Happy:unhappy* ENEM2_Please:annoyed* ENEM3_Satisfied:unsatisfied*
Behavioural Intention (BI)	BI1_Assuming I have an internet access on my smartphone, I intend to proceed with the purchase BI2_When I have my smartphone with me, I predict that I would use it to proceed with the purchase BI3_If I had to do it over again, I would make the same choice

*Reversed Score

6.2.3 Nomological Validity

The nomological validity can be expressed by the correlation matrix table, where constructs show good correlation between each other as shown in table 6-8. As can be seen from the table, the correlations between constructs are in the expected directions. Most constructs correlate positively with each other, as such, review of the correlation matrix indicates that the constructs display appropriate nomological validity.

Table 6-8: Correlation Matrix

	BI	PU	PE	SN	EM	IS	ENG
BI	0.848						
PU	0.312	0.864					
PE	0.238	0.375	0.873				
SN	0.417	0.188	0.152	0.861			
EM	0.558	0.459	0.217	0.522	0.656		
IS	0.254	0.478	0.632	0.227	0.389	0.892	
ENG	0.313	0.191	0.088	0.297	0.633	0.181	0.676

Note: Diagonals (in bold) represent the square root of the average variance extracted while the other entries represent the correlations

6.2.3.1 Convergent Validity - Reliability test

Reliability is about internal consistency of a construct and measured by the Cronbach's alpha with a cut-off point of 0.70 as the threshold (Netemeyer et al., 2003; Hair et al., 2010; Devellis 2012). Hence, the engagement construct was tested, the result was 0.86. The other constructs were also tested and the results exceeded the cut-off point as follows: Perceived usefulness (PU) 0.9, Perceived ease of use (PE) 0.9, Subjective norms (SN) 0.9, Information seeking (IS) 0.92. Alpha for Empowerment (EM) was 0.6, which is acceptable as the construct has two items, whilst the score for Behavioural intention (BI) is 0.88. Therefore, these results suggest good scale reliability to proceed to discriminant validity testing. For composite reliability (CR) please refer to table 6.9.

6.2.3.2 Discriminant Validity test

To establish the validity test for each construct, discriminant validity was carried out via CFA following Fornell and Larker's (1981) suggested steps. The square of the correlation between any two constructs shows how much variance they share. The ideal result is that the AVE for each construct should be greater than the square of any correlation between that construct and another. Such a result indicates that a latent construct explains more of the variance in its own observed variables than it does in the observed variables hypothesised to be related to any other construct (Hair et al., 2006).

As shown in table 5.12, the AVE for all constructs was no less than 0.5 and based on Homburg and Pflesser's (2000) recommendation, AVE should be reported if the construct consists of more than two items and composite reliability if more than two items, as well, while coefficient alpha should reported if more than one item. Although there is no universal agreement on what the minimum CR value should be, and while Cronbach's alpha value of 0.70 should not be applied strictly to SEMs, less than 0.70 may be obtained and would be acceptable (Bagozzi and Yi, 2012). Hence, the discriminant

validity test suggested a good result and the composite reliability scores were above 0.60, (see table 6-9).

Table 6-9: **Discriminant Validity Test**

	CR	AVE	MSV	ASV
BI	0.884	0.719	0.311	0.134
PU	0.898	0.747	0.228	0.125
PE	0.906	0.762	0.399	0.112
SN	0.896	0.741	0.272	0.107
EM	0.600	-	0.307	0.195
IS	0.921	0.795	0.399	0.155
ENG	0.700	0.500	0.401	0.111

the factor loadings) / [(square of the summation of the factor loadings) + (square of the summation of the error variances)]; AVE= (summation of the square of the factor loadings) / [(summation of the square of the factor loadings) + (summation of the error variances)]

-Reports composite reliability (if more than two items).

-AVE is reported when there are more than two items.

6.2.4 Common Method Bias

6.2.4.1 Marker Variable

In order to check for common method bias (CMB) a marker variable (MV) technique was employed to examine the model following Lindell and Whitney's (2001) approach. Thus, a scale consisting of six items adopted from Kraft and Goodell (1993) for health consciousness was used as it is considered to be unrelated to the research context. The construct's scale was tested for reliability and the coefficient alpha was .82, which matches the second condition of the MV technique.

The CMB was tested via AMOS 19 by creating a common latent factor along with the MV and constraining regression weight for one equal value to run the CFA (see figure 6-5). The results show no greater than 0.2 difference between the adjusted model and the baseline model, see table 6-10. Therefore, there is no serious CMB issue affecting the model (Aiken and West, 1991; Gaskin, 2014; Lowry et al., 2013).

Figure 6-5: Marker Variable

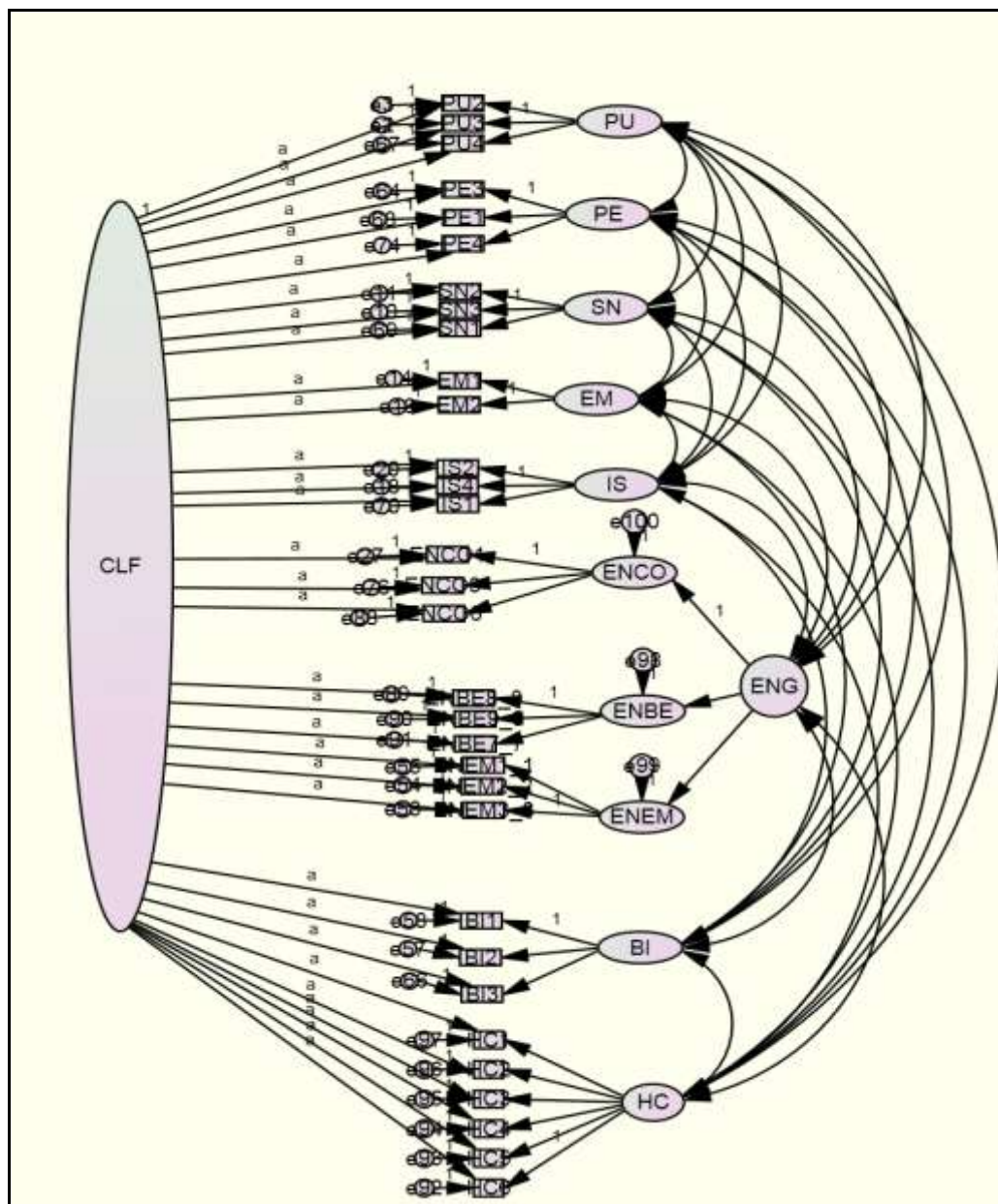


Table 6-10: Standard Regression Weights

	PU	SN	EM	IS	ENEM	BI	PE	ENCO	ENEB	MV
PU3	0.921									0.077
PU2	0.831									0.014
PU4	0.838									0.162
SN3		0.883								0.105
SN2		0.951								0.010
SN1		0.851								0.154
EM2			0.707							0.207
EM1			0.601							0.237
IS4				0.870						0.172
IS2				0.951						0.126
IS1				0.851						0.099
ENEM3_3					0.931					0.071
ENEM2_2					0.957					0.072
ENEM1_1					0.932					0.077
BI2						0.921				0.086
BI1						0.882				0.113
BI3						0.729				0.151
PE3							0.925			0.179
PE4							0.805			0.221
PE1							0.884			0.217
ENCO1								0.738		0.073
ENCO3								0.648		0.111
ENCO6								0.556		0.244
ENBE7_7									0.915	0.071
ENBE8_8									0.912	0.065
ENBE9_9									0.917	0.079
HC1										0.504
HC2										0.549
HC3										0.641
HC4										0.592
HC5										0.561
HC6										0.421

6.2.4.2 Harman's single factor test - EFA

The data explained 25.8 per cent of variance after all items were loaded on one factor. Therefore on this test it can be assumed that common method bias is not an issue in this study (see table 6-11).

Table 6-11: Total Variance Explained

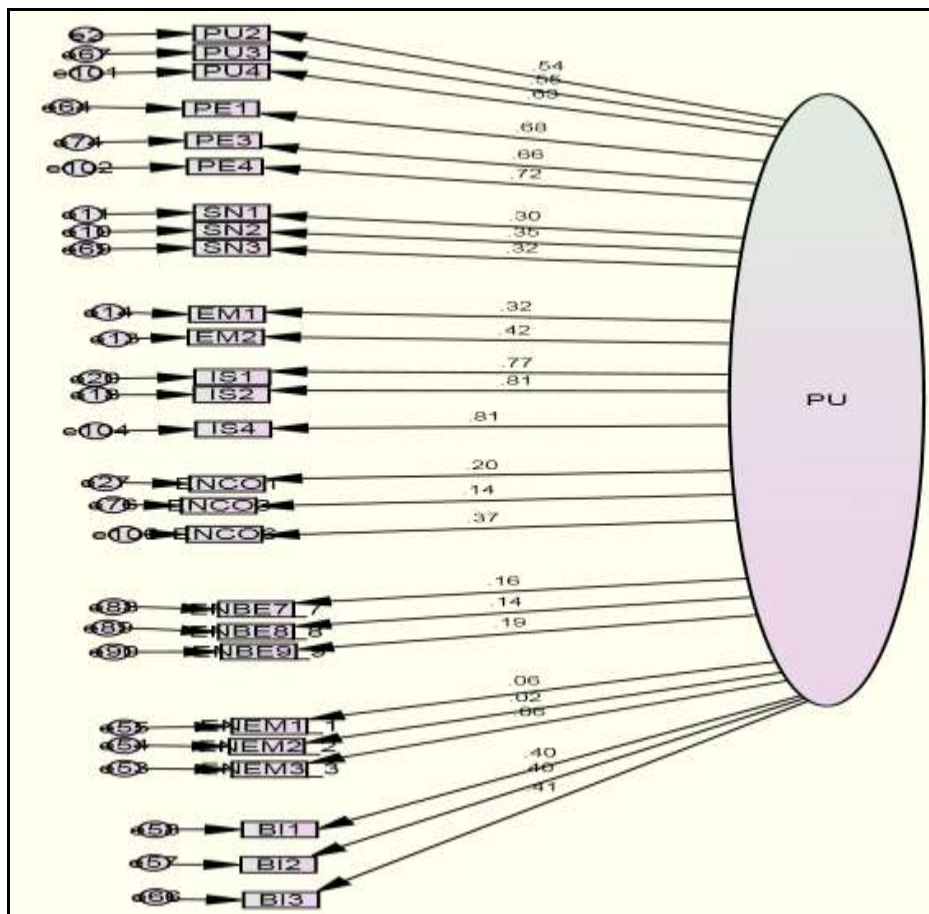
Compo.	Initial Eigenvalues			Extraction Sums .		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	6.719	25.843	25.843	6.719	25.843	25.843
2	4.167	16.028	41.871			
3	2.667	10.259	52.130			
4	1.800	6.924	59.054			
5	1.635	6.288	65.342			
6	1.450	5.579	70.921			
7	1.308	5.030	75.950			
8	.946	3.638	79.589			
9	.770	2.962	82.551			
10	.617	2.374	84.925			
11	.551	2.120	87.045			
12	.481	1.851	88.896			
13	.390	1.499	90.395			
14	.332	1.276	91.671			
15	.302	1.160	92.831			
16	.281	1.082	93.913			
17	.236	.906	94.819			
18	.218	.839	95.658			
19	.195	.749	96.407			
20	.174	.670	97.077			
21	.167	.640	97.718			
22	.149	.575	98.292			
23	.135	.517	98.810			
24	.122	.471	99.281			
25	.104	.400	99.681			
26	.083	.319	100.000			

Extraction Method: Principal Component Analysis.

6.2.4.3 Harman's single factor test - CFA

Further, statistical assessment of common method bias was conducted using Harman's single factor test (e.g., Podsakoff et al., 2003). For this study a single factor CFA model in which all items were loaded on one construct yielded a very poor model ($\chi^2 = 4755.247$, $df = 299$, $p\text{-value} = .000$, $GFI = .434$, $CFI = .237$, $RMSEA = .212$), see figure 6-6 for CFA model. The improvement in the 9 factors model fit, relative to the one factor model is significant ($\Delta \chi^2 = 4271.77$; $\Delta df = 24$; $p < .05$). Therefore, results of these tests suggest that common method bias is not an issue in this study.

Figure 6-6: Harman's Single Factor - CFA



6.3 Structural Model – Stage two:

Following the reliability and validity tests of the constructs is the validation of the structural theory via path model. The critical ratio (C.R.) should be no less than 0.10 per cent significance level \geq (+/- 1.28).

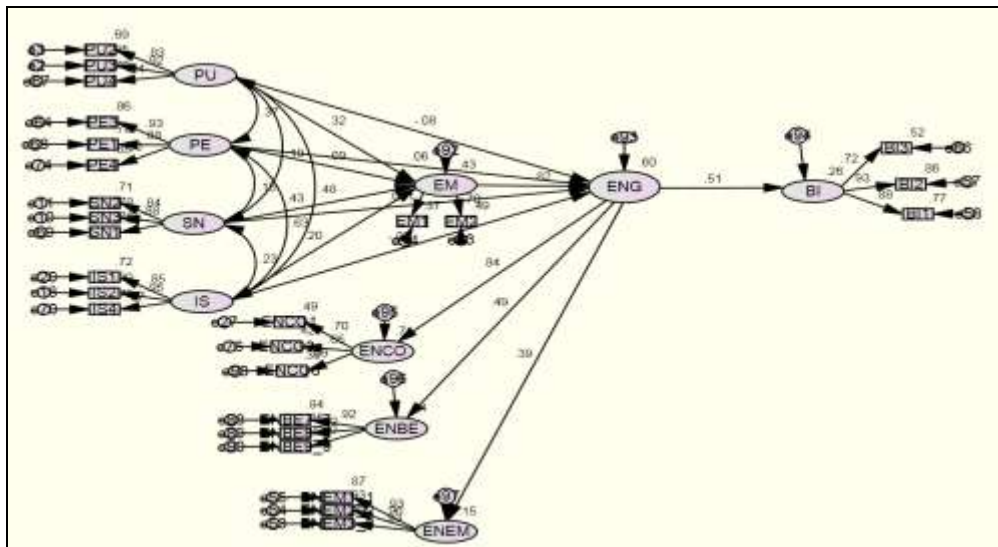
Once the model statistic is confirmed as significant, then the strength of the relationships between the dependent variable and the independent variable using the multiple R^2 statistics is identified. The R^2 value (i.e., coefficients of determination) represents the amount of explained variation in the independent variable associated with all of the independent variables considered together. The coefficient represents the exogenous latent variables' combined effects on the endogenous latent variable (Hair et al., 2014). Multiple R^2 ranges from 0 to 1, and a larger R^2 indicates a stronger relationship between the independent variables and the dependent variables.

According to Hair et al. (2010) and Diamantopoulos and Sigua (2000), R^2 values of 0.10 - 0.29 are considered as reasonable to predict a dependent variable, 0.30 - 0.49 are considered as good, 0.50 - 0.69 are considered as very good while 0.70 and greater are considered superior but possibly suspicious. As shown in figure 6.7, the R^2 value for customer empowerment (EM) it was 0.43, for customer engagement (ENG) it was 0.60 and for behavioural intention (BI) it was 0.26, representing reasonable explanation.

6.3.1 Structural Model – Iteration One

The first model goodness of fit figures were quite good, Chi-square was X^2 (539.911), DF (280), CMIN/DF (1.928) and p-value (0.00). The GFI was 0.891, CFI was .958, while RMSEA was 0.053 and PCLOSE 0.229, as shown in figure 6-7, and for regression weight see table 6-12.

Figure 6-7: SEM Model # 1



GFI .891, CFI .958, NFI .916, RMSEA .053, SRMR .083 PCLOSE .229

Table 6-12: Regression Weights

	Estimate	S.E.	C.R.	P	Label
EM <--- PU	.236	.058	4.093	***	par_17
EM <--- PE	-.095	.088	-1.079	.281	par_18
EM <--- SN	.330	.055	6.040	***	par_19
EM <--- IS	.162	.076	2.133	.033	par_20
ENG <--- PU	-.049	.057	-.870	.384	par_23
ENG <--- PE	.046	.075	.620	.535	par_24
ENG <--- SN	.007	.061	.114	.909	par_31
ENG <--- IS	-.043	.067	-.645	.519	par_32
ENG <--- EM	.648	.142	4.546	***	par_34
BI <--- ENG	.899	.148	6.059	***	par_35

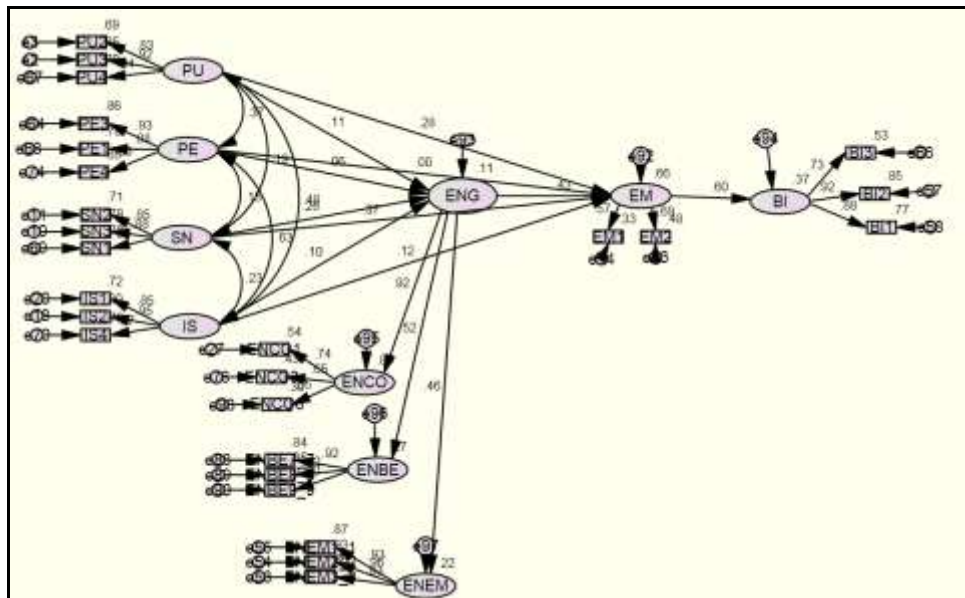
The path coefficients (P) represent the hypothesised relationships among the constructs. Standardised values are between -1 and +1, where path coefficients value close to +1 represent strong positive relationships and close to -1 represent strong negative relationships. Further, the values of

estimated path coefficients closer to zero are usually not significant (Hair et al, 2010). As shown in figure 6-8, all significant path coefficients values were positive. The regression weights are stated in table 6-12. However, a second SEM to test the best goodness of fit is reported in the next section.

6.3.2 Structural Model – Iteration Two

The goodness of fit figures were very good, GFI was 0.90, CFI was .97, while RMSEA was 0.048 and PCLOSE 0.68, while Chi-square was X^2 (493.42), DF (280), CMIN/DF (1.76) and p-value (0.00), as shown in figure 6-8, and for regression weight see table 6-13.

Figure 6-8: SEM Model # 2



GFI .903, CFI .965, NFI .924, RMSEA .048, SRMR .065 PCLOSE .676

Table 6-13: Regression Weights

	Estimate	S.E.	C.R.	P	Label
ENG <--- PU	.076	.054	1.403	.160	par_23
ENG <--- PE	-.051	.084	-.606	.544	par_24
ENG <--- SN	.182	.051	3.563	***	par_31
ENG <--- IS	.071	.073	.975	.330	par_32
EM <--- PU	.207	.051	4.036	***	par_17

	Estimate	S.E.	C.R.	P	Label
EM <--- PE	-.004	.077	-.058	.954	par_18
EM <--- SN	.284	.051	5.584	***	par_19
EM <--- IS	.094	.066	1.408	.159	par_20
EM <--- ENG	.465	.100	4.631	***	par_34
BI <--- EM	.853	.103	8.273	***	par_35

The R^2 value for customer empowerment (EM) was 0.66, customer engagement (ENG) was 0.11 and behavioural intention (BI) was 0.37, see figure 6-7. The second model shows better figures and better fit, see table 6-13. Hence, the second model was adopted for hypothesis testing, reported in Chapter 8.

6.4 Summary Remarks

This chapter discussed the measurement model and examined its findings based on the second dataset. The structural model along with the findings was discussed in the light of the proposed theoretical framework. Then, reliability and validity were examined along with the marker variable. Finally, the next chapter will test the hypotheses set out earlier in Chapter Three and discuss the results.

CHAPTER SEVEN: HYPOTHESIS TESTING

7.1 Introduction

The previous chapter discussed and tested the customer engagement scale following Churchill's (1979) framework. This chapter examines the research hypotheses and their findings in relation with the theoretical framework and in the light of the literature review. It concludes with a summary of which hypotheses are supported and not supported.

7.2 Test of Hypotheses

According to Diamantopoulos and Schlegelmilch (1997) a t-test value of \geq (+/- 1.645) considered as the threshold for a one tailed test of directional hypotheses that require considerable prior knowledge about the nature of the phenomenon, while \geq (+/- 1.96) is the threshold of a two tailed test, both at the 0.5 per cent level. However, for a one-tailed (i.e., directional) hypothesis, a t-value greater than or equal to the following is necessary for significance at the listed levels: 1.28 (10 per cent level), 1.645 (5 per cent level), 2.326 (1 per cent level) and 3.090 (0.1 per cent level) (Churchill, 1999; Sharma, 1996). For a two-tailed hypothesis (i.e., exploratory), a t-value greater than or equal to the following is necessary for significance at the listed levels: 1.645 (10 per cent level), 1.96 (5 per cent level), 2.58 (1 per cent level) and 3.291 (0.1 per cent level) (Cohen, 2002; Hair, 2010). Twelve hypotheses were stated at the beginning of this study, which will be tested as follows:

H1: Subjective norms are positively related to customer empowerment.

The relationship between subjective norms and customer empowerment was significant with a t-value of (5.58). That explains the enormous effect of social pressure on customer empowerment behaviour, which acts as a predicative antecedent. Furthermore, the hypothesis confirms previous findings on the role of social pressure in adoption of new technology as in Lee and Green (1991), Morris and Venkatesh (2000), and Venkatesh et al.

(2003). Hence, Saudi culture does not differ much from collectivist cultures in the Middle East and in Far East countries where families and friends play their part in customer behaviour (De Mooij, 2005).

H2: Subjective norms are positively related to customer engagement.

The relationship between subjective norms and customer engagement was significant with a t-value of (3.56). This is in line with De Mooij (2005) where collectivist cultures as in Saudi Arabia contribute heavily in customers' decisions to engage in marketing communication activities, unlike individualistic cultures. It emphasises the importance of social context in collectivist cultures to take the initiative and engage in dialogue. Moreover, it draws attention to the social atmosphere, suggesting the possibility of exploring its attributes to push messages fit that provoke a sense of belonging rather than uniqueness, to stimulate customer interest.

H3: Information seeking is positively related to customer empowerment.

Information seeking was anticipated to have an impact on customer empowerment as an antecedent. The t-value was (1.41) was significant, which supports the hypothesis. This is in line with previous empirical findings of Jayawardhena and Foley (2000), Papacharissi and Rubin (2000), Chen and Popovich (2003), Newholm et al. (2006), Pires et al. (2006), and Cova and Pace (2006) predicted such relation, but surprisingly not sufficiently strong. However, considering the lower value of 1.28 the hypothesis would be significant, which explains the necessity of smartphones to access information, and it could not be neglected as it exceeds the threshold. Hence, given the fact that mobile users rely on their devices to find information via the internet, it requires further investigation.

H4: Information seeking is positively related to customer engagement.

The relationship between information seeking and customer engagement was not significant (0.98), which did not support the hypothesis and did not go in line with previous research (Ruggiero, 2000; Chen and Popovich, 2003; Baure et al., 2005; Rettie et al., 2005; Peters et al., 2007; Schiffman and Kanuk, 2007; Raacke and Bonds-Raacke, 2008; Choi et al., 2008; Gao et al., 2010). Although the current finding did not contradict previous findings, it is worthwhile investigating this relationship in further depth.

H5: Customer engagement is positively related to customer empowerment.

The relationship between customer engagement and customer empowerment was strongly significant with a t-value of (4.63). Engagement behaviour plays an important role in empowerment behaviour. Customers get empowered as a result of their engaged behaviour, which encapsulates their attitude toward advertising by taking advantage of their handset capabilities. Hence, there was a direct relation between them, which goes in line with previous research that envisaged such a relationship (Wathieu et al., 2002; Pires et al., 2006; Füller et al., 2009; Verhoef et al., 2010; van Doorn et al., 2010; Brodie et al., 2013) and confirms the hypothesis.

H6: Mobile perceived usefulness is positively related to customer engagement

The relationship between perceived usefulness and customer engagement was significant with a t-value of (1.40), which supports the hypothesis. It confirms early research that anticipated a direct relationship with any emerging technology such as smartphones (Chen and Popovich, 2003; Baure et al., 2005; Rettie et al., 2005; Peters et al., 2007; Choi et al., 2008; (Gao et al., 2010). The significance of smartphones' presence in this relationship plays an important role in customer engagement behaviour as it facilitates customers' instant reaction to advertisements. Thus, they found it a

useful device to communicate their feelings and thoughts in a practical manner.

H7: Mobile perceived usefulness is positively related to customer empowerment.

The relationship between perceived usefulness and customer empowerment was significant with a t-value of (4.04), which supports the hypothesis. Early research demonstrated empirically the existence of such a relationship in regard to embracing new technology (Chen and Popovich, 2003; Baure et al., 2005; Peters et al., 2007; Choi et al., 2008; Gao et al., 2010). This implies the usefulness of smartphones to customers in gaining empowerment and reflects their choice of a particular product. Furthermore, it explains the important of possession of such device to perform day to day activities such as shopping. This elucidates the growing behaviour of e-shopping in the context of adoption of new technology (Ha and Stoel, 2009).

H8: Mobile perceived ease of use is positively related to customer engagement

The relationship between perceived ease of use and customer engagement was not significant with a t-value of (-0.61), which did not support the hypothesis. Furthermore, it fails to confirm early findings on adopting new technologies as in Venkatesh et al., (2003), although it highlights the importance of smartphones' capability and simplicity to engage. Thus, this effect could be explained by the lack of regulations in the Saudi telecommunication market. Hence, a mobile advertising strategy is adopted by many marketers not much attention is given to privacy of customers and trust. Permission-based advertising with a full opt-in and out mechanism is not fully utilised, which results in a negative attitude toward mobile advertising, which might affect the relationship.

H9: Mobile perceived ease of use is positively related to customer empowerment

The two variables had showed a weak relationship with a t-value of (-0.06). This does not support the hypothesis, and is not consistent with early research made on TAM (Chen and Popovich, 2003; Baure et al., 2005; Peters et al., 2007; Choi et al., 2008; Gao et al., 2010). However, the negative effect was not foreseen which was surprising. A possible explanation for these findings might be related to the differences in customers' handsets, such that some found them easy to get to grips with, while others found them quite challenging and not easy to master.

H10: Age moderates the relationship between customer empowerment and engagement. Specifically, the relationship will be stronger amongst younger consumers.

The effect of age on the relationship between customer empowerment and engagement was weak and the difference between age group less than 35 years old and those older than that was insignificant with a t-value of (- 0.14). Hence, the hypothesis was not supported. Although previous research empirically shows differences (Kumar and Lime, 2008; Gao and Salvendy, 2010; Gao et al., 2010), this moderation was not strong enough, although it had an effect on this relationship. See appendix C for an age difference table.

H11: Gender moderates the relationship between customer empowerment and engagement. Specifically, the relationship will be stronger amongst women compared to men.

The effect of gender on the relationship between customer empowerment and customer engagement was significant with a t-value of (1.38). Much research demonstrated the effect of demographic variables in the field of

marketing studies (Moutinho and Goode, 1995; Gefen and Detmar W, 1997; Venkatesh and Morris, 2000; Bendall-Lyon and Powers, 2002; Dommeyer and Gross, 2003), although this effect was barely noticeable in the digital sphere (Wei, 2012). Consequently, the moderation effect was strong enough and there was a significant difference between male and female. See Appendix D for a gender difference table

H12: There is a positive relationship between customer empowerment and behavioural intention.

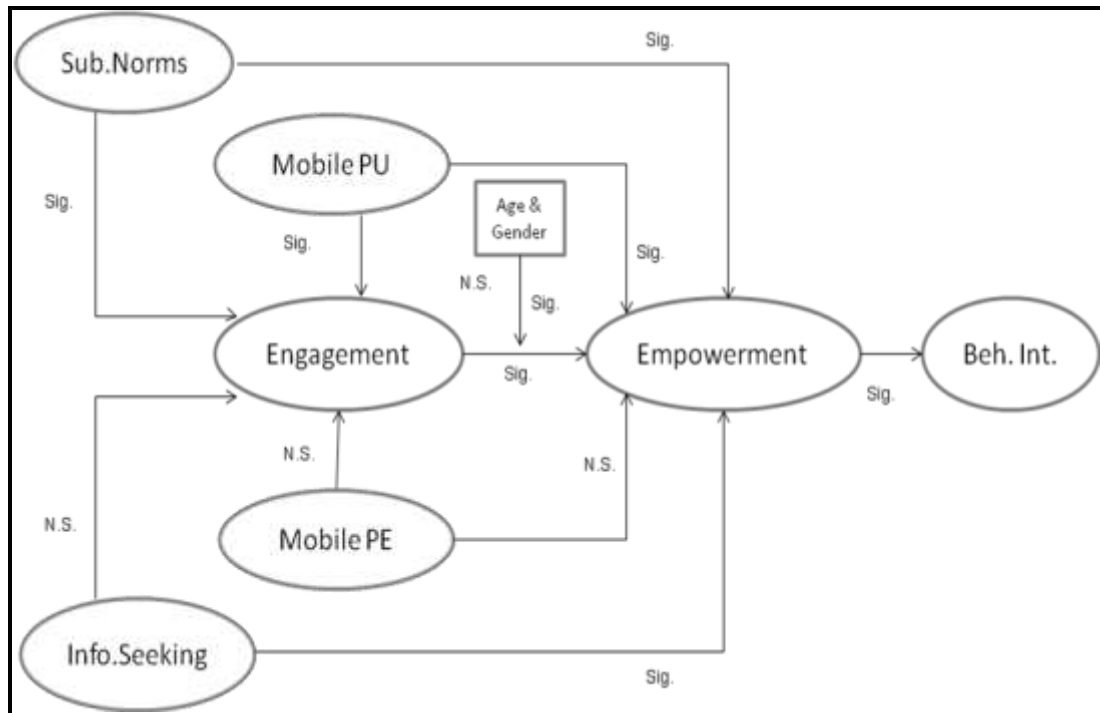
The relationship between customer empowerment and behavioural intention was significant with a t-value of (8.27), which supports the hypothesis. It confirms the findings of Chen and Popovich, (2003), Baure et al., (2005), Peters et al., (2007), Choi et al., (2008), Gao et al. (2010) and is in line with those of Watson et al (2002), Hong et al. (2008), and Banerjee (2008). The intention of buying the product was significantly strong as it generates customers' interest and match their needs/wants to own the item in question. It also explains the role of customer empowerment behaviour by giving him/her the choice to do so where the advertising message effect is carried out implicitly throughout customers' actions (see table 7.1 and figure 7-1 for summary).

Table 7-1: Hypothesis Testing

Hypothesis	P. Direction	R. Weight	t-value	Comment
H1: Subjective norms are positively related to customer empowerment.	SN → EM	0.37	5.58***	Supported
H2: Subjective norms are positively related to customer engagement.	SN → ENG	0.26	3.56***	Supported
H3: Information seeking is positively related to customer empowerment.	IS → EM	0.12	1.41*	Supported
H4: Information seeking is positively related to customer engagement.	IS → ENG	0.10	0.98	Not Supported
H5: Customer engagement is positively related to customer empowerment.	ENG → EM	0.43	4.63***	Supported
H6: Mobile perceived usefulness is positively related to customer engagement.	PU → ENG	0.11	1.40*	Supported
H7: Mobile perceived usefulness is positively related to customer empowerment.	PU → EM	0.28	4.04***	Supported
H8: Mobile perceived ease of use is positively related to customer engagement.	PE → ENG	-0.06	-0.61	Not Supported
H9: Mobile perceived ease of use is positively related to customer empowerment.	PE → EM	0.00	-0.06	Not Supported
H10: Age moderates the relationship between customer empowerment and engagement. Specifically, the relationship will be stronger amongst younger consumers.	ENG → EM	-	-0.14	Not Supported
H11: Gender moderates the relationship between customer empowerment and engagement. Specifically, the relationship will be stronger amongst women compared to men.	ENG → EM	-	1.38*	Supported
H12: Customer empowerment is positively related to behavioural intention.	EM → BI	0.60	8.27***	Supported

Notes: *** p-value < 0.01; ** p-value < 0.05; * p-value < 0.10

Figure 7-1: Conceptual Framework



Note: Sig (significant relationship), N.S. (not significant relationship).

7.3 Summary Remarks

This chapter explored the research hypotheses in the light of the literature review. Eight hypotheses were supported out of twelve, while some of the unsupported hypotheses require further investigation. The two main constructs put under examination on this study, customer engagement and customer empowerment, show a significant relationship. They were proven to have important impact in the role of mobile marketing communication, while customers put their devices to good use for their own advantage. The more they become engaged, the more they become empowered, which affects their behavioural intention to buy the product concerned. The next chapter will discuss these findings in further details.

CHAPTER EIGHT: DISCUSSION

8.1 Introduction

The previous chapter tested the conceptual framework and the hypotheses. In this chapter, the main conclusions drawn from the research findings are summarised, and the measurement development and the structure model are discussed. This chapter begins with a discussion of the conceptual framework model followed by tested hypothesised relationships, in relation to the research questions and objectives. Finally, a summary of the work carried out in this chapter is presented.

8.2 Discussion:

This study set out to develop a scale for customer engagement in response to Leeflang (2011), and to test its effects on customer empowerment behaviour via mobile handsets. Also, it examined the effect of the antecedents of perceived ease of use, perceived usefulness, subjective norm and information seeking. Furthermore, it investigated the direct impact of such behaviour carried out via mobile handset and its possible consequences on purchase intention.

It is important to mention that engagement studies were carried out while this study was in progress by Bordie et al. (2013) and Hollebeek et al. (2014). Both studies conceptualised consumer engagement in the service dominant logic and tested their developed conceptual models in the context of virtual communities. On the one hand, Brodie et al. (2013) adopted a qualitative approach to test their conceptual framework. Although their conceptual model was quite big it inherited the limitation of this approach and the findings can not be generalised. On the other hand, Hollebeek et al. (2014) adopted a quantitative approach and conceptualised consumer brand engagement as a first order construct consisting of three dimensions

(cognitive, emotional and behavioural), and in the context of social media which was tested.

Hence, they differ from the scale developed in the present research study which conceptualised customer engagement as a second order construct consisting of three dimensions (cognitive, emotional and behavioural) in the context of marketing communication in the goods dominant logic (see table 8.1).

Table 8-1: Items of Customer Engagement Scale

Construct Dimensions	Items
Cognitive	ENCO1_ I think that such communication messages on the smartphone are good for me. EMCO3_ I believe if I act on the communication messages it will be a good choice. EMCO6_ I think I will use social media (e.g. Facebook, Twitter) to communicate with firms sending such communication messages
Behavioural	ENBE7_ Worth owning :not worth owning ENBE8_ Impressive: not impressive ENBE9_ Valuable: not valuable
Emotion	ENEM1_ Happy:unhappy ENEM2_ Please:annoyed ENEM3_ Satisfied:unsatisfied

The developed scale captured customer behaviour during the launch of mobile marketing campaigns advertising a new smartphone. It shows customers' engagement via mobile handset and how they act upon such messages. Further, engaged customers get empowered via the use of their

mobile handsets to search for information and that affects their decision to buy the product.

Thus, the new developed scale provides advancement in the knowledge field of customer engagement and contributes to in the understanding of consumer behaviour in a new emerging medium, mobile phones. This will help practitioners to measure their effectiveness in mobile marketing campaigns.

8.3 Measure Development

This research study follows Churchill's (1979) framework. Customer engagement was composed of three dimensions: cognitive, behaviour and emotion. After generating the items for the initial pool, 84 items were listed for the three dimensions' engagement construct. A shortlist was generated with 65 items and reduced to 34 items, broken down into 6 items for cognitive, 10 items for behavioural and 18 items for emotional. In the EFA stage, three iterations were carried out resulting in 29 items. On the CFA stage 6 iterations were carried out to purify the scale, which resulted in 9 items, 3 belonging to the cognitive dimension, 3 to the behavioural dimension and 3 to the emotional dimension.

The scale development results showed a very good scale which fits to test the customer engagement behaviour as detailed in Chapter Five. The highlights of the results reveal Chi-square was X^2 (29.67), DF (24) and CMIN/DF (1.2). The goodness of fit figures were very good, while scale reliability and validity exceeded the threshold.

The customer engagement scale represents three dimensions (cognitive, behavioural and emotional) as second order and each dimension consists of

three items. These items demonstrate consumer behaviour on mobile handset in relation to mobile marketing campaigns. Respondents were tested on their cognitive element in response to mobile ads received on their handset which revealed positive engagement. They were tested on their emotional and behavioural elements and it was found they have positively engaged in the mobile marketing communication cycle (see table 8-1 for items).

8.4 Nomological Validity and the Structural Model

The second dataset was used to test the conceptual framework laid down in Chapter Three. In the EFA stage, two iterations were carried out with 31 items. In the CFA stage, two iterations were carried out resulting in 26 items. After several rounds of CFA the results show very good goodness of fit figures, with a reliable and validated model.

8.4.1 Significant Relationships

The conceptual framework consists of 7 constructs with 12 hypotheses. The hypotheses were tested and 8 out of 12 found to be significant. The antecedent constructs, subjective norms (SN), information seeking (IS), perceived usefulness (PU), and perceived ease of use (PE) which were all positively related to customer engagement and customer empowerment, which consequently positively related to behavioural intention (BI). The input of gender as a moderator factor on the relationship between customer engagement and customer empowerment was tested and found to positively affect their relationship (see table 8-2).

Table 8-2: Significant Relationships

Hypothesis	Antecedent	Outcome	R. Weight	T-value	Sig.
H1	SN	EM	0.37	5.58	0.001
H2	SN	ENG	0.26	3.56	0.001

H3	IS	EM	0.12	1.41	0.10
H5	ENG	EM	0.43	4.63	0.001
H6	PU	ENG	0.11	1.40	0.10
H7	PU	EM	0.28	4.04	0.001
H11	ENG	EM	-	1.38	0.10
H12	EM	BI	0.60	8.27	0.001

Note: EM (customer empowerment), ENG (customer engagement), SN (subjective norms) IS (information seeking), PU (perceived usefulness), BI (Behavioural Intention)

The hypotheses laid out to test the relationship between customer engagement and customer empowerment within the conceptual framework were tested and uncovered the existence of a strong relationship between them. It was shown that customer engagement behaviour plays an important role in customer empowerment behaviour. Given the early stage of customer engagement research in the marketing field, a few studies anticipated the importance of customer engagement and mainly were studied in service dominant logic (i.e. Bowden, 2009; van Doorn et al., 2010; Brodie et al., 2011; Brodie et al., 2013). The developed scale for customer engagement captured customers' behaviour in relation to marketing campaigns. It exhibits real time behaviour of customer engagement on their smartphones which confirms the importance of these devices in launching campaigns.

The findings in line with Okazaki and Taylor (2008) and Okazaki et al.'s (2009) findings that mobile marketing has a positive effect on customer attitude towards a brand. Customer engagement as encapsulated in Chapter Two, is shown to have a role in the customer initial interest about the product and further action taking by customers, which presents itself in cognitive, emotional and behavioural dimensions. It offers a significant opportunity to

open up a direct dialogue with advertisers as B2C and potentially with their friends as C2C. However, a lack of C2C communication might be attributable to mistrust and the source of these types of ads, which are generally affected by the local market's poor regulations to control mobile advertising.

Customer engagement, however, acts as an antecedent to customer empowerment, purchase and intention to buy a new mobile phone, which echoes Mort and Drennan's (2007) findings in a mobile services context, encapsulated in goods dominant logic. Further, the customers rely on smartphones to make up their minds in the purchase process (San-Martín et al., 2013). Hence, it is impossible to dismiss the important role of the mobile phone as a medium by which to communicate with customers.

Customers get empowered as a result of their engaged behaviour, which reflects their attitude towards advertising, by taking advantage of their handset capabilities, which goes in line with Yang et al. (2013) and Okazaki et al. (2014). Customer empowerment is significantly affected by information seeking, which confirms Pires et al.'s (2006) findings. It also confirms the notion of consumer power, where they control their destination of choice (Outi et al., 2007; Wang et al., 2000; Maney et al., 2002; Pires et al., 2005). Further, empowered customers have the capability to change their environment and influence their action (Alshibly, 2014). Customer empowerment practices help institutionalise market orientation and branding capability through interaction activities that centre on the use of market intelligence and a shared sense of brand meaning (O'Cass and Ngo, 2011).

In terms of the demographic factor, gender was found to have a significant effect on the relationship between customer engagement and customer empowerment, which implies an important effect of this moderation. Moreover, both variables showed the role of demographic factor in adoption

of new technology as a medium to communicate. The findings echo early findings in the e-learning and mobile learning contexts, where gender effects do exist (Ong and Lai, 2006; Wang et al., 2009).

Perceived usefulness as an antecedent of customer engagement and customer empowerment was significant on both. Information seeking was only significant for customer empowerment. That could be due to engaged customers being more knowledgeable with up to date smartphones and find it less important to look for more details, but find their handset useful for their day to day activities in general as it goes in line with Chen and Popovich (2003), Baure et al. (2005), Rettie et al. (2005), Peters et al. (2007), Choi et al. (2008) and Gao et al. (2010).

Information seeking significantly affected customer empowerment, which consequently affected behaviour intention to buy the product, as early research anticipated (e.g. Outi et al., 2007; Eang et al., 2000). Subjective norms, meanwhile, as an antecedent exhibited the effect of social pressure on customer engagement and customer empowerment, which was significant and is in line with Yang and Jolly's (2009) findings on mobile services adoption in America and the role of subjective norms. Customers get engaged and feel empowered as their friends or family encourage them to do so by realising the true capability of their handset devices. As a consequence, the effects on their intention of behaviour can be understood by their willingness to purchase a smartphone, as the relationship between customer empowerment and behavioural intention was significant, which is in line with the assumption and findings of Chen and Popovich (2003), Baure et al. (2005), Peters et al. (2007), Mort and Drennan (2007), Choi et al. (2008) and Gao et al. (2010).

8.4.2 Insignificant Relationships

The remaining four insignificant relationships were between perceived ease of use (PE) and information seeking (IS) on customer engagement and customer empowerment. Furthermore, age was insignificant as a moderator between customer engagement and empowerment. PE was found to be insignificant on customer engagement and customer empowerment (EM) while IS was insignificant on customer engagement (ENG) only (see table 8-3).

Table 8-3: Insignificant Relationships

Hypothesis	Antecedent	Outcome	R. Weight	T-value	Sig
H4	IS	ENG	0.10	0.98	N.S.
H8	PE	ENG	-0.06	-0.61	N.S.
H9	PE	EM	0.00	-0.06	N.S.
H10	ENG	EM	-	-0.14	N.S.

The insignificance of PE relationships with ENG and EM was surprising. It might be attributable to the differences between the customers' handsets, which some found were easy to use while others found them quite challenging and not easy to master. Although previous research found a positive impact of PE alongside PU on new technology adoption (e.g. Chen and Popovich, 2003; Baure et al., 2005; Peters et al., 2007; Choi et al., 2008; Gao et al., 2010), the present study found the contrary. More investigation on the PE construct is required.

The effect of information seeking (IS) on customer engagement were insignificant. The findings of research (e.g. Ruggiero, 2000; Chen and Popovich, 2003; Baure et al., 2005; Rettie et al., 2005; Peters et al., 2007; Schiffman and Kanuk, 2007; Raacke and Bonds-Raacke, 2008; Choi et al.,

2008; Gao et al., 2010), gave the assumption of the positive relationship between these variables. Yet, the present study found the relationship was insignificant, but did not contradict the assumption. Thus, further investigation is needed to explore and examine the full scope of such a relationship in different contexts.

The moderating role of age was also surprisingly insignificant, which contradicts previous researchers (Gross, 2003; Kassinen, 2003; Robins, 2003; Scharl et al., 2005; Gao et al., 2010). That might be because the majority of respondents in this study were categorised as youth and few were categorised as elderly; hence, there was no statistically significant difference between them. More research is required to cover the great spectrum of age difference to test its effect on customer engagement.

8.4.3 Indirect Relationships

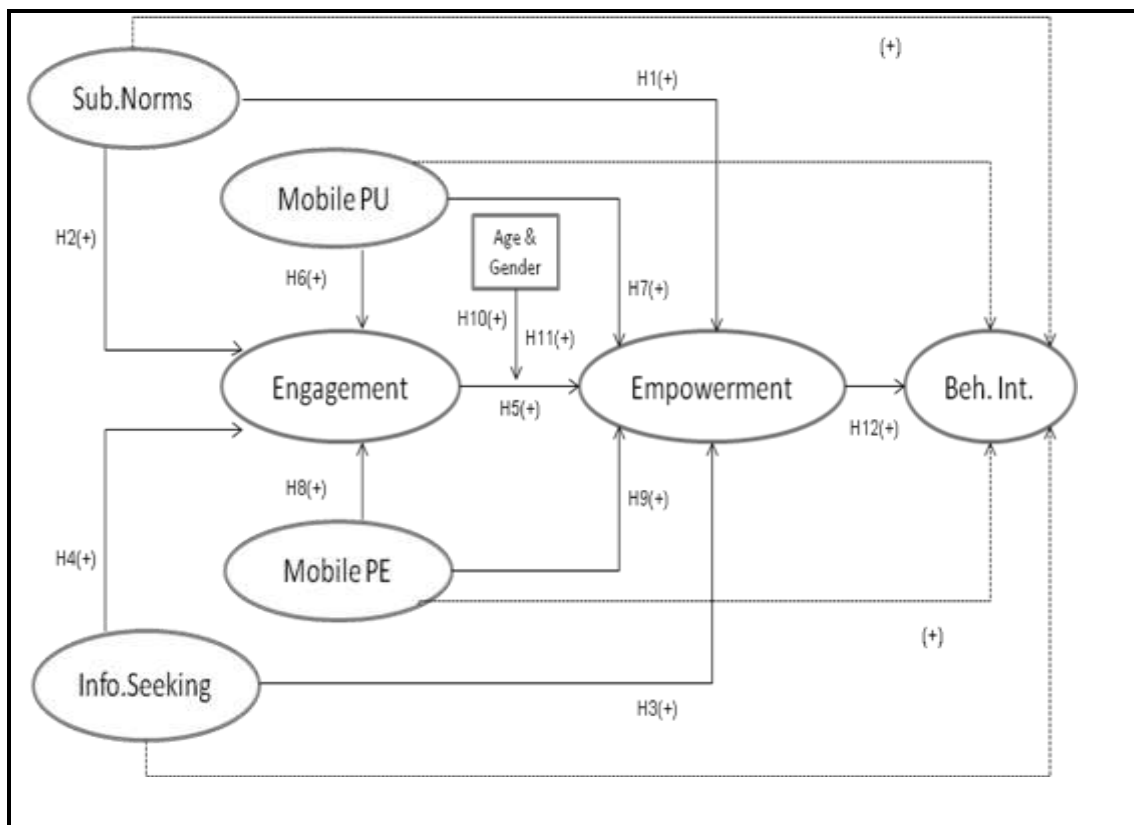
Indirect relationships were tested via AMOS 19, as follows. Information seeking (IS), subjective norms (SN), perceived usefulness (PU) and perceived ease of use (PE) were antecedents to behavioural intention (BI). The results showed that SN had a significantly impact on BI, while PE was significant but at a lower level of confidence. The remaining relationships were related to BI but were insignificant (see table 8-4 for these relationships and figure 8-1).

Table 8-4: Indirect Relationships

Antecedent	Outcome	R. Weight	T-value	Sig
IS	BI	0.091	-0.877	N.S.
SN	BI	0.077	2.477	0.001
PU	BI	0.074	0.934	N.S.
PE	BI	0.103	1.877	0.10

SN was discussed in Chapter Three, and it was hypothesised that there was a positive relationship with ENG and EM, which was empirically tested in this study. However, it was not hypothesised to have a relationship with BI, but found to be strongly positive. Hence, SN was found to have an indirect relationship with BI, based on the Theory of Reason Action (TRA) laid down by Fishbein and Ajzen (1975) and empirically tested by previous researchers (e.g. Lee and Green, 1991).

Figure 8-1: Indirect Relationships



Note: Dotted arrows represent indirect relationships.

8.4.4 Explained Variance in Constructs

The structural model was able to explain 45.8 per cent of the variance in customer engagement. Moreover, the R^2 value of customer engagement were 0.11 per cent explains the construct with three dimensions (ENCO,

ENBH and ENEM) which is considered reasonable, while it explains 0.66 per cent of variance customer empowerment, which is very good and 0.37 per cent of behavioural intention, which is a good. This marks a good start in the explained variance of the current model and sets the baseline as on similar comparable model exists in the literature to the best of the author's knowledge. The next section discusses other figures and demographical findings in further detail in relation to the literature.

8.5 Country Context

The demographic findings highlighted that 60 per cent of the sample was male and 40 per cent was female, which can be related as the gender difference in technology adoption, where males are more likely to be early adopters of new technology compared to females as findings of Venkatesh and Morris (2000) suggested. Furthermore, the age differences of the sample reflect the young generation of the Saudi population, with 81.5 per cent under the age of 35 and 18.5 per cent above that age. Further, it goes in line with the latest census (CDSI, 2010), which showed two thirds of the population are under the age of 35.

The dataset shows a wide reflection of respondents covering all counties in Saudi Arabia. The highest proportion was in the Central County, Al Riyadh with 39 per cent, followed by 27.3 per cent in Makkah County in the Western Province, and 12.8 per cent in the Eastern Province. In the north central, Al Qasim County had 4.5 per cent, while 4.2 per cent were in Al Madinah County in the northwest of the Western Province, and 4.1 per cent in the southwest, in Asir County. The remaining 8.3 per cent were scattered across the least populated counties.

These findings shed light on mobile usage patterns in Saudi Arabia and reflect the current status of consumers of such technology, which explains

the high penetration rate of mobiles, reaching nearly 200 per cent in 2012. The number of mobile-cellular subscriptions worldwide is approaching the number of people on earth, almost 7 billion by the end of 2014, corresponding to a penetration rate of 96 per cent according to the latest report by the International Telecommunication Union (ITU, 2014).

The ownership of mobile handsets in Saudi Arabia shows that nearly 53 per cent own two or more handsets while 47 per cent own only one. The major market share of mobile handset brands, according to the data, is held by iPhone with 55 per cent, 48.7 were Samsung Galaxy S and Note, 27.9 per cent were BlackBerry, 3.9 per cent were HTC, 2.7 per cent were Nokia Lumia and 14.5 per cent were other brands. Moreover, 77 per cent of respondents said they had had their handset for more than a year while 28 per cent had had them for less than a year.

In terms of the smartphone function use, data show 92.5 per cent used it for calls, 91.9 per cent for browsing the internet, 90.5 per cent for social media network applications, 78.9 for checking emails, 76.8 per cent for texting, 58 per cent for other smartphone applications and 7 per cent for other uses. Further, respondents were asked if they were interested in smartphones and their news; 68 per cent said yes and 32 said no. When asked if they had experience of receiving advertising messages on their handset, 91 per cent said yes while 9 per cent said no. This shows significantly the importance of the young generation role in possession of new smartphones and their engagement in mobile marketing campaigns. It is in line with the early research by Barwise and Strong (2002) on the diffusion of mobile advertising in marketing and how satisfied customers were with their experience. Different types of mobile advertising (i.e. SMS, MMS, QR codes) show growth in interest among customers, if employed correctly without undermining customers' privacy and right to opt-out (Bauer et al., 2005;

Scharl et al., 2005; Hsu et al., 2007; Turel et al., 2007; Hossain and Bahar, 2013; Watson et al., 2013; Gao et al., 2013).

8.6 Research Questions' Answers

Having discussed earlier the measure development and structural model relationships, this section answers the main research questions:

1- To what extent does customer engagement affect customer empowerment?

The results revealed the established scale of customer engagement was very good to capture customer behaviour. The effect on customer empowerment was significant, where customer engagement is crucial to empowerment behaviour. Customers who exhibited high levels of cognitive, emotional and behavioural engagement were engaged better with mobile marketing campaigns. As a result they get empowered by their handset's ability to communicate their needs and wants in a very convenient way. That goes in line with Wathieu et al. (2002), Pires et al. (2006), Füller et al. (2009), Verhoef et al. (2010), van Doorn et al. (2010) and Brodie et al. (2013), who assumed such a relationship between customer engagement and customer empowerment.

2- What are the antecedents and consequences of customer engagement and empowerment via mobile handsets?

On the one hand, the perceived ease of use effect on customer engagement and customer empowerment was insignificant as customers still do not find it an easy task to grip the use of their handset. On the other hand, the effect of perceived usefulness was quite significant for both customer engagement and customer empowerment. Moreover, subjective norms present a significant impact on empowerment behaviour, which consequently effects behavioural intention. Yet, information seeking had quite weak impact on engagement behaviour, but significant enough on empowerment behaviour.

3- To what degree do demographic factors influence the relationships between customers these variables?

The influence shows a significant difference in the relationship between customer engagement and customer empowerment for gender only, which is in line with Moutinho and Goode (1995), Gefen and Detmar (1997), Venkatesh and Morris (2000), Bendall-Lyon and Powers (2002), Dommeyer and Gross (2003), Kassinen (2003), Robins (2003), Scharl et al. (2005) and Gao et al. (2010). Furthermore, there were significant differences related to age and gender on some relations with other constructs, but they were out of the research scope. Further investigation is required to explore other demographic factors beyond age and gender, if for possible other influences.

8.7 Summary Remarks

The main conclusions drawn from the research findings were summarised, along with the measurement development, and the structure model. This chapter also discussed the conceptual framework model laid down, followed by the testing of hypothesised relationships to the research questions and objectives. The next chapter will present the theoretical implications of this study. Following that, the practical implications and limitations of the study will be detailed. Then, further directions for future research in this field of study will be discussed.

CHAPTER NINE: CONCLUSION

9.1 Introduction

An extensive amount of research has been carried out on mobile advertising and mobile marketing which has explored customers' perceptions of mobile ads (e.g. Barwise and Strong, 2002; Barnes, 2002; Tsang et al., 2004; Vincent, 2005; Bauer et al., 2005; Nysveen et al., 2005; Wu and Wang, 2005; Peters et al., 2007; Kim et al., 2008; Zhang and Mao, 2008; Pihlström and Brush, 2008; Choi et al., 2008). Yet, the potential capability of mobile phones used as an engagement medium with customers beyond mobile advertising was lacking in much of this research and remains poorly understood. Furthermore, customer empowerment through using a mobile handset has not yet been uncovered.

The emergence of customer engagement in the marketing field and its importance has been acknowledged by many researchers (e.g. van Doorn et al., 2010; Abdul-Ghani et al., 2010; Gambetti and Grffigna, 2010; Brodie et al., 2011), while customer empowerment has been extensively acknowledged in human resources research as employee empowerment (e.g. Conger and Kanungo, 1988; Thomas and Velthouse, 1990; Spreitzer, 1995) and very little in marketing (e.g. Cova and Pace, 2006; Ouschan et al., 2006; Niininen et al., 2007; Outi et al., 2007). However, there still remains a gap in marketing literature between customer engagement and customer empowerment in the mobile marketing context. As a contribution to fill this gap this research. A scale was developed for customer engagement and tested in relation to consumer behaviour literature (see table 9.1).

Table 9-1: Items of Customer Engagement Scale

Construct Dimensions	Items
Cognitive	ENCO1_I think that such communication messages on the smartphone are good for me. EMCO3_I believe if I act on the communication messages it will be a good choice. EMCO6_I think I will use social media (e.g. Facebook, Twitter) to communicate with firms sending such communication messages
Behavioural	ENBE7_Worth owning :not worth owning ENBE8_Impressive: not impressive ENBE9_Valuable: not valuable
Emotion	ENEM1_Happy:unhappy ENEM2_Please:annoyed ENEM3_Satisfied:unsatisfied

This research study, therefore, aimed to advance the knowledge on the literature of customer engagement (Bowden, 2009; van Doorn et al., 2010; van Doorn, 2010; Brodie et al., 2011; Leeflang, 2011; Brodie et al., 2013; Hollebeek et al., 2014), and customer empowerment and its scale (Cova and Pace, 2006; Ouschan et al., 2006; Niininen et al., 2007; Outi et al., 2007; Füller et al., 2009; O'Cass and Ngo, 2011; Pranic and Roehl, 2012) to understand the role of mobile usage patterns of consumers in Saudi Arabia and their impact on customer engagement and the customer empowerment relationship. Further, it investigated the antecedents and consequences of customer engagement, customer empowerment and the effect of moderating factors.

Thus, a reliable and validated scale of customer engagement was developed for the mobile marketing context, which is considered as a contribution; the scales' items are stated in the table above (table 9-1). Furthermore, this research presents the empirical findings that explain the relationship between subjective norms, information seeking, perceived usefulness, perceived ease of use, customer engagement, customer empowerment, behavioural intention and the moderating role of age and gender. The empirical study provides interesting results for discussion, while also extending prior research in the area of marketing and management studies. This chapter addresses each of these topics in three stages.

The first stage discusses theoretical implications in relation to development of the customer engagement scale, along with customer empowerment in the light of prior research. Furthermore, it discusses theoretical contributions to the Technology Acceptance Model (TAM), the mobile marketing context and methodology. The second stage, discusses practical implications in relation to customer engagement and its scale, along with implications related to goods dominant logic. The third stage, discusses limitations of the study, conceptually and methodologically, followed by suggestions for future research directions. Finally, the conclusion of the study is stated.

9.2 Theoretical Contribution

Corley and Gioia (2011) classified contribution to knowledge into two theoretical dimensions, namely, originality and utility. The originality represents the value-added contribution to the accumulated body of knowledge which can be incremental or revelatory. The utility represents the usefulness of the contribution which can be practical or scientific. This research has made advancement in knowledge in relation to customer engagement, customer empowerment and the Technology Acceptance Model (TAM) literature in the context of mobile marketing. This research

provides incremental contributions in both practical and scientific forms, as illustrated in figure 9.1.

Figure 9-1: Research Implications

	4	1
Revelatory		
Originality	3	2
Incremental	X	X
	Practically useful	Scientifically useful
	Utility	

Note: the X letter in boxes 3 and 2 indict the areas where the incremental contribution of this study lies. Adopted from Corley and Gioia (2011).

These contributions will be discussed in relation to the relevant literatures respectively as shown in the above figure as follows.

9.2.1 Theoretical Contribution: Development of Customer Engagement Scale

The objectives of this research were to investigate the relationship between customer engagement and customer empowerment in mobile communication, to examine the impact of moderating factors on this relationship and to investigate the antecedents and possible consequences of customer engagement and customer empowerment. Hence, a scale was developed for customer engagement behaviour suited for the context of mobile marketing.

As discussed in the first and second chapters, to the best of the author's knowledge, no study has previously investigated customer engagement and customer empowerment in relation to the mobile marketing context. All previous studies accomplished in the mobile marketing context focused more on customer attitude towards mobile advertising (e.g. Barwise and Strong, 2002; Tsang et al., 2004; Vincent, 2005; Maneesoonthorn and Fortin, 2006), while few studies emerged conceptualising customer engagement and its importance in marketing strategies (e.g. Gambetti and Graffigna, 2010; van Doorn et al., 2010; Kumar et al., 2010; Verhoef et al., 2010; Kumar et al., 2010; Brodie et al., 2011). These were mainly in service dominant logic and some carried out empirical tests (e.g. Bowden, 2009; Brodie et al., 2013; Hollebeek et al., 2014; Baldus et al., 2014). The gap in relation to customer engagement was identified from recommendations from previous researchers, who highlighted the importance of customer engagement in marketing and the need for further research to overcome the lack of knowledge in this area (e.g. van Doorn et al., 2010; van Doorn, 2011; Brodie et al., 2011; Leeflang, 2011; Brodie et al., 2013). Therefore, the customer engagement scale developed in this research study is regarded as an incremental contribution as it represents the cornerstone to understand customer behaviour in the mobile context.

This research made a significant contribution by developing a measurement scale to test customer engagement via mobile handsets. It follows Churchill's (1979) framework of scale development along with the recommendations of Hair et al. (2010), DeVellis (2012) and Netemeyer et al. (2003). The scale consists of nine items representing three dimensions which are cognitive, emotional and behavioural, and is shown to be valid and reliable.

The nature of the interactive dialogue carried out via these technologies provides marketing scholars with invaluable information to help to understand customer behaviour in the communication process. It also,

contributes to the accumulated knowledge in the field of customer engagement. More precisely, it provides a basic understanding of customer engagement behaviour and customer empowerment which could help improve targeting of the appropriate segment. Furthermore, the scale provides empirical results which can be used in further customer engagement studies to improve the research perceptions in the communication field. Moreover, it enables researchers to assess marketing campaigns' success in different market sectors.

9.2.2 Theoretical Contribution: Development in the Understanding of Customer Engagement

This research was concerned with understanding the relationship between customer engagement and customer empowerment, given the infant stage of customer engagement in the marketing realm, with a handful of studies anticipating such a relationship (e.g. Cova and Pace, 2006; Brodie et al., 2013). In addition, the relationship between subjective norms, information seeking, perceived usefulness and perceived ease of use towards customer engagement and customer empowerment towards behavioural intention were investigated for the first time by this research, which makes an additional contribution to customer engagement literature by identifying the influential relations affecting customer behaviour in a mobile marketing context.

Consequently, this research contributes to the literature of customer engagement in five different ways: first, by determining the subjective norms' positive impact on customer engagement it is significant, which is an incremental type of contribution. Second, information seeking was shown to have a positive impact on customer engagement but was not significant enough to explain the relationship, hence, further research is needed to investigate this in future. Third, it was indicated by this research that perceived usefulness has a positive and significant impact on customer

engagement, which is considered as an incremental type of contribution. Fourth, perceived ease of use surprisingly had a negative impact on customer engagement, which may be explained by the difficulties users face in dealing with their handsets. Thus, more research is required to investigate this relationship in future. A fifth incremental contribution in customer engagement literature was achieved based on this research, which found that there was a significant impact of customer engagement on customer empowerment in the context of mobile marketing. Although many studies have been conducted on mobile advertising to test customers' acceptance of receiving advertising on their handsets (e.g. Tsang et al., 2004; Vincent, 2005; Maneesoonthorn and Fortin, 2006), little has been conducted on understanding this technology as a way to engage and communicate with customers. Hence, this study helps to fill the gap in the literature by exploring the implications of mobile technology in business communication strategies to advance the knowledge further.

9.2.3 Theoretical Contribution related to Customer Empowerment Literature

This research has explored the impact on customer empowerment of customer engagement and other antecedents, which results in adoption of a scale to fulfil the research objectives. Given the limited studies in customer empowerment in a communication context, this research provides an incremental contribution in understanding customer behaviour in a mobile marketing context.

9.2.3.1 Theoretical Contribution: Development of the Understanding of Customer Empowerment

This research provides a theoretical grounding for the understanding the way customers communicate in marketing campaigns. Empowerment behaviour has been mostly conceptualised and examined in organisation behaviour, community and politics (e.g. Bandura, 1977; Zimmerman, 1990; Zimmerman

and Rappaport, 1988; Chebat and Kollias, 2000), while customer empowerment was discussed in the context of consumersim (e.g. Newhole et al., 2006; Denegrie-Knott et al., 2006; Pires et al., 2006), where the customer knowledgablity represents customer empowerment. The gap in knowledge in relation to customer empowerment literature was identified by the recommendation of previous researchers (e.g. Cova and Pace, 2006; Füller et al., 2009). In addition, the relationship between subjective norms, information seeking, perceived usefulness and perceived ease of use towards customer empowerment and in turn towards behavioural intention was investigated for the first time by this research, which makes an additional contribution to the customer empowerment literature by identifying the influential relations affecting customer behaviour in a mobile marketing context.

Therefore, this research contributes to the literature of customer empowerment in five different ways: first, subjective norms have positive and significant impact on customer engagement which is an incremental type of contribution. Second, perceived usefulness has a positive significant impact which is considered as an incremental type of contribution. Third, information seeking was determined to have a positive significant impact on customer empowerment which is consistent with early research (e.g. Yang et al., 2013; Okazaki et al., 2014; Lee and Ma, 2012). Fourth, perceived ease of use showed a negative impact on customer empowerment but is not significant, which contradicts some early studies (e.g. Chen and Popovich, 2003; Baure et al., 2005; Peters et al., 2007; Choi et al., 2008; Gao et al., 2010), however, that might be due to customer experiences with their devices, which some find it difficult to master. Thus, further investigation is needed to explore such a relationship in the mobile marketing context in future research. Fifth, the customer empowerment impact on behavioural intention was positive and significant which is an incremental contribution as it was investigated for the first time in this research in a mobile marketing context.

9.2.4 Theoretical Contribution to the Literature related to TAM

The Technology of Acceptance Model (TAM) was the theoretical underpinning for this study. Thus, the second research question was designed to satisfy the third stated objective in Chapter One, which assists in accomplishing the ultimate aim. Hence, the TAM was extended by inclusion of subjective norms, information seeking, customer engagement and customer empowerment based on the logic provided in Chapter Three. New relationships were investigated for the first time in this study. The study, also, was the first to test demographic factors (age and gender) as moderators between customer engagement and customer empowerment which resulted in showing the significant effect of these relationships.

The construction to the TAM model was represented in information seeking, which was found in some previous studies to influence customer empowerment (e.g. Yang et al., 2013; Okazaki et al., 2014; Lee and Ma, 2012) and this study has supported this proposition. An assumption was formulated that information seeking may influence customer empowerment since it is indicated that knowledge influences customer behaviour (e.g. Jayawardhena and Foley, 2000; Papacharissi and Rubin, 2000; Newholm et al., 2006; Pires et al., 2006; Cova and Pace, 2006). Consequently, this study found empirical evidence that information seeking positively and significantly impacts customer empowerment but not customer engagement. In addition, there is a contribution in relation to subjective norms which were found in some early studies to have an impact on adoption of new technology (e.g. Morris and Venkatesh, 2000; Venkatesh et al., 2003; De Mooij, 2005).

Hence, an assumption was developed that subjective norms influence customer engagement and customer empowerment, since it has indicated they have an influence on customer behaviour (e.g. Lee and Green, 1991; Venkatesh et al., 2003; Lim and Dubinsky, 2005). As a result, the study found significant and positive impact on customer engagement and customer

empowerment, which consequently has an affects on the understanding of customer behaviour in a mobile marketing context and is considered to be the first introduction of its kind in the TAM model.

The methodology of this research provided additional theoretical contributions, as follows: first, this study examined indicators that belong to extensively-recognised theories (TRA, UGT and TAM) of consumer behaviour and technology adoption. Accordingly, this study adopted verified and modified examined items which assist in obtaining well accepted reliability as well as convergent and discriminant validity. Thus, it contributes to these theories' literature by examining their main constructs in a new context.

Second, this study divided the data set into two equal sup-sets to perform scale purification and development for customer engagement. It employed exploratory factor analysis (EFA) and confirmatory factor analysis (CFA) for this stage for the first data set. It also, employed EFA, CFA and the structural equation modelling (SEM) for the second data set to examine the proposed theoretical framework. These methods enable researchers to examine such complex frameworks and evaluate relationships in a systematic manner (Byrne, 2010; Hair et al., 2010; Hair et al., 2014). Hence, this is considered as a theoretical contribution in this study.

9.2.5 Theoretical Contribution to the Literature related to Mobile Marketing Context

This research provides advancement in knowledge to understand mobile marketing communication. Early research focused on mobile advertising acceptance in relation to customer attitude toward these sorts of advertisements (e.g. Barwise and Srong, 2002; Tsang et al., 2004; Scharl et al., 2005; Turel et al., 2007; Okazaki and Taylor, 2008; Okazaki et al., 2009),

while others examined the effectiveness of these messages (e.g. Rettie et al., 2005; Okazaki et al., 2007; Grant and O'Donohoe, 2007), yet nothing had been done to study customer engagement and customer empowerment in a mobile marketing context to the best of the author's knowledge. In response to this gap, in the present study customer engagement and customer empowerment via smartphones and their impact on behavioural intention are explored in details. Consequently, customer engagement was found to have a strong impact on customer empowerment which as a result strongly impacts on behavioural intention. Hence, this is regarded as an incremental contribution in this study.

9.2.6 Theoretical Contribution to the Literature related to Demographic Factors

The proposed model of this study was examined with age and gender as potentially moderating factors on the relationship between customer engagement and customer empowerment. These comparisons were assessed based on t-value differences via AMOS 19 multiple-group analysis in relation to p-value. This study contains two groups of each demographic factor, as follows: first, age (18-35 young and 36-55 old), second, gender (male and female). The results show a significant difference in gender, which confirms previous studies that found gender effects on customer behaviour (e.g. Kumar and Lime, 2008; Gao and Salvendy, 2010; Gao et al., 2010). However, some studies found the effect was barely noticeable in the digital sphere (e.g. Wei, 2012), as it found in relation to age, which was insignificant. Thus, this research provides an incremental contribution in the context of mobile marketing in Saudi Arabia, and further research is needed to test these along with other demographic factors in different cultural contexts.

9.3 Practical Implications

This section is devoted to the practical implications of this study. Firstly, the implications of customer engagement and its scale are explained. Secondly, implications related to customer experience in a mobile marketing context are considered.

9.3.1 Implications of Customer Engagement and its Measurement

Scale

The implications of this study on the practical and managerial level are in terms of business communication strategies. Understanding customer behaviour after marketing campaigns would help improve companies' return on investment (ROI). Further, it helps in targeting and managing the communication process in such an environment. In addition, understanding the customer empowerment conferred by mobile technology and how it is used would help to enhance the prediction of customer behaviour, and how it could be better targeted and segmented in campaigns. Moreover, it would impact positively on relationship management practices to enhance customers' loyalty.

The study provides a measurement scale which companies could use to test their customers' engagement behaviour after launching a campaign. Moreover, the findings highlight the importance of improving customers' communication experiences and enhancing the companies' relationships with their customers, bearing in mind that this is the heart of any interaction. It would help companies to manage customers' perceptions in the virtual environment and minimise negative side effects. Further, the pressure of social presence around a customer could be invested in by increasing the exposure of advertisements in social media sites where friends or followers would influence a customer decision to buy a product. Also, maintain a good presence on social media sites would help generate further interest in a product which can be seen and shared by users.

CRM can be employed based on these social media sites to identify and target the right community to promote the company's offers. Moreover, integrate mobile phone number for customers to establish direct communication with them. These will assure an improvement in any company communication strategy, which would enhance its position in market.

9.3.2 Customer Engagement – Implications for Customer Experience

This present study examined customer engagement and customer empowerment in new smartphone advertisements in the context of mobile phones. Since research on customer engagement is in its infancy, this study's findings will help marketing managers to understand the customer engagement across different types of goods. It becomes necessary for management to know how customers are engaged via their mobile phones and to understand the true potential of these devices. Hence, this study helps marketers to plan their marketing communication strategies by measuring customer engagement. Moreover, this will help them to plan their marketing campaigns by integrating the mobile channels as a crucial key success factor to reach their customers. In addition, it opens up the communication channel for dialogue with their customers, which would impact consequently on their purchase behaviour.

The capability of mobile handsets represents opportunities for marketers to shift from mass communications to one-to-one communication strategy. As on individual level better segmentation and tailored offers would best suit individual's needs/wants. Moreover, communicating directly with a customer would build up trust and enhance brand loyalty on the long run. Also, geographic based location advertisements on mobile phone can direct customers to the nearest available store to the offer best value to them.

Mobile phone is the new frontier for business growth in the future and marketers should incorporate mobile communication into their balanced score card (BSC) for their long term strategy. It also, can be embedded in integrated marketing communications strategy to target the right customer and deliver a coherent message.

9.4 Limitations and Future Research Directions

This research provides new and unique findings related to customer engagement measurement and in relation to customer empowerment and their relation to TRA, UGT and TAM constructs. There are two areas into which limitations can be grouped: conceptual and methodological, which will be discussed in the next sections, as follows.

9.4.1 Conceptual Limitations

This study has identified a set of variables as a result of their fit within the given nomological net of the mobile marketing context as well as their suitability for assessment. There is a possibility to identify more variables (e.g. satisfaction, loyalty) which could or should have been included in this research, but boundaries laid down by the scope of the research objectives prevented inclusion of other variables. Such extension would enable the researcher to investigate the included variables in greater detail.

However, it is not possible to attempt to include every potential variable in the given model. Hence, the researcher had to compromise on variables that were not included, reserving them for potential use in further studies due to the cost, time and effort involved in this study. Moreover, cultural context of the study as it focus mainly on Saudi Arabia considered to be a limitation as other context may differ.

9.4.2 Methodological Limitations

The research faced several limitations due to the nature of the study. Firstly, the data collection instrument utilised in this research was an online questionnaire was posted in different electronic forums, which targeted mainly internet users who were mainly the young generation in Saudi Arabia, as they were the majority of the sample. Senior citizens represent the less fortunate internet users and those less interested in modern gadgets, although the purchasing power they possess is considerable, but lacked understanding in this research. The case may differ in different cultural context and country where less technologic developed countries may have low adoption to such technology and that may result in poor customer engagement due to poor empowerment. Secondly, the research focuses on smartphone advertisements and campaigns to capture customer engagement behaviour. As a result it disregards other categories of goods which might share the same interest of customer's behaviour or less/more. However, in Saudi Arabia the high GDP suggest a high disposal income to individual which distinguish it from other countries, other commodities could be worth investigation. Third, common method bias (CMV) remains a limitation. Although no serious effect was detected, it can not be asserted that CMV was not at all present. Moreover, the TAM model was shown by some previous researchers to have similar symptoms of bias due to the nature of the study, but it did not undermine their findings. Also, the cross-sectional nature of the study remains as a limitation. Finally, the research examines the role of smartphone handsets on customer engagement and customer empowerment, which is a growing trend of the third generation of wireless telecommunication, but it did not cover the second generation mobile handset users who remain the biggest proportion worldwide.

9.5 Future Research Directions

This study provides empirical ground for future research as a step on the ladder to advance knowledge on customer engagement behaviour. The research field is still in its infant stage and further research needs to be

carried out to explore different aspects of engagement behaviour on decision making and post purchase via mobile handsets. Customer engagement has attracted growing interest in the research domain by marketing scholars in the last five years. This study contributes a cornerstone in the advancement of knowledge to understand customers' behaviour in the era of the mobile context. Future studies may include other moderators such as income, education and geographical boundaries.

Furthermore, future research needs to focus on other drivers of customer engagement and customer empowerment within a full scale of tested theories. For instance, factors such as Interpersonal Utility, Passing time, Convenience, Entertainment, Control, and Trust should be investigated in the mobile communication context. Moreover, actual behaviour after customer engagement as in mobile WOM has an effect on other customers' decision should also be investigated. Further research can investigate the role of mobile payment infrastructure on customer purchasing decision. Moreover, the extent to which customers are willing to adopt mobile payment as a secure method to purchase on the go can be investigated.

There is also a need for future research in the field of social marketing in relation to customer engagement in mobile donation. Many charitable organisations, in their fundraising campaigns, use the mobile as a channel for donation, along with other channels. It would be interesting to know the impact of the mobile handset on customer engagement in relation to charitable campaigns, as well as the moderators' factors that influence such behaviour and its convenience for customers.

Mobile commerce is considered as a new frontier in research and the role of customer engagement and customer empowerment in this context is still lacking. Future research should investigate customer engagement with

mobile shopping websites and apps shopping, as such environments would impact on customers' purchasing decision. Also, it could examine customer adoption of mobile shopping catalogues in apps and their contribution to enhancing customer experience and the overall journey from checking-in until the payment stage.

The current body of knowledge lacks understanding of the link between service providers and the role of mobiles in customer engagement behaviour. Hence, more research is needed to look into service-dominant logic and whether it differs from goods-dominant logic. Further, it would examine different sectors of service in the era of the ubiquity of mobile handsets. Many of the young generation express themselves through their social media network accounts, so to investigate to what extent the presence of mobile handsets facilitates their choice across different services/products would be of interest

One more area that needs further study is customer loyalty. Many companies use their customers' personal data, including mobile phone number, to improve their loyalty and to target their offers to individuals. Future research needs to investigate customer relationship marketing (CRM) practice, in the context of mobile handsets, and its impact on customer engagement behaviour to strengthen loyalty ties with a company. Also, it could explore mobile CRM in relation to services provided (e.g. hospitality, healthcare, airline tickets and banks) and how that impacts on customer engagement and customer empowerment.

Moreover, future research should focus on the emerging trend of mobilisation whereby a growing numbers of customers carry out their shopping routines (i.e. weekly grocery shopping) on their mobile handsets and tablets. Research is needed to examine to what extent mobile apps built based on customer experience impact on their acceptance of in-app advertisements in

their mobile shopping activities. Would they be annoying and rejected or enjoyable and acceptable?

Finally, this present study provides a reliable and valid measure of customer engagement behaviour in the context of mobile marketing. Therefore, forthcoming studies are encouraged to replicate the model in different cultural contexts and with different types of products to assess its reliability. Moreover, researchers could investigate further the relationship between perceived ease of use and customer engagement and customer empowerment, as well as, the moderation factors between customer engagement and customer empowerment.

9.6 Conclusion

The main findings of the present research express the importance of the mobile handset role in customer engagement and customer empowerment. Also, theoretical contributions have been provided by the development of a new measurement scale. Moreover, the practical implication of the insightful knowledge on engagement and empowerment behaviour to marketers on designing and planning mobile marketing communication has been highlighted. The chapter discussed the tested hypotheses in relation to the research objectives and questions. The limitations of the study were detailed. To conclude, the study contributes to the field of customer engagement and offers directions for future research.

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Appendix A: Questionnaire English and Arabic

Questionnaire English Version

Dear Participant,

I am a PhD student, in the School of Business at the University of Hull, UK. As part of my research, I am conducting a survey on customer engagement on mobile marketing communications campaigns.

I am looking for participants who have an experience on mobile marketing or mobile advertising and above 18 years old. Your point of view and experience are extremely valuable to my research, and therefore I would very much appreciate your participation by completing this online questionnaire. It takes around 10 minutes and there is no correct or wrong answer and your input will be valuable.

This is an anonymous survey; the information obtained will be kept strictly confidential and will be used for academic purposes only.

Thank you very much for your support.

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- I agree to continue
- I do not agree and wish to terminate the survey

Q1) Do you own a smartphone?

- Yes
- No

Q2) How many ?

- 1
- 2
- more than 2

Q3) What brand ? (You can select more than one)

- iPhone
- Samsung galaxy
- Samsung galaxy note
- BlackBerry
- Nokia (eg. Lumia)
- HTC
- Others - please specify _____

Q4) How long have you had it?

- Less than 6 months
- More than 6 months
- More than 1 year

Q5) What do you use your smartphone for ? (You can select more than one)

- Calls
- Texting
- Browsing internet
- Checking emails
- Using social media networks apps (eg. Facebook, Twitter, Instagram, Whatsapp, etc...)
- Using other smartphones apps
- Others - please specify _____

Q6) Are you interested in smartphones and their news?

- Yes
- No

Q7) Have you ever received an advertising message on your mobile phone?

- Yes
- No

Q8) Drawn on your experience of using your smartphone, please indicate the extent to which you agree with the following statements.

	Strongly Disagree (1)	Disagree (2)	Slightly Disagree (3)	Neutral (4)	Slightly Agree (5)	Agree (6)	Strongly Agree (7)
Using smartphone improves my performance in my day to day activities	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Using smartphone in my day to day activities increase my productivity	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Using smartphone enhances my effectiveness on day to day life	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I find smartphone useful in my day to day activities	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My interaction with the smartphone is clear and understandable	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Interaction with the smartphone does not require a lot of my mental effort	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Please select neutral	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I find the smartphone easy to use	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I find it easy to get smartphone to do what I want it to do	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I use the smartphone because it is a new way to do research on internet	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I use the smartphone because it is easier to seek information	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I use the smartphone to instantly get information for free wherever and whenever I needed it.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I use the smartphone to look for information	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I use the smartphone to see what is out there	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q9) Based on your experiences of smartphones and receiving communication messages from firms on smartphones, please answer the following: When I receive a message from a firm promoting a particular product

	Strongly Disagree (1)	Disagree (2)	Slightly Disagree (3)	Neutral (4)	Slightly Agree (5)	Agree (6)	Strongly Agree (7)
I think that such communication messages on the smartphone are good for me	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I can understand the features of the communication messages received on the smartphone	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I believe if I act on the communication messages it will be a good choice	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I think I should seek more information about the content of such messages before I act on them	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I believe other opinions will help me decide to act on such communication messages	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

I think I will use social media (e.g. Facebook, Twitter) to communicate with firms sending such communication messages	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
People who influence my behaviour think that I should use the smartphone.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Please select neutral	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
People who are important to me think that I should use smartphone.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
People who influence my behaviour would think that I should use the smartphone.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
People who are important to me think that I should use smartphone to communicate with them via instant messaging application (e.g. Whatsapp, Blackberry)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

I had the feeling of an active participant in the conversation with the firm	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Communication via the smartphone gave me the feeling that I am taken seriously	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Assuming I have internet access on my smartphone, I intend to proceed with the purchase	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
When I have my smartphone with me, I predict that I would use it to proceed with the purchase	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
If I had to do it over again, I would make the same choice	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q10) Based on your experiences of smartphones and receiving communication messages from firms on smartphones, please choose which side you agree more with the statement below.

How do you feel about ad messages promoting smartphone devices received on your mobile phone?

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	
Like	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	dislike
Useful	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	not useful
high-tech	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	not high-tech
Good	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	bad
High quality	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	low quality
Practical	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	impractical
Worth owning	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	not worth owning
Impressive	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	not impressive
Valuable	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	not valuable
Advance	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	not advanced

Q11) Based on your experiences of smartphones and receiving communication messages from firms on smartphones, please choose which side you agree more with the statement below. How do you feel about ad messages promoting smartphone devices received on your mobile phone?

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	
Happy	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Unhappy
Please	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Annoyed
Satisfied	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Unsatisfied
Contented	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Melancholic
Hopeful	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Despairing
Relaxed	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Bored
Stimulated	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Relaxed
Exited	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Calm
Frenzied	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Sluggish

Jittery	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Dull
Wide awake	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Sleep
Aroused	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Unaroused
Controlling	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Controlled
Influential	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Influenced
In control	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Cared for
Important	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Awed
Dominant	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Submissive
Autonomous	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Guided

Q12) Please indicate the extent to which you agree with the following statements.

	Strongly disagree (1)	Disagree (2)	Slightly disagree (3)	Neutral (4)	Slightly agree (5)	Agree (6)	Strongly Agree (7)
I worry that there are harmful chemicals in my food	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I am concerned about my drinking water quality	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I usually read the ingredients on food labels	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I read more health-related articles than I did 3 years ago	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I am interested in information about my health	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I am concerned about my health all the time	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q13) Please answer the following demographic questions:

Gender

- Male
- Female

Q14) Age

- 18 - 25
- 26 - 35
- 36 - 45
- 46 - 55
- 55 and above

Q15) Which county do live in Saudi Arabia?

- Al Riyadh
- Makkah
- Al Madinah
- Al Qasim
- Eastern Province
- Ha'il
- Jizan
- Asir
- Al Bahah
- Tabuk
- Najran
- Al Jouf
- Northern Borders

End of Questionnaire

Questionnaire Arabic Version

عزيزي المشارك،

أنا طالب دكتوراه في كلية إدارة الأعمال في جامعة هال بالمملكة المتحدة، وكجزء من بحثي أقوم بإجراء دراسة استقصائية عن إنخراط العملاء في حملات الرسائل التسويقية عبر الهواتف الذكية في المملكة العربية السعودية.

يستهدف هذا الإستبيان مستخدمي الهواتف الذكية (**Smartphones**- لمن هم فوق 18 عاماً)، ويهدف بتحديد إلى قياس مدى الإنخراط والتفاعل مع حملات الرسائل الدعائية المرسلّة عبر الهواتف الذكية لمعرفة وجهة نظرهم وتجربتهم الشخصية تجاه ذلك. لا يستغرق إكمال هذا الإستبيان أكثر من 15 دقيقة وليس هناك إجابة صحيحة أو خاطئة بذاتها، بل كل ما تذكره سوف يكون له قيمة.

هذا الإستبيان لا يتطلب أسم المشارك، وجميع ما تقدمه من معلومات سوف يتم التعامل معها بسرية تامة و لن تستخدم إلا للأغراض الأكاديمية فحسب.

أقدر لك كثيراً مشاركتك ومساعدتك في إتمام هذا البحث من خلال تعبئة هذا الاستبيان، مع الشكر الجزيل.

إبراهيم بن سليم الزايد العتيبي

كلية إدارة الأعمال - قسم التسويق

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بإشراف أكاديمي من قبل

البروفسور / شنكا جاوردينا

كلية إدارة الأعمال - رئيس قسم التسويق

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- أوافق على أكمال الاستبيان
- لا أوافق على أكمال الاستبيان

Q1 هل تمتلك هاتف ذكي مثل: أي فون، سامسونج جلاكسي، بلاك بيري أو غيرها؟

- نعم
- لا

Q2 كم جهاز تمتلك؟

- 1
- 2
- أكثر من 2

Q3 ما نوع الجهاز الذي تمتلكه؟ (بإمكانك إختيار أكثر من خيار)

- أي فون - iPhone
- سامسونج جالاكسي أس Samsung Galaxy S
- سامسونج جالاكسي نوت Samsung Galaxy Note
- بلاك بيري BlackBerry
- نوكيا Nokia
- أتش تي سي HTC
- غيرها - الرجاء التحديد (.....)

Q4 منذ متى وأنت تمتلكه؟

- أقل من ستة أشهر
- أكثر من ستة أشهر
- أكثر من سنة

Q5 في ماذا تستخدم هاتفك الذكي ؟ (بإمكانك إختيار أكثر من خيار)

- للاتصال
- لرسائل
- لتصفح الأنترنت
- للبريد الإلكتروني
- لأستخدام تطبيقات شبكات التواصل الإجتماعي مثل (فيسبوك، تويتر، انستجرام وغيرها)
- لأستخدام تطبيقات الهواتف الذكية الأخرى
- كل ما ذكر أعلاه
- غيرها (الرجاء التحديد) _____

Q6 هل أنت مهتم بالهواتف الذكية ومتابعة أخبارها ؟

- نعم
- لا

Q7 هل سبق وأن استلمت رسائل دعائية على هاتفك الذكي ؟

- نعم
- لا

Q8 قياساً على خبرتك في التعامل مع هاتفك الذكي، الرجاء الإجابة على الأسئلة التالية، الرجاء الإختيار لأي مدى تتفق مع ما يذكر أدناه:

أوافق بشدة	أوافق	أوافق قليلاً	محايد	لا أوافق قليلاً	لا أوافق	لا أوافق بشدة	
7	6	5	4	3	2	1	
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	استخدام الهاتف الذكي حسن من أدائي لأنشطتي اليومية
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	استخدام الهاتف الذكي في الأنشطة اليومية زاد من إنتاجيتي
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	استخدام الهاتف الذكي حسن من فعاليتي في الأنشطة اليومية
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	أجد الهاتف الذكي مفيد في أنشطتي اليومية
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	استخدام الهاتف الذكي واضح ومفهوم
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	استخدام الهاتف الذكي لا يتطلب مجهود عقلي كبير
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	الرجاء اختيار محايد
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	أجد الهاتف الذكي سهل الاستخدام
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	أجده من السهولة استخدام الهاتف الذكي لعمل ما أريد عمله
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	استخدام الهاتف الذكي لأنه طريقة جديدة للبحث في الأنترنت
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	استخدم الهاتف الذكي لسهولته في البحث عن المعلومات

<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	استخدم الهاتف الذكي لأحصل على المعلومات على الفور وبالمجان أينما وكلما كنت بحاجة لها
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	استخدم الهاتف الذكي للبحث عن المعلومات
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	استخدم الهاتف الذكي للأطلاع على المستجدات

Q9 قياساً على خبرتك في الهواتف الذكية واستلامك لرسائل دعائية من الشركات على هاتفك الذكي، أرجو تخيل السيناريو التالي:- تلقيت رسالة نصية تروج لمنتج معين تهتم به، لأي مدى تتفق مع ما يذكر أدناه:

أوافق بشدة	أوافق	أوافق قليلاً	محايد	لا أوافق قليلاً	لا أوافق	لا أوافق بشدة	
7	6	5	4	3	2	1	
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	أظن أن هذه الرسائل التي تصل عن طريق الهاتف الذكي مناسب لي
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	استطيع فهم محتوى هذه الرسائل المستلمة على الهاتف الذكي
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	أعتقد إذا تصرفت بناءً على هذه الرسائل سوف يكون خيار جيد
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	أظن أنه يتعين علي طلب معلومات أكثر عن محتويات هذه الرسائل قبل أن أتصرف بناءً عليها
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	أعتقد أن الآراء الأخرى سوف تساعدني في اتخاذ القرار لأتصرف بناءً على هذه الرسائل
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	أظن أنني سوف استخدم شبكات التواصل الاجتماعي (فيسبوك، تويتر، وغيرها) للتواصل مع الشركة التي ترسل هذه الرسائل
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	الناس الذين يؤثرون على سلوكي يعتقدون أنه يتعين علي استخدام الهاتف الذكي

<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	الناس المهمين لدي يعتقدون انه علي استخدام الهاتف الذكي
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	الرجاء أختيار محايد
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	الناس الذين يؤثرون على سلوكي قد يعتقدون أنه علي استخدام الهاتف الذكي
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	الناس المهمين لدي يعتقدون أنه يتعين علي استخدام الهاتف الذكي لتواصل معهم من خلال تطبيقات الشات مثل (Line, Whatsapp, Blackberry messenger) ، وغيرها
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	اشعر أنني مشارك نشط في المحادثة مع الشركة
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	التواصل من خلال الهاتف الذكي أشعرتني أنني أخذ بجدية
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	على أفتراض انه لدي اتصال بالإنترنت من خلال الهاتف الذكي ، أنوي الإقدام على الشراء
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	عندما يكون معي الهاتف الذكي، أتوقع أنني سوف استخدمه للإقدام على الشراء
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	إذا تحتم علي تكرار الفعل، سوف أقوم بنفس الأختيار

Q10 قياساً على خبرتك في الهواتف الذكية واستلامك لرسائل الدعائية من الشركات على هاتفك الذكي، أرجو الإجابة على التالي بحيث أقصى الطرفين يمثل رأيك بدقة وما بينهما عكس ذلك:

	7	6	5	4	3	2	1	
لا يعجبني :	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	يعجبني:
غير مفيد :	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	مفيد:
ليست تقنية عالية :	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	تقنية عالية:
سيء :	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	جيد:
جودة متدنية :	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	جودة عالية:
غير عملي:	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	عملي:
لا يستحق الإقتناء	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	يستحق الإقتناء
غير مثير للإعجاب :	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	مثير للأعجاب
غير قِيم :	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	قِيم:
غير متقدم :	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	متقدم:

Q11 قياساً على خبرتك في الهواتف الذكية واستلامك لرسائل دعائية من الشركات على هاتفك الذكي، أرجو الإجابة على التالي بحيث أقصى الطرفين يمثل رأيك بدقة وما بينهما عكس ذلك:-
عندما تصلك رسالة دعائية تروج للهواتف الذكية على هاتفك الجوال

	7	6	5	4	3	2	1	
سعيد	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	غير سعيد
مبتهج	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	منزعج
راضي	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	غير راضي
مقتنع	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	مكتئب
متفائل	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	محبط
مسترخي	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	متضايق
متفاعل	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	غير متفاعل
متحمس	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	هادئ
هائج	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	راكد

متأمل	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	متنرفز
نائم	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	مستيقظ
غير مثير	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	مثير
متحكم به	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	أتحكم
متأثر	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	مؤثر
مهتم له	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	مسيطر
مرهب	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	مهتم
مستسلم	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	مهيمن
موجه	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	مستقل

Q12 لأي مدى تتفق مع ما يذكر أدناه:

أوافق بشدة	أوافق	أوافق قليلاً	محايد	لا أوافق قليلاً	لا أوافق	لا أوافق بشدة	
7	6	5	4	3	2	1	
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	أنا أخشى من وجود مواد كيميائية ضارة في أطعمتي
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	أنا أشعر بالقلق إزاء جودة مياه الشرب
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	أنا في العادة أقرأ مكونات الطعام الموجودة على الملصق الغذائي
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	أنا أقرأ مقالات صحية أكثر مما كنت في الثلاث سنوات الماضية
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	أنا أهتم بالمعلومات المتعلقة بصحتي
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	أشعر بالقلق حول صحتي طوال الوقت

Q13 الرجاء الإجابة على الأسئلة الديموغرافية التالية:

- الجنس
- ذكر
- أنثى

Q14 العمر

- 18 - 20 سنة
- 21 - 30 سنة
- 31 - 40 سنة
- 41 - 50 سنة
- 51 سنة و أكثر

Q15 في أي منطقة من المملكة العربية السعودية تقيم؟

- منطقة الرياض
- منطقة مكة المكرمة
- منطقة المدينة المنورة
- منطقة القصيم
- منطقة الشرقية
- منطقة حائل
- منطقة جازان
- منطقة عسير
- منطقة الباحة
- منطقة تبوك
- منطقة نجران
- منطقة الجوف
- منطقة الحدود الشمالية

Appendix A-A : HUBS Research Committee Ethical Approval

Reply Reply to all Forward X Close Help

i You replied on 25/07/2013 13:28.

From: Steven Ellis Sent: Thu 25/07/2013 11:44
To: Ibrahim Alotaibi
Cc:
Subject: HUBSREC 2013/36
Attachments:


[View As Web Page](#)

Dear Ibrahim

I can confirm on behalf of the research ethics committee Thanos Papadopoulos has approved "Beyond mobile advertising an investigation study to customer engagement and improvement behaviours via mobile" on 25/7/13.

Please save this E-mail as approval for the go ahead for your research

Kind regards
Steven Ellis

 UNIVERSITY OF Hull

Appendix A-B : Frequencies Table

Frequencies

Item		Q2	Q3_1	Q3_2	Q3_3	Q3_4	Q3_5	Q3_6	Q3_7	Q4_1	Q4_2	Q4_3	Q5_1
N	Valid	664	365	226	71	185	18	26	96	75	112	511	614
	Missing	0	299	438	593	479	646	638	568	589	552	153	50
Mean		1.66	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Median		2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Mode		1	1	1	1	1	1	1	1	1	1	1	1
Std. Deviation		.673	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
Item		Q5_2	Q5_3	Q5_4	Q5_5	Q5_6	Q5	Q6	Q7	PU1	PU2	PU3	PU4
N	Valid	510	610	524	601	385	47	664	664	664	664	664	664
	Missing	154	54	140	63	279	617	0	0	0	0	0	0
Mean		1.00	1.00	1.00	1.00	1.00	1.00	1.32	1.09	5.02	4.57	4.60	5.25
Median		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	5.00	5.00	5.00	6.00
Mode		1	1	1	1	1	1	1	1	6	6	5	6
Std. Deviation		.000	.000	.000	.000	.000	.000	.467	.283	1.696	1.758	1.774	1.636
Item		PE1	PE2	PE3	PE4	IS1	IS2	IS3	IS4	IS5	ENCO1	ENCO2	EMCO3
N	Valid	664	664	664	664	664	664	664	664	664	664	664	664
	Missing	0	0	0	0	0	0	0	0	0	0	0	0
Mean		5.88	5.35	5.93	5.82	5.71	5.87	5.76	5.97	6.02	2.80	4.77	2.84
Median		6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	2.00	5.00	2.00
Mode		6	6	7	6	7	7	7	7	7	1	6	2

Std. Deviation		1.329	1.650	1.316	1.346	1.532	1.490	1.651	1.360	1.382	1.666	1.667	1.602
Item		EMCO4	EMCO5	EMCO6	SN1	SN2	SN3	SN4	EM1	EM2	EM3	EM4	BI1
N	Valid	664	664	664	664	664	664	664	664	664	664	664	664
	Missing	0	0	0	0	0	0	0	0	0	0	0	0
Mean		5.05	4.53	3.67	3.86	4.53	4.15	5.35	3.14	4.31	6.06	5.88	4.55
Median		6.00	5.00	4.00	4.00	5.00	4.00	6.00	3.00	4.00	7.00	6.00	5.00
Mode		7	6	1	4	6	4	6	1	4	7	7	4
Std. Deviation		1.956	1.867	2.052	1.813	1.914	1.781	1.715	1.762	1.717	1.475	1.522	1.850
Item		BI2	BI3	HC1	HC2	HC3	HC4	HC5	HC6	Gender	Age	Location	ENBE1_1
N	Valid	664	664	664	664	664	664	664	664	664	664	664	664
	Missing	0	0	0	0	0	0	0	0	0	0	0	0
Mean		4.22	4.53	4.66	4.52	4.46	4.48	5.16	4.27	1.40	1.87	3.01	2.68
Median		4.00	4.00	5.00	5.00	5.00	5.00	6.00	4.00	1.00	2.00	2.00	2.00
Mode		4	4	5	5	5	6	6	5	1	2	1	1
Std. Deviation		1.833	1.706	1.857	1.946	1.899	1.922	1.665	1.779	.489	.825	2.783	1.953
Item		ENBE2_2	ENBE3_3	ENBE4_4	ENBE5_5	ENBE6_6	ENBE7_7	ENBE8_8	ENBE9_9	ENBE10_10	ENEM1_1	ENEM2_2	ENEM3_3
N	Valid	664	664	664	664	664	664	664	664	664	664	664	664
	Missing	0	0	0	0	0	0	0	0	0	0	0	0
Mean		3.25	3.65	3.49	3.58	3.80	3.74	3.66	3.68	4.02	3.44	3.29	3.47
Median		3.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
Mode		1	1	1	4	1	4	1	1	4	4	4	1
Std. Deviation		1.950	2.104	1.961	1.940	2.049	2.064	2.088	2.079	2.129	1.921	1.865	1.944
Item		ENEM4_4	ENEM5_5	ENEM6_6	ENEM7_7	ENEM8_8	ENEM9_9	ENEM10_10	ENEM11_11	ENEM12_12	ENEM13_13	ENEM14_14	ENEM15_15
N	Valid	664	664	664	664	664	664	664	664	664	664	664	664
	Missing	0	0	0	0	0	0	0	0	0	0	0	0
Mean		3.93	3.88	3.60	3.72	3.52	3.35	3.39	3.86	3.45	3.97	3.90	4.02

Median	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
Mode	4	4	4	4	4	4	4	4	4	4	4	4	4
Std. Deviation	1.783	1.788	1.849	1.747	1.801	1.638	1.694	1.730	1.820	1.853	1.715	1.720	1.720
Item	ENEM16_16	ENEM17_17	ENEM18_18	-	-	-	-	-	-	-	-	-	-
N Valid	664	664	664	-	-	-	-	-	-	-	-	-	-
Missing	0	0	0	-	-	-	-	-	-	-	-	-	-
Mean	4.09	3.96	4.22	-	-	-	-	-	-	-	-	-	-
Median	4.00	4.00	4.00	-	-	-	-	-	-	-	-	-	-
Mode	4	4	4	-	-	-	-	-	-	-	-	-	-
Std. Deviation	1.727	1.676	1.871	-	-	-	-	-	-	-	-	-	-

Appendix B: Tables showing Skewness, Kurtosis and Normality Tests

Case Processing Summary

	Cases					
	Valid		Missing		Total	
	N		N		N	
PE1	664	100.0%	0	.0%	664	100.0%
PE2	664	100.0%	0	.0%	664	100.0%
PE3	664	100.0%	0	.0%	664	100.0%
PE4	664	100.0%	0	.0%	664	100.0%
PU1	664	100.0%	0	.0%	664	100.0%
PU2	664	100.0%	0	.0%	664	100.0%
PU3	664	100.0%	0	.0%	664	100.0%
PU4	664	100.0%	0	.0%	664	100.0%
IS1	664	100.0%	0	.0%	664	100.0%
IS2	664	100.0%	0	.0%	664	100.0%
IS3	664	100.0%	0	.0%	664	100.0%
IS4	664	100.0%	0	.0%	664	100.0%
IS5	664	100.0%	0	.0%	664	100.0%
ENCO1	664	100.0%	0	.0%	664	100.0%
EMCO3	664	100.0%	0	.0%	664	100.0%
SN1	664	100.0%	0	.0%	664	100.0%
SN2	664	100.0%	0	.0%	664	100.0%
SN3	664	100.0%	0	.0%	664	100.0%
SN4	664	100.0%	0	.0%	664	100.0%
EM1	664	100.0%	0	.0%	664	100.0%
EM2	664	100.0%	0	.0%	664	100.0%
BI1	664	100.0%	0	.0%	664	100.0%
BI2	664	100.0%	0	.0%	664	100.0%
BI3	664	100.0%	0	.0%	664	100.0%
ENBE7_7	664	100.0%	0	.0%	664	100.0%
ENBE8_8	664	100.0%	0	.0%	664	100.0%
ENBE9_9	664	100.0%	0	.0%	664	100.0%
ENBE10_10	664	100.0%	0	.0%	664	100.0%
ENBE1_1	664	100.0%	0	.0%	664	100.0%
ENBE2_2	664	100.0%	0	.0%	664	100.0%
ENBE3_3	664	100.0%	0	.0%	664	100.0%
ENBE4_4	664	100.0%	0	.0%	664	100.0%
ENBE5_5	664	100.0%	0	.0%	664	100.0%

ENBE6_6	664	100.0%	0	.0%	664	100.0%
ENEM1_1	664	100.0%	0	.0%	664	100.0%
ENEM2_2	664	100.0%	0	.0%	664	100.0%
ENEM3_3	664	100.0%	0	.0%	664	100.0%
ENEM4_4	664	100.0%	0	.0%	664	100.0%
ENEM5_5	664	100.0%	0	.0%	664	100.0%
ENEM6_6	664	100.0%	0	.0%	664	100.0%
ENEM7_7	664	100.0%	0	.0%	664	100.0%
ENEM8_8	664	100.0%	0	.0%	664	100.0%
ENEM9_9	664	100.0%	0	.0%	664	100.0%
ENEM10_10	664	100.0%	0	.0%	664	100.0%
ENEM11_11	664	100.0%	0	.0%	664	100.0%
ENEM12_12	664	100.0%	0	.0%	664	100.0%
ENEM13_13	664	100.0%	0	.0%	664	100.0%
ENEM14_14	664	100.0%	0	.0%	664	100.0%
ENEM15_15	664	100.0%	0	.0%	664	100.0%
ENEM16_16	664	100.0%	0	.0%	664	100.0%
ENEM17_17	664	100.0%	0	.0%	664	100.0%
ENEM18_18	664	100.0%	0	.0%	664	100.0%
ENCO2	664	100.0%	0	.0%	664	100.0%
EMCO4	664	100.0%	0	.0%	664	100.0%
EMCO5	664	100.0%	0	.0%	664	100.0%
EMCO6	664	100.0%	0	.0%	664	100.0%

Descriptives

			Statistic	Std. Error
PE1_My interaction with the smartphone is clear and understandable	Mean		5.88	.052
	95% Confidence Interval for Mean	Lower Bound	5.77	
		Upper Bound	5.98	
	5% Trimmed Mean		6.04	
	Median		6.00	
	Variance		1.766	
	Std. Deviation		1.329	
	Minimum		1	
	Maximum		7	
	Range		6	

	Interquartile Range		2	
	Skewness		-1.778	.095
	Kurtosis		3.451	.189
PE2_Interaction with the smartphone does not require a lot of my mental effort	Mean		5.35	.064
	95% Confidence Interval for	Lower Bound	5.22	
	Mean	Upper Bound	5.48	
	5% Trimmed Mean		5.49	
	Median		6.00	
	Variance		2.722	
	Std. Deviation		1.650	
	Minimum		1	
	Maximum		7	
	Range		6	
	Interquartile Range		2	
	Skewness		-1.191	.095
	Kurtosis		.589	.189
	PE3_I find the smartphone easy to use	Mean		5.93
95% Confidence Interval for		Lower Bound	5.83	
Mean		Upper Bound	6.03	
5% Trimmed Mean			6.10	
Median			6.00	
Variance			1.732	
Std. Deviation			1.316	
Minimum			1	
Maximum			7	
Range			6	
Interquartile Range			1	
Skewness			-1.893	.095
Kurtosis			3.969	.189
PE4_I find it easy to get smartphone to do what I want it to do		Mean		5.82
	95% Confidence Interval for	Lower Bound	5.72	
	Mean	Upper Bound	5.93	
	5% Trimmed Mean		5.99	

	Median		6.00	
	Variance		1.811	
	Std. Deviation		1.346	
	Minimum		1	
	Maximum		7	
	Range		6	
	Interquartile Range		2	
	Skewness		-1.700	.095
	Kurtosis		3.134	.189
PU1_Using smartphone improves my performance in my day to day activities	Mean		5.02	.066
	95% Confidence Interval for Mean	Lower Bound	4.89	
		Upper Bound	5.15	
	5% Trimmed Mean		5.13	
	Median		5.00	
	Variance		2.878	
	Std. Deviation		1.696	
	Minimum		1	
	Maximum		7	
	Range		6	
	Interquartile Range		2	
	Skewness		-.806	.095
	Kurtosis		-.247	.189
PU2_Using smartphone in my day to day activities increase my productivity	Mean		4.57	.068
	95% Confidence Interval for Mean	Lower Bound	4.43	
		Upper Bound	4.70	
	5% Trimmed Mean		4.63	
	Median		5.00	
	Variance		3.091	
	Std. Deviation		1.758	
	Minimum		1	
	Maximum		7	
	Range		6	

	Interquartile Range		3		
	Skewness		-.511	.095	
	Kurtosis		-.772	.189	
PU3_Using smartphone enhances my effectiveness on day to day life	Mean		4.60	.069	
	95% Confidence Interval for	Lower Bound	4.47		
	Mean	Upper Bound	4.74		
	5% Trimmed Mean		4.67		
	Median		5.00		
	Variance		3.148		
	Std. Deviation		1.774		
	Minimum		1		
	Maximum		7		
	Range		6		
	Interquartile Range		3		
	Skewness		-.560	.095	
	Kurtosis		-.699	.189	
	PU4_I find smartphone useful in my day to day activities	Mean		5.25	.063
		95% Confidence Interval for	Lower Bound	5.13	
Mean		Upper Bound	5.37		
5% Trimmed Mean			5.38		
Median			6.00		
Variance			2.676		
Std. Deviation			1.636		
Minimum			1		
Maximum			7		
Range			6		
Interquartile Range			2		
Skewness			-1.007	.095	
Kurtosis			.262	.189	
IS1_I use the smartphone because it is a new way to do research on internet		Mean		5.71	.059
		95% Confidence Interval for	Lower Bound	5.59	
	Mean	Upper Bound	5.82		
	5% Trimmed Mean		5.87		

	Median		6.00	
	Variance		2.347	
	Std. Deviation		1.532	
	Minimum		1	
	Maximum		7	
	Range		6	
	Interquartile Range		2	
	Skewness		-1.430	.095
	Kurtosis		1.509	.189
IS2_I use the smartphone because it is easier to seek information	Mean		5.87	.058
	95% Confidence Interval for Mean	Lower Bound	5.76	
		Upper Bound	5.99	
	5% Trimmed Mean		6.07	
	Median		6.00	
	Variance		2.220	
	Std. Deviation		1.490	
	Minimum		1	
	Maximum		7	
	Range		6	
	Interquartile Range		2	
	Skewness		-1.785	.095
	Kurtosis		2.891	.189
IS3_I use the smartphone to instantly get information for free wherever and whenever I needed it	Mean		5.76	.064
	95% Confidence Interval for Mean	Lower Bound	5.64	
		Upper Bound	5.89	
	5% Trimmed Mean		5.95	
	Median		6.00	
	Variance		2.725	
	Std. Deviation		1.651	
	Minimum		1	
	Maximum		7	
	Range		6	

	Interquartile Range		2	
	Skewness		-1.558	.095
	Kurtosis		1.565	.189
IS4_I use the smartphone to look for information	Mean		5.97	.053
	95% Confidence Interval for Mean	Lower Bound	5.87	
		Upper Bound	6.07	
	5% Trimmed Mean		6.16	
	Median		6.00	
	Variance		1.848	
	Std. Deviation		1.360	
	Minimum		1	
	Maximum		7	
	Range		6	
	Interquartile Range		1	
	Skewness		-2.015	.095
	Kurtosis		4.231	.189
IS5_I use the smartphone to see what is out there	Mean		6.02	.054
	95% Confidence Interval for Mean	Lower Bound	5.91	
		Upper Bound	6.12	
	5% Trimmed Mean		6.21	
	Median		6.00	
	Variance		1.911	
	Std. Deviation		1.382	
	Minimum		1	
	Maximum		7	
	Range		6	
	Interquartile Range		1	
	Skewness		-2.030	.095
	Kurtosis		4.235	.189
ENCO1_I think that such communication messages on the smartphone are good for me	Mean		2.80	.065
	95% Confidence Interval for Mean	Lower Bound	2.68	
		Upper Bound	2.93	
	5% Trimmed Mean		2.71	

	Median		2.00	
	Variance		2.776	
	Std. Deviation		1.666	
	Minimum		1	
	Maximum		7	
	Range		6	
	Interquartile Range		3	
	Skewness		.650	.095
	Kurtosis		-.635	.189
EMCO3_I believe if I act on the communication messages it will be a good choice	Mean		2.84	.062
	95% Confidence Interval for	Lower Bound	2.72	
	Mean	Upper Bound	2.97	
	5% Trimmed Mean		2.75	
	Median		2.00	
	Variance		2.566	
	Std. Deviation		1.602	
	Minimum		1	
	Maximum		7	
	Range		6	
	Interquartile Range		3	
	Skewness		.617	.095
	Kurtosis		-.474	.189
	SN1_People who influence my behaviour think that I should use the smartphone	Mean		3.86
95% Confidence Interval for		Lower Bound	3.72	
Mean		Upper Bound	4.00	
5% Trimmed Mean			3.85	
Median			4.00	
Variance			3.286	
Std. Deviation			1.813	
Minimum			1	
Maximum			7	
Range			6	

	Interquartile Range		3	
	Skewness		-.041	.095
	Kurtosis		-.954	.189
SN2_People who are important to me think that I should use smartphone	Mean		4.53	.074
	95% Confidence Interval for	Lower Bound	4.38	
	Mean	Upper Bound	4.68	
	5% Trimmed Mean		4.59	
	Median		5.00	
	Variance		3.664	
	Std. Deviation		1.914	
	Minimum		1	
	Maximum		7	
	Range		6	
	Interquartile Range		3	
	Skewness		-.480	.095
	Kurtosis		-.910	.189
SN3_People who influence my behaviour would think that I should use the smartphone.	Mean		4.15	.069
	95% Confidence Interval for	Lower Bound	4.01	
	Mean	Upper Bound	4.28	
	5% Trimmed Mean		4.17	
	Median		4.00	
	Variance		3.171	
	Std. Deviation		1.781	
	Minimum		1	
	Maximum		7	
	Range		6	
	Interquartile Range		3	
	Skewness		-.208	.095
	Kurtosis		-.872	.189
SN4_People who are important to me think that I should use smartphone to communicate with them via instant messaging	Mean		5.35	.067
	95% Confidence Interval for	Lower Bound	5.22	
	Mean	Upper Bound	5.48	
	5% Trimmed Mean		5.50	

application (e.g. Whatsapp, Blackburry)	Median		6.00	
	Variance		2.942	
	Std. Deviation		1.715	
	Minimum		1	
	Maximum		7	
	Range		6	
	Interquartile Range		2	
	Skewness		-1.152	.095
	Kurtosis		.487	.189
EM1_I had the feeling of an active participant in the conversation with the firm	Mean		3.14	.068
	95% Confidence Interval for Mean	Lower Bound	3.01	
		Upper Bound	3.27	
	5% Trimmed Mean		3.06	
	Median		3.00	
	Variance		3.104	
	Std. Deviation		1.762	
	Minimum		1	
	Maximum		7	
	Range		6	
	Interquartile Range		3	
	Skewness		.365	.095
	Kurtosis		-.887	.189
EM2_Communication via the smartphone gave me the feeling that I am taken seriously	Mean		4.31	.067
	95% Confidence Interval for Mean	Lower Bound	4.18	
		Upper Bound	4.44	
	5% Trimmed Mean		4.34	
	Median		4.00	
	Variance		2.947	
	Std. Deviation		1.717	
	Minimum		1	
	Maximum		7	
	Range		6	

	Interquartile Range		3		
	Skewness		-.302	.095	
	Kurtosis		-.718	.189	
BI1_Assuming I have an internet access on my smartphone, I intend to proceed with the purchase	Mean		4.55	.072	
	95% Confidence Interval for	Lower Bound	4.41		
	Mean	Upper Bound	4.70		
	5% Trimmed Mean		4.62		
	Median		5.00		
	Variance		3.424		
	Std. Deviation		1.850		
	Minimum		1		
	Maximum		7		
	Range		6		
	Interquartile Range		2		
	Skewness		-.422	.095	
	Kurtosis		-.772	.189	
	BI2_When I have my smartphone with me, I predict that I would use it to proceed with the purchase	Mean		4.22	.071
		95% Confidence Interval for	Lower Bound	4.08	
Mean		Upper Bound	4.36		
5% Trimmed Mean			4.24		
Median			4.00		
Variance			3.359		
Std. Deviation			1.833		
Minimum			1		
Maximum			7		
Range			6		
Interquartile Range			3		
Skewness			-.225	.095	
Kurtosis			-.954	.189	
BI3_If I had to do it over again, I would make the same choice		Mean		4.53	.066
		95% Confidence Interval for	Lower Bound	4.40	
	Mean	Upper Bound	4.66		
	5% Trimmed Mean		4.59		

	Median		4.00	
	Variance		2.910	
	Std. Deviation		1.706	
	Minimum		1	
	Maximum		7	
	Range		6	
	Interquartile Range		2	
	Skewness		-.333	.095
	Kurtosis		-.542	.189
ENBE7_7	Mean		3.74	.080
	95% Confidence Interval for Mean	Lower Bound	3.58	
		Upper Bound	3.90	
	5% Trimmed Mean		3.71	
	Median		4.00	
	Variance		4.262	
	Std. Deviation		2.064	
	Minimum		1	
	Maximum		7	
	Range		6	
	Interquartile Range		3	
	Skewness		.171	.095
	Kurtosis		-1.130	.189
ENBE8_8	Mean		3.66	.081
	95% Confidence Interval for Mean	Lower Bound	3.50	
		Upper Bound	3.82	
	5% Trimmed Mean		3.62	
	Median		4.00	
	Variance		4.361	
	Std. Deviation		2.088	
	Minimum		1	
	Maximum		7	
	Range		6	

	Interquartile Range		3	
	Skewness		.187	.095
	Kurtosis		-1.193	.189
ENBE9_9	Mean		3.68	.081
	95% Confidence Interval for Mean	Lower Bound	3.52	
		Upper Bound	3.84	
	5% Trimmed Mean		3.64	
	Median		4.00	
	Variance		4.321	
	Std. Deviation		2.079	
	Minimum		1	
	Maximum		7	
	Range		6	
	Interquartile Range		3	
	Skewness		.212	.095
	Kurtosis		-1.148	.189
ENBE10_10	Mean		4.02	.083
	95% Confidence Interval for Mean	Lower Bound	3.86	
		Upper Bound	4.18	
	5% Trimmed Mean		4.02	
	Median		4.00	
	Variance		4.534	
	Std. Deviation		2.129	
	Minimum		1	
	Maximum		7	
	Range		6	
	Interquartile Range		4	
	Skewness		-.039	.095
	Kurtosis		-1.276	.189
ENBE1_1	Mean		2.68	.076
	95% Confidence Interval for Mean	Lower Bound	2.53	
		Upper Bound	2.83	
	5% Trimmed Mean		2.54	

	Median		2.00	
	Variance		3.813	
	Std. Deviation		1.953	
	Minimum		1	
	Maximum		7	
	Range		6	
	Interquartile Range		3	
	Skewness		.907	.095
	Kurtosis		-.362	.189
ENBE2_2	Mean		3.25	.076
	95% Confidence Interval for Mean	Lower Bound	3.10	
		Upper Bound	3.40	
	5% Trimmed Mean		3.17	
	Median		3.00	
	Variance		3.802	
	Std. Deviation		1.950	
	Minimum		1	
	Maximum		7	
	Range		6	
	Interquartile Range		3	
	Skewness		.458	.095
	Kurtosis		-.837	.189
ENBE3_3	Mean		3.65	.082
	95% Confidence Interval for Mean	Lower Bound	3.49	
		Upper Bound	3.81	
	5% Trimmed Mean		3.62	
	Median		4.00	
	Variance		4.429	
	Std. Deviation		2.104	
	Minimum		1	
	Maximum		7	
	Range		6	

	Interquartile Range		3	
	Skewness		.219	.095
	Kurtosis		-1.213	.189
ENBE4_4	Mean		3.49	.076
	95% Confidence Interval for Mean	Lower Bound	3.34	
		Upper Bound	3.64	
	5% Trimmed Mean		3.44	
	Median		4.00	
	Variance		3.846	
	Std. Deviation		1.961	
	Minimum		1	
	Maximum		7	
	Range		6	
	Interquartile Range		3	
	Skewness		.265	.095
	Kurtosis		-.990	.189
ENBE5_5	Mean		3.58	.075
	95% Confidence Interval for Mean	Lower Bound	3.43	
		Upper Bound	3.72	
	5% Trimmed Mean		3.53	
	Median		4.00	
	Variance		3.762	
	Std. Deviation		1.940	
	Minimum		1	
	Maximum		7	
	Range		6	
	Interquartile Range		3	
	Skewness		.229	.095
	Kurtosis		-.997	.189
ENBE6_6	Mean		3.80	.080
	95% Confidence Interval for Mean	Lower Bound	3.65	
		Upper Bound	3.96	
	5% Trimmed Mean		3.78	

	Median		4.00	
	Variance		4.197	
	Std. Deviation		2.049	
	Minimum		1	
	Maximum		7	
	Range		6	
	Interquartile Range		4	
	Skewness		.081	.095
	Kurtosis		-1.195	.189
ENEM1_1	Mean		3.44	.075
	95% Confidence Interval for Mean	Lower Bound	3.29	
		Upper Bound	3.58	
	5% Trimmed Mean		3.38	
	Median		4.00	
	Variance		3.692	
	Std. Deviation		1.921	
	Minimum		1	
	Maximum		7	
	Range		6	
	Interquartile Range		3	
	Skewness		.280	.095
	Kurtosis		-.856	.189
ENEM2_2	Mean		3.29	.072
	95% Confidence Interval for Mean	Lower Bound	3.15	
		Upper Bound	3.43	
	5% Trimmed Mean		3.21	
	Median		4.00	
	Variance		3.479	
	Std. Deviation		1.865	
	Minimum		1	
	Maximum		7	
	Range		6	

	Interquartile Range		3	
	Skewness		.330	.095
	Kurtosis		-.814	.189
ENEM3_3	Mean		3.47	.075
	95% Confidence Interval for Mean	Lower Bound	3.32	
		Upper Bound	3.61	
	5% Trimmed Mean		3.41	
	Median		4.00	
	Variance		3.779	
	Std. Deviation		1.944	
	Minimum		1	
	Maximum		7	
	Range		6	
	Interquartile Range		4	
	Skewness		.231	.095
	Kurtosis		-1.011	.189
ENEM4_4	Mean		3.93	.069
	95% Confidence Interval for Mean	Lower Bound	3.80	
		Upper Bound	4.07	
	5% Trimmed Mean		3.92	
	Median		4.00	
	Variance		3.179	
	Std. Deviation		1.783	
	Minimum		1	
	Maximum		7	
	Range		6	
	Interquartile Range		2	
	Skewness		-.014	.095
	Kurtosis		-.649	.189
ENEM5_5	Mean		3.88	.069
	95% Confidence Interval for Mean	Lower Bound	3.74	
		Upper Bound	4.01	
	5% Trimmed Mean		3.86	

	Median		4.00	
	Variance		3.196	
	Std. Deviation		1.788	
	Minimum		1	
	Maximum		7	
	Range		6	
	Interquartile Range		2	
	Skewness		-.008	.095
	Kurtosis		-.676	.189
ENEM6_6	Mean		3.60	.072
	95% Confidence Interval for Mean	Lower Bound	3.46	
		Upper Bound	3.74	
	5% Trimmed Mean		3.55	
	Median		4.00	
	Variance		3.421	
	Std. Deviation		1.849	
	Minimum		1	
	Maximum		7	
	Range		6	
	Interquartile Range		3	
	Skewness		.151	.095
	Kurtosis		-.810	.189
ENEM7_7	Mean		3.72	.068
	95% Confidence Interval for Mean	Lower Bound	3.59	
		Upper Bound	3.85	
	5% Trimmed Mean		3.69	
	Median		4.00	
	Variance		3.052	
	Std. Deviation		1.747	
	Minimum		1	
	Maximum		7	
	Range		6	

	Interquartile Range		3	
	Skewness		.086	.095
	Kurtosis		-.607	.189
ENEM8_8	Mean		3.52	.070
	95% Confidence Interval for Mean	Lower Bound	3.38	
		Upper Bound	3.65	
	5% Trimmed Mean		3.46	
	Median		4.00	
	Variance		3.243	
	Std. Deviation		1.801	
	Minimum		1	
	Maximum		7	
	Range		6	
	Interquartile Range		2	
	Skewness		.167	.095
	Kurtosis		-.760	.189
ENEM9_9	Mean		3.35	.064
	95% Confidence Interval for Mean	Lower Bound	3.22	
		Upper Bound	3.47	
	5% Trimmed Mean		3.27	
	Median		4.00	
	Variance		2.682	
	Std. Deviation		1.638	
	Minimum		1	
	Maximum		7	
	Range		6	
	Interquartile Range		2	
	Skewness		.260	.095
	Kurtosis		-.261	.189
ENEM10_10	Mean		3.39	.066
	95% Confidence Interval for Mean	Lower Bound	3.26	
		Upper Bound	3.52	
	5% Trimmed Mean		3.33	

	Median		4.00	
	Variance		2.869	
	Std. Deviation		1.694	
	Minimum		1	
	Maximum		7	
	Range		6	
	Interquartile Range		2	
	Skewness		.256	.095
	Kurtosis		-.416	.189
ENEM11_11	Mean		3.86	.067
	95% Confidence Interval for Mean	Lower Bound	3.73	
		Upper Bound	3.99	
	5% Trimmed Mean		3.85	
	Median		4.00	
	Variance		2.993	
	Std. Deviation		1.730	
	Minimum		1	
	Maximum		7	
	Range		6	
	Interquartile Range		2	
	Skewness		.037	.095
	Kurtosis		-.422	.189
ENEM12_12	Mean		3.45	.071
	95% Confidence Interval for Mean	Lower Bound	3.31	
		Upper Bound	3.59	
	5% Trimmed Mean		3.39	
	Median		4.00	
	Variance		3.312	
	Std. Deviation		1.820	
	Minimum		1	
	Maximum		7	
	Range		6	

	Interquartile Range		2	
	Skewness		.219	.095
	Kurtosis		-.738	.189
ENEM13_13	Mean		3.97	.072
	95% Confidence Interval for Mean	Lower Bound	3.83	
		Upper Bound	4.11	
	5% Trimmed Mean		3.96	
	Median		4.00	
	Variance		3.432	
	Std. Deviation		1.853	
	Minimum		1	
	Maximum		7	
	Range		6	
	Interquartile Range		2	
	Skewness		-.011	.095
	Kurtosis		-.740	.189
ENEM14_14	Mean		3.90	.067
	95% Confidence Interval for Mean	Lower Bound	3.77	
		Upper Bound	4.03	
	5% Trimmed Mean		3.89	
	Median		4.00	
	Variance		2.940	
	Std. Deviation		1.715	
	Minimum		1	
	Maximum		7	
	Range		6	
	Interquartile Range		2	
	Skewness		.030	.095
	Kurtosis		-.418	.189
ENEM15_15	Mean		4.02	.067
	95% Confidence Interval for Mean	Lower Bound	3.89	
		Upper Bound	4.16	
	5% Trimmed Mean		4.03	

	Median		4.00	
	Variance		2.959	
	Std. Deviation		1.720	
	Minimum		1	
	Maximum		7	
	Range		6	
	Interquartile Range		2	
	Skewness		.045	.095
	Kurtosis		-.410	.189
ENEM16_16	Mean		4.09	.067
	95% Confidence Interval for Mean	Lower Bound	3.96	
		Upper Bound	4.22	
	5% Trimmed Mean		4.10	
	Median		4.00	
	Variance		2.983	
	Std. Deviation		1.727	
	Minimum		1	
	Maximum		7	
	Range		6	
	Interquartile Range		2	
	Skewness		-.083	.095
	Kurtosis		-.467	.189
ENEM17_17	Mean		3.96	.065
	95% Confidence Interval for Mean	Lower Bound	3.83	
		Upper Bound	4.09	
	5% Trimmed Mean		3.96	
	Median		4.00	
	Variance		2.809	
	Std. Deviation		1.676	
	Minimum		1	
	Maximum		7	
	Range		6	

	Interquartile Range		2	
	Skewness		.015	.095
	Kurtosis		-.269	.189
ENEM18_18	Mean		4.22	.073
	95% Confidence Interval for Mean	Lower Bound	4.08	
		Upper Bound	4.36	
	5% Trimmed Mean		4.24	
	Median		4.00	
	Variance		3.501	
	Std. Deviation		1.871	
	Minimum		1	
	Maximum		7	
	Range		6	
	Interquartile Range		3	
	Skewness		-.073	.095
	Kurtosis		-.756	.189
ENCO2_I can understand the features of the communication messages received on the smartphone	Mean		4.77	.065
	95% Confidence Interval for Mean	Lower Bound	4.64	
		Upper Bound	4.90	
	5% Trimmed Mean		4.86	
	Median		5.00	
	Variance		2.778	
	Std. Deviation		1.667	
	Minimum		1	
	Maximum		7	
	Range		6	
	Interquartile Range		2	
	Skewness		-.725	.095
	Kurtosis		-.342	.189
EMCO4_I think I should seek more information about the content of such messages before I act on them	Mean		5.05	.076
	95% Confidence Interval for Mean	Lower Bound	4.90	
		Upper Bound	5.20	
	5% Trimmed Mean		5.16	

	Median		6.00	
	Variance		3.826	
	Std. Deviation		1.956	
	Minimum		1	
	Maximum		7	
	Range		6	
	Interquartile Range		3	
	Skewness		-.855	.095
	Kurtosis		-.466	.189
EMCO5_ I believe other	Mean		4.53	.072
opinions will help me decide	95% Confidence Interval for	Lower Bound	4.38	
to act on such	Mean	Upper Bound	4.67	
communication messages	5% Trimmed Mean		4.58	
	Median		5.00	
	Variance		3.487	
	Std. Deviation		1.867	
	Minimum		1	
	Maximum		7	
	Range		6	
	Interquartile Range		2	
	Skewness		-.560	.095
	Kurtosis		-.762	.189
EMCO6_ I think I will use	Mean		3.67	.080
social media (e.g. Facebook,	95% Confidence Interval for	Lower Bound	3.52	
Twitter) to communicate with	Mean	Upper Bound	3.83	
firms sending such	5% Trimmed Mean		3.64	
communication messages	Median		4.00	
	Variance		4.212	
	Std. Deviation		2.052	
	Minimum		1	
	Maximum		7	
	Range		6	

Interquartile Range	3	
Skewness	.072	.095
Kurtosis	-1.352	.189

Tests of Normality

	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
PE1_My interaction with the smartphone is clear and understandable	.283	664	.000	.760	664	.000
PE2_Interaction with the smartphone does not require a lot of my mental effort	.260	664	.000	.825	664	.000
PE3_I find the smartphone easy to use	.282	664	.000	.742	664	.000
PE4_I find it easy to get smartphone to do what I want it to do	.269	664	.000	.774	664	.000
PU1_Using smartphone improves my performance in my day to day activities	.204	664	.000	.885	664	.000
PU2_Using smartphone in my day to day activities increase my productivity	.183	664	.000	.913	664	.000
PU3_Using smartphone enhances my effectiveness on day to day life	.197	664	.000	.908	664	.000
PU4_I find smartphone useful in my day to day activities	.228	664	.000	.861	664	.000
IS1_I use the smartphone because it is a new way to do research on internet	.266	664	.000	.789	664	.000
IS2_I use the smartphone because it is easier to seek information	.281	664	.000	.733	664	.000
IS3_I use the smartphone to instantly get information for free wherever and whenever I needed it	.286	664	.000	.740	664	.000
IS4_I use the smartphone to look for information	.300	664	.000	.713	664	.000
IS5_I use the smartphone to see what is out there	.281	664	.000	.702	664	.000

ENCO1_I think that such communication messages on the smartphone are good for me	.221	664	.000	.881	664	.000
EMCO3_I believe if I act on the communication messages it will be a good choice	.212	664	.000	.894	664	.000
SN1_People who influence my behaviour think that I should use the smartphone	.175	664	.000	.926	664	.000
SN2_People who are important to me think that I should use smartphone	.167	664	.000	.902	664	.000
SN3_People who influence my behaviour would think that I should use the smartphone.	.153	664	.000	.934	664	.000
SN4_People who are important to me think that I should use smartphone to communicate with them via instant messaging application (e.g. Whatsapp, Blackberry)	.240	664	.000	.828	664	.000
EM1_I had the feeling of an active participant in the conversation with the firm	.175	664	.000	.905	664	.000
EM2_Communication via the smartphone gave me the feeling that I am taken seriously	.153	664	.000	.936	664	.000
BI1_Assuming I have an internet access on my smartphone, I intend to proceed with the purchase	.146	664	.000	.914	664	.000
BI2_When I have my smartphone with me, I predict that I would use it to proceed with the purchase	.141	664	.000	.930	664	.000
BI3_If I had to do it over again, I would make the same choice	.175	664	.000	.920	664	.000
ENBE7_7	.135	664	.000	.898	664	.000

ENBE8_8	.146	664	.000	.895	664	.000
ENBE9_9	.136	664	.000	.896	664	.000
ENBE10_10	.130	664	.000	.895	664	.000
ENBE1_1	.253	664	.000	.805	664	.000
ENBE2_2	.163	664	.000	.890	664	.000
ENBE3_3	.137	664	.000	.894	664	.000
ENBE4_4	.141	664	.000	.904	664	.000
ENBE5_5	.124	664	.000	.914	664	.000
ENBE6_6	.127	664	.000	.908	664	.000
ENEM1_1	.159	664	.000	.895	664	.000
ENEM2_2	.161	664	.000	.896	664	.000
ENEM3_3	.152	664	.000	.903	664	.000
ENEM4_4	.188	664	.000	.918	664	.000
ENEM5_5	.187	664	.000	.918	664	.000
ENEM6_6	.180	664	.000	.909	664	.000
ENEM7_7	.188	664	.000	.917	664	.000
ENEM8_8	.175	664	.000	.912	664	.000
ENEM9_9	.194	664	.000	.896	664	.000
ENEM10_10	.188	664	.000	.900	664	.000
ENEM11_11	.223	664	.000	.895	664	.000
ENEM12_12	.184	664	.000	.902	664	.000
ENEM13_13	.195	664	.000	.905	664	.000
ENEM14_14	.217	664	.000	.902	664	.000
ENEM15_15	.221	664	.000	.902	664	.000
ENEM16_16	.213	664	.000	.906	664	.000
ENEM17_17	.229	664	.000	.892	664	.000
ENEM18_18	.203	664	.000	.897	664	.000
ENCO2_I can understand the features of the communication messages received on the smartphone	.200	664	.000	.899	664	.000
EMCO4_I think I should seek more information about the content of such messages before I act on them	.215	664	.000	.844	664	.000
EMCO5_I believe other opinions will help me decide to act on such communication messages	.169	664	.000	.899	664	.000

EMCO6_I think I will use social media (e.g. Facebook, Twitter) to communicate with firms sending such communication messages	.167	664	.000	.897	664	.000
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Appendix C: Age Group Differences

Age group difference

P. Direction			under35		above35		z-score
			Estimate	P	Estimate	P	
ENG	<---	PU	0.074	0.189	0.158	0.153	0.674
ENG	<---	SN	0.174	0.002	0.199	0.098	0.186
ENG	<---	PE	0.073	0.392	-0.122	0.314	-1.316
EM	<---	SN	0.304	0.000	0.126	0.117	-1.785*
EM	<---	IS	0.128	0.145	-0.040	0.789	-0.976
EM	<---	ENG	0.518	0.000	0.489	0.002	-0.141
EM	<---	PU	0.221	0.000	0.124	0.126	-0.970
EM	<---	PE	-0.064	0.496	0.179	0.212	1.418
ENBE	<---	ENG	0.947	0.000	0.968	0.000	0.064
ENEM	<---	ENG	0.701	0.000	1.060	0.000	1.173
BI	<---	EM	0.614	0.000	0.664	0.003	0.208
PU2	<---	PU	0.877	0.000	1.003	0.000	1.306
SN2	<---	SN	1.032	0.000	1.075	0.000	0.356
EM1	<---	EM	0.745	0.000	1.375	0.000	1.869*
IS2	<---	IS	1.175	0.000	1.101	0.000	-0.761
ENEM2_2	<---	ENEM	0.990	0.000	1.038	0.000	0.687
ENEM1_1	<---	ENEM	0.974	0.000	1.026	0.000	0.683
BI2	<---	BI	1.341	0.000	1.428	0.000	0.408
BI1	<---	BI	1.251	0.000	1.463	0.000	0.979
PU4	<---	PU	0.811	0.000	0.938	0.000	1.413
PE1	<---	PE	0.943	0.000	0.944	0.000	0.007
SN1	<---	SN	0.974	0.000	1.031	0.000	0.488
IS1	<---	IS	1.102	0.000	0.904	0.000	-1.819*
PE4	<---	PE	0.994	0.000	0.836	0.000	-1.431

ENCO3	<---	ENCO	0.806	0.000	1.020	0.000	0.925
ENBE8_8	<---	ENBE	1.010	0.000	1.084	0.000	0.783
ENBE9_9	<---	ENBE	0.981	0.000	1.099	0.000	1.281
ENCO6	<---	ENCO	0.899	0.000	1.221	0.000	1.196

Notes: *** p-value < 0.01; ** p-value < 0.05; * p-value < 0.10

Appendix D: Gender Group Differences

Gender group difference

P. Direction			Male		Female		z-score
			Estimate	P	Estimate	P	
ENG	<---	PU	0.190	0.003	0.037	0.595	-1.605
ENG	<---	SN	0.183	0.006	0.103	0.104	-0.865
ENG	<---	PE	-0.036	0.655	-0.098	0.323	-0.488
EM	<---	SN	0.314	0.000	0.237	0.002	-0.782
EM	<---	IS	0.160	0.054	0.004	0.978	-0.989
EM	<---	ENG	0.370	0.005	0.681	0.000	1.376*
EM	<---	PU	0.231	0.000	0.164	0.045	-0.652
EM	<---	PE	-0.096	0.243	0.232	0.086	2.073**
ENBE	<---	ENG	0.401	0.006	1.469	0.000	3.106***
ENEM	<---	ENG	0.338	0.010	1.199	0.000	2.928***
BI	<---	EM	0.701	0.000	1.062	0.000	1.578
PU2	<---	PU	0.959	0.000	0.830	0.000	-1.259
SN2	<---	SN	1.047	0.000	1.042	0.000	-0.046
EM1	<---	EM	0.932	0.000	0.731	0.000	-1.000
IS2	<---	IS	1.144	0.000	1.198	0.000	0.548
ENEM2_2	<---	ENEM	0.988	0.000	1.017	0.000	0.457
ENEM1_1	<---	ENEM	0.934	0.000	1.065	0.000	1.955*
BI1	<---	BI	0.954	0.000	0.964	0.000	0.107
BI3	<---	BI	0.723	0.000	0.767	0.000	0.458
PU4	<---	PU	0.875	0.000	0.804	0.000	-0.754
PE1	<---	PE	0.895	0.000	1.024	0.000	1.590
SN1	<---	SN	1.068	0.000	0.895	0.000	-1.709*
IS1	<---	IS	1.022	0.000	1.087	0.000	0.614
PE4	<---	PE	0.943	0.000	0.921	0.000	-0.228
ENCO3	<---	ENCO	0.875	0.000	0.878	0.000	0.014
ENBE8_8	<---	ENBE	1.023	0.000	1.047	0.000	0.319
ENBE9_9	<---	ENBE	1.047	0.000	0.946	0.000	-1.301

ENCO6	<---	ENCO	1.343	0.000	0.537	0.000	-3.38***
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Notes: *** p-value < 0.01; ** p-value < 0.05; * p-value < 0.10